<u>QUESTION 1</u> (page 4 of transcript) **The Hon. PENNY SHARPE:** How many SES volunteers do you have in the Lismore area? **CARLENE YORK:** I'll have to take that on notice; I don't know the exact number.	
ANSWER	The NSW SES Lismore Unit has 125 registered volunteer members.

QUESTION 2 (page 9 of transcript) **Ms CATE FAEHRMANN:** Ms York, I ask about the Mullumbimby evacuation centre. Why did the SES issue an evacuation notice telling people to go to that evacuation centre—the ex-services club in Mullumbimby—when nothing was ready for them? Nobody knew about it; nobody was there. How did that happen? People were leaving their flooded houses and being told to go to the evacuation centre by the SES. Nobody was there. When they got there, there were no resources, people or staff. So people went back to their flooded houses. They were advised by the SES to go to the evacuation centre. It wasn't an evacuation centre. **CARLENE YORK:** I don't know the precise timings. I will have to take that one on notice for you and get back to you with the information.	
ANSWER	The NSW SES issued an evacuation warning at 3:15pm on Sunday 27 February 2022 for Mullumbimby. Following deteriorating conditions, the Service issued an evacuation order for the Brunswick River at Mullumbimby at 5:50am on Monday 28 February 2022. The SES guidance to the community in that evacuation order was: "*Wherever possible, people should go and stay with family or friends, or make other accommodation arrangements. If you are unable to, an evacuation centre has been set up at the Mullumbimby RSL".* When the order was issued work was underway to establish the evacuation centre at Mullumbimby RSL, which continued through the morning. The Welfare Services Functional Area advised that the evacuation centre was fully established at 6:30pm on Monday 28 February 2022.

QUESTION 3 (page 16 of transcript) **The Hon. MARK BANASIAK:** Ms York, picking up on Ms Cusack's question regarding the community of Yamba being cut off, the flood plan states that NSW SES may request resupply assistance from supporting agencies. In the case that Ms Cusack is talking about, did you request resupply from agencies? When did you request it? **CARLENE YORK:** I'll have to take that on notice, I'm sorry, with Yamba.	
ANSWER	The NSW SES was responsible for immediate resupply to isolated areas in the Northern Rivers from 28 February 2022. Bulk resupply was coordinated through the Emergency Operations Centre (EOC) and distributed from Casino Meatworks. The location shifted to Rural Fire Service (RFS) air hanger at Casino airbase on 9 March 2022.

QUESTION 4 (page 17 of transcript) **The Hon. MARK BANASIAK:** Just to close the loop on the swiftwater rescue, can all the agencies table their risk assessments that they do before they send the boats out? I note in the plan that SES does a risk assessment, and it would be handy for the Committee to have that. **CARLENE YORK:** Could I just add to that? In relation to the risk assessments and training which have been spoken about, where they are approved flood rescue operators, it is a nationally accredited training program. Whether you're in one agency or another, the course is the same to be accredited for that.	
ANSWER	The NSW SES provides a copy of our Flood Rescue Field Procedure to support this reply: a. Section 3.2 outlines the Flood Rescue Risk Framework and the hierarchy of rescue options we will consider, using the lowest risk option available for any given rescue; and b. Section 3.5 outlines the use of NSW SES vessels. The NSW SES also provides a copy of our Vessel Safety Management System Quick Reference Guide to support this reply.

Flood Rescue Field Procedure

Key Points:

The Flood Rescue Field Procedure:

- Supports the NSW SES to deliver its responsibilities regarding flood operations within NSW
- Outlines the key processes to be followed during flood operations
- Applies to all NSW SES members involved in flood operations particularly field operation
- Should be read in conjunction with the NSW *State Rescue Policy*

Expected understanding

Audience	Level of understanding required		
	Detailed	Key points	Awareness
Executive			●
Managers and Commanders		●	
Incident Management Teams		●	
Flood Rescue Operators	●		

Version 3.0
August 2020

Contents

1. Purpose

NSW SES is the combat agency for floods in NSW (*State Emergency and Rescue Management Act 1989* and *NSW SES Act 1989*), which includes responding to a range of flood rescues during riverine and flash flood events. This document provides information for members involved in flood operations, particularly flood rescue operators in the field.

As flood operations progress, the frequency and complexity of flood rescues can increase rapidly with the area of operations becoming quite broad. Flood rescues can occur across several stages of a flood event, including:

- In the initial stages of flooding, where people are walking, riding or driving through flood waters
- During an extended flood event, where people may be isolated or trapped on low flood islands, landlocked areas and/or in or on flooded homes
- When flood waters are receding, and people are driving or walking through flood waters

Examples of the types of flood rescues include:

- Rescue of people being swept away and often resulting in clinging to trees while walking, riding or playing in floodwaters
- Rescue of people trapped in or on a car in floodwaters, e.g. at a causeway
- Rescue of people or domestic animals stranded in a flooded creek
- Rescue of people stranded in or on the roof of flooded homes requiring emergency transport
- Rescue of people requiring medical transport from a high flood island or landlocked area

2. Scope

This document applies to all members of the NSW SES (volunteers and employees) conducting flood rescue operations.

This document sets out the NSW SES:

- Flood rescue capability structure
- Flood rescue conduct
- Flood rescue categories
- Victim transport by boats in flood operations
- Use of flood rescue boats, including in support of other emergency services and agencies

For flood rescue management and coordination, refer to the *Flood Rescue Management Procedure*.

3. Procedures

3.1 Hazards and Precautions

Flood rescue is an extremely high risk activity. All flood rescue activities are subject to a dynamic risk assessment.

Inherent risks include:

- Serious injury or death to NSW SES personnel, other supporting emergency service organisation personnel, or community members as a result of:
    - Drowning

    - Collisions with or being struck by boats or submerged objects
    - Being trapped or pinned under water
- Exposure to infectious diseases, bodily fluid and chemicals (including urine, faeces, waste products and dead animals)
- Exposure to live animals as a part of a rescue or within the environment (for example snakes and spiders)
- Hypothermia and Hyperthermia
- Human behavioural factors, error and fatigue

The NSW SES manages the risks through the following controls:

- State Rescue Board's Flood Rescue Risk Framework identifying the level of capability required to mitigate the risk (Section 3.2)
- NSW SES training, fit for task, and immunisation requirements (Section 3.3)
- Personal protective equipment and clothing (PPE and PPC), including personal floatation devices (PFD's) and guidance regarding the contamination and decontamination (Section 3.4)
- Appropriate use of boats and vehicles (Sections 3.5 and 3.6)
- Agency protocols for conditions and locations where boats may be used (Section 3.5)
- Guidance on communications and boat location reporting (Section 3.7)
- Deployment of appropriate skilled and resourced teams (Section 3.9 and 3.10)
- Debriefing (Section 3.11)

3.2 Flood Rescue Risk Framework

To ensure the safety of both the rescuer and victim, a low to high risk framework has been developed for each of the various rescue methods in flood rescue (Figure 1), as referenced in the State Rescue Policy. Under times of stress, using this framework helps to prevent rescuers from endangering themselves and/or the victim. This provides a progressive set of options for undertaking a rescue appropriate to the situation to minimise unnecessary risk.

While it is safest to talk a victim into performing a self-rescue, there is a substantial increase in risk once the victim enters the water.

The framework is, 'Talk', 'Throw' (released), 'Reach', 'Wade', 'Throw' (held), 'Row', 'Go', 'Helo' and 'No' (figure 1).

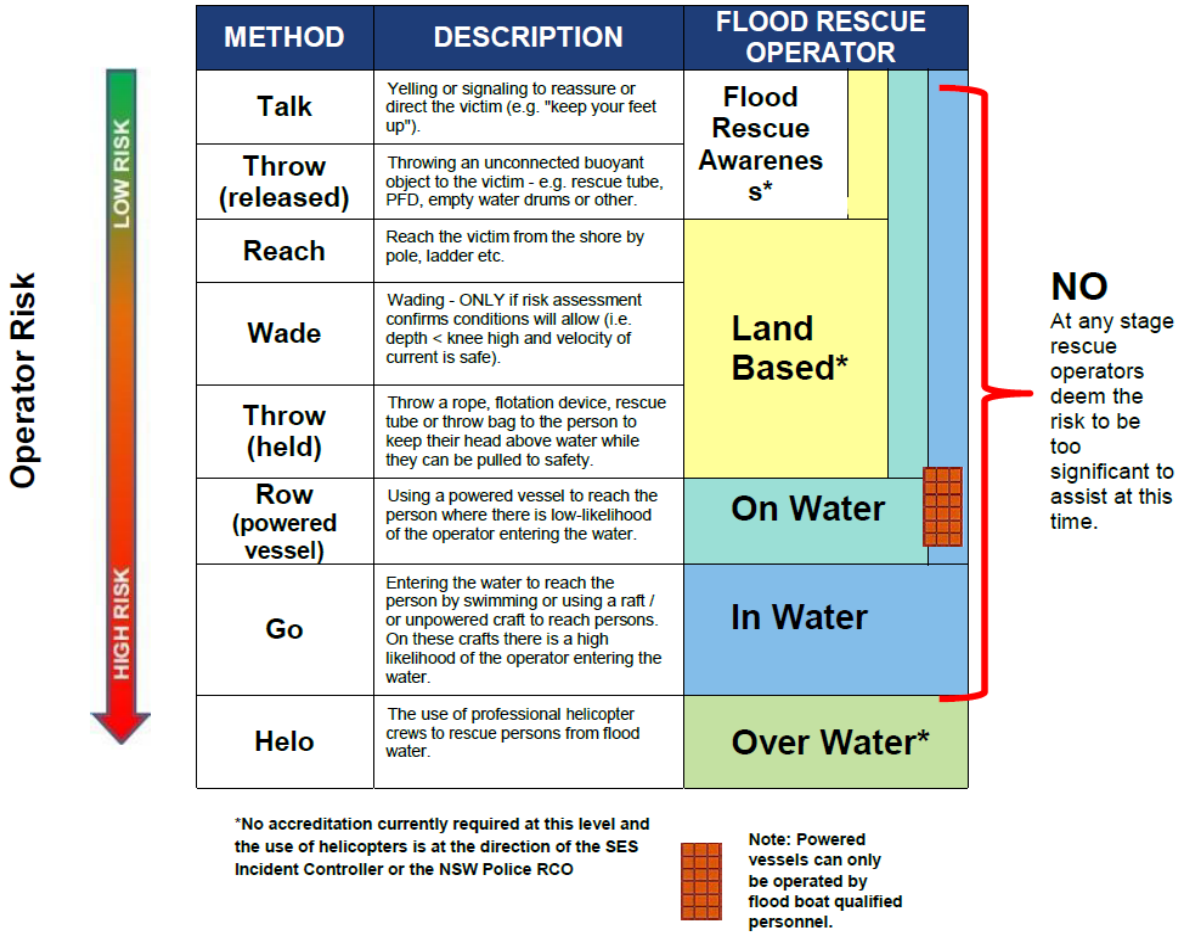


Figure 1 The Flood Rescue Risk Framework (State Rescue Policy, 2018)

3.3 People and Training

3.3.1 *Flood Rescue Awareness*

All members of NSW SES will be trained in flood rescue awareness to provide basic understanding and awareness of generic flood water hazards, the associated risks when working near flood water and basic actions that can be taken to help the victim without entering flood waters.

3.3.2 *Boat Operators*

Boat Operators are existing members, who have:

- Successfully completed all prerequisite training:
  - Fundamentals and Operate Communications Equipment, or
  - Job Ready
  - Participate in a Rescue Operation
  - Maintain Team Safety
  - First Aid, and
- Met the Fit for Task requirements of the relevant swim and fitness tests (as per Flood Rescue Fit for Task - Instructions) and
- Been assessed as competent in the NSW SES Flood Rescue Boat Operator course (and previous versions thereof) and

- Successfully completed the Roads and Maritime theory test before commencing their Flood Boat operations course and is reflected in NSW SES SAP

Note: Boat Operators must successfully complete the NSW SES Flood Rescue Fit for Task every three (3) years to maintain currency and retain their Boat Operator status.

Subject to a dynamic Take 5 risk assessment by the Team Leader before and during the task, Boat Operators may operate a NSW SES boat, or other boat engaged by NSW SES, in the following circumstances:

- On orphaned flood waters. “Orphaned flood waters” in this section means “water that is sitting outside the river or in a billabong with no flow or current but is aligned to a river in flood”
- On enclosed waters (subject to the conditions below) for general tasks, jobs and other appropriate activities including, but not limited to:
    - River search and recovery
    - Appropriately endorsed boat training activities
    - Appropriate support to other agencies
    - Community events

Boat Operators are not Flood Rescue Operators, and are **not** to operate boats in the following circumstances:

- Where a current Flood Warning, Severe Weather Warning, Severe Thunderstorm Warning or Marine Wind Warning is in place for that body of water, unless that warning is assessed by the Team Leader as having no unacceptable levels of risk affecting the particular section of that body of water intended for operations by the Boat Operator
- Where conditions are identified as having a heightened risk to a member by the Team Leader, such as a flood or flash flood, fast flowing or unusual water conditions or environments (even when no official event, bulletin, watch, warning or other advice exists), where poor visibility impacts the boat’s safe navigation, e.g. some night operations, etc.
- Any other circumstance that, in the opinion of the Team Leader conducting the risk assessment, may require the skills of a FRO “On-Water” risk assessments should cover a prognosis for the full duration of the intended task

In these conditions, a Flood Rescue Operator (On-Water) must be used.

3.3.3 *Flood Rescue Operators*

NSW SES has three levels of Flood Rescue Operators (FRO):

- Flood Rescue Operator Land-based – conduct rescues by working primarily from land (previously referred to as Level 1)
- Flood Rescue Operator On-Water – conduct rescues by working primarily on powered boats as outlined in flood rescue boat training (previously referred to as Level 2)
- Flood Rescue Operator In-Water – conduct rescues by working primarily in water and can use and operate unpowered watercraft (previously referred to as Level 3)

The three FRO levels:

- Align with the flood rescue risk framework
- Recognise that different training requirements, equipment, and operating procedures are required for each of the levels

The basic training for FROs are specified in the skillsets outlined in the *State Rescue Policy*. Although these sections detail current courses and competencies, earlier versions of courses and competencies are subject to the currency and RPL/RCC processes administered through the Zone Training Advisors.

3.3.3.1 Fit for Task

Before commencing training to become a FRO, members must undertake the following fit for task tests:

- The NSW SES Swim Test
- Fitness Assessment

These tests must be undertaken in accordance with the Flood Rescue Fit for Task Instructions.

3.3.3.2 Immunisation

Entry into flood waters can be dangerous and cold, as well as being contaminated with biohazards and sewage. All In-Water Operators should comply with all current immunisation requirements. For more information, contact the Work, Health and Safety Branch.

Floods can potentially increase the transmission of the following communicable diseases:

- Water-borne diseases, such as Hepatitis A, gastroenteritis, leptospirosis and melioidosis
- Vector-borne diseases, especially mosquito-borne diseases such as Barmah Forest Virus, Ross River virus and Dengue fever

The diseases most likely to be encountered from flood water-related incidents are:

- **Hepatitis A**. This virus is present in faeces and will be present in water contaminated by sewage. It has a variable incubation period of 15-50 days. Symptoms are usually abrupt producing fever, abdominal discomfort followed by jaundice.
- **Gastroenteritis**. This is caused by the ingestion of bacteria. Sewage contains large numbers of organisms, principally salmonella another bacteria present include Campylobacter, Shigella, E Coli and Listeria.
- **Blue Green Algae** (Cyanobacteria). This algae is frequently found in fresh water, particularly ponds and water-filled quarries. During summer periods of warm settled weather, they multiply and form a bloom on the surface of the water. These blooms look like jelly or paint and are normally blue green in colour although other variants of red, brown or black. The algae produce toxins, which vary in potency although ingestion of small quantities of concentrated blooms could be fatal.
- **Leptospirosis** (Weils Disease). This is a bacterial infection caused by an organism called Leptospires. There are two common strains of the bacteria, which are carried in the urine of rats and cattle. The urine contaminates any water including streams, rivers, canals, ponds and wet riverbanks. The likelihood of becoming infected is greater from stagnant or slow-moving waterways, particularly in high water. First signs of Weils Disease are a flu-like illness within 3 to 4 days. Early diagnoses and medical intervention is vital. Left unchecked the disease can be fatal.

Members who believe they have had exposure to contaminated floodwater should contact Work, Health and Safety Branch via safehold on 1800 737 647, and in the first instance seek medical assistance as appropriate.

For further information, refer to the NSW SES Work, Health and Safety Branch.

3.3.3.3 Flood Rescue Operator– Land Based

The minimum training competencies and non-competency based training courses that are captured in the *State Rescue Policy* are required for a Land-based Flood Rescue Operator are outlined below. Land-based Flood Rescue is not a stand-alone specialist accreditation.

Course Name	Agency Courses
PUAOHS002B Maintain safety at an incident scene	Or equivalent
PUASAR022A Participate in a rescue operation	
First Aid qualified as deemed appropriate by the agency	
AND	
PUASAR033 or PUASAR001 Perform Land-based Swiftwater and floodwater rescue and recovery	Or equivalent
OR	
Swiftwater Rescue Awareness (1 day) provided by Rescue 3	SRA Or equivalent
OR	
Demonstrate self-rescue skills in white water	Or equivalent
Apply River Crossing Skills	

3.3.3.4 Flood Rescue Operator– On-Water

The minimum training required for an On-Water Flood Rescue Operator are all the requirements of a Land-Based Flood Rescue Operator and additional competencies or training outlined below.

Course Name	Agency Courses
PUASES009A Undertake inland flood boat operations	Or equivalent
OR	
Surf Lifesaving IRB Operator (current)	
OR	
Certificate 2 in Maritime Operations (Coxswain) Up to a 12m boat	MAR2031

3.3.3.5 Flood Rescue Operator– In-Water

The skillset for a FRO In-Water consists of:

- All competencies and requirements for FRO Land-Based
- Competency & Non-competency-based training for this level is now available within the NSW SES as per the *State Rescue Policy*

In most cases In-Water Flood Rescue Operators hold the competencies and requirements for FRO On-Water, but this is not a requirement for accreditation through the State Rescue Board.

The minimum training competencies / and non-competencies as captured in the *State Rescue Policy* are required for an In-Water Flood Rescue Operator are all the requirements of a Land-based Flood Rescue Operator and additional competencies/training outlined below:

Course Name	Agency Course
Swiftwater Rescue Technician Level 1 provided by Rescue 3	SRT1 Or equivalent
OR	
PUASAR034 or PUASAR002 Undertake Swiftwater and floodwater rescue and recovery	Or equivalent
OR	
Demonstrate white water rescues and recoveries (SISOWWR403A)	Or equivalent
Perform complex white water rescues and recoveries (SISOWWR302A)	

Equivalent training means training that is aligned to Rescue 3 International training or National PUA equivalent. Note that Service RCC/RPL processes would apply.

Professional development for FRO In-Water includes, but is not limited to, the following training:

- Night training in flood rescue, at alternate venues artificial, or Natural environments
- Rescue from flooded vehicles
- Introduction of new rescue techniques or equipment within workshops & PD's
- Practice of techniques (e.g. throwing lines, inflatable rescue boat-based skills etc.) at pools or approved waterways (organised at Unit and/or Zone level) – this should be done at least annually, as per the State Rescue Board Policy

Given the level of risk, FRO In-Water must maintain currency in In-Water Flood Rescue as follows.

- Annually, as recorded in beacon:
    - Conduct at least one flood rescue that uses FRO In-Water skills, or
    - Assist as a course manager at external courses (e.g. for courses conducted at Penrith Whitewater Stadium) or trainer, support personnel within natural environments, or
    - Attend at least one professional development activity conducted or coordinated at State, Zone or Unit level, or
    - Attend a professional development course or workshop, exercise (e.g. night training, rescue from vehicles)

In addition to the annual requirements:

- Undertake the appropriate level of NSW SES Swim Test as specified in the Flood Rescue Fit for Task Instructions every three years
- Undergo refresher training, SWTIRN001 Flood Rescue Level 3 Refresher, at least once every three years. This is also counted towards the annual requirement in that year, as recorded in SAP LSO

If currency cannot be demonstrated for the above criteria over a three-year period, then the operator must undergo re-certification to maintain currency by attending recertification training or completing flood rescue activities that can be recognised by a Senior Operator.

3.4 Equipment and Clothing

Appropriate PPE and PPC must be worn at all times, in accordance with the *Personal Protective Equipment and Clothing Guideline* and as determined by a dynamic risk

assessment. This includes Personal Floatation Devices and helmets in warm and hot zones and wetsuits for in-water operations.

Equipment will be provided within the capacity of the NSW SES. The *State Rescue Policy* provides guidance for minimum equipment for operators and flood rescue accredited units.

3.4.1 *Personal Floatation Devices (PFDs)*

The use of PFDs when operating in or around water is accepted as a means to mitigate risk and is a critical component in ensuring the safety of persons when working in or on a boat, or in the “warm zone” where an identified heightened risk of falling into the water exists.

The NSW SES has provided the NSW SES Flood Rescue PFD (Force 6 and SOS) for:

- All FRO In-Water Rescue Operators as personal issue
- All flood rescue boats for use by boat crew
- All NSW SES vehicles

Refer to NSW SES *PFD Instructions* for more information on the NSW SES PFDs.

PFD 100+ (previously referred to as Type 1), including child PFDs, are used for passengers on flood boats.

All members of the NSW SES, when working in or on a boat, or close to a waters’ edge where an identified heightened risk of falling into the water exists, must wear an approved NSW SES PFD.

On-Water and In-Water FROs must carry PLBs and Radios attached to PFDs at all times where available when undertaking flood rescue activities in accordance with the *PLB Guideline*.

Risk factors that are recognised to cause a heightened risk in or near water are:

- **Nature of the activity** - this may contribute to the relative stability of the boat and increase the likelihood of unexpectedly ending up in the water. Examples include:
    - Standing in a boat
    - Working over the side of boats
    - Working close to the water’s edge
- **Size, design and inherent stability** of the boat – smaller boats require careful loading and use to reduce the risk of capsize, especially at night, in inclement weather or on flood waters where shallow water can occur unexpectedly and there is a heightened risk of collision with underwater obstructions or debris.
- **Environment** - geographical features, climatic circumstances, and local conditions in which boating activities are taking place, such as:
    - Strong currents and tidal flows
    - Wind or severe weather warnings issued by the Bureau of Meteorology
    - Restricted visibility, such as poor light or at night, fog or heavy rain
    - Cold water or air temperatures
    - Flood waters which are often shallow, contain underwater obstructions and are debris loaded
    - Remote areas where timely assistance may not be available
- **Vulnerable persons** lacking the ability to support themselves in water due to the person’s physical or psychological state, and non and/or weak swimmers. Any member who has not successfully completed the NSW SES swim test should be considered a vulnerable person.

- **Close to the water's edge** is defined as any location where it could be reasonably considered that it is possible for a person to accidentally enter the water.

In all circumstances where operating close to a water's edge, a dynamic risk assessment using Take 5 should be made as to the requirement to wear a PFD before commencing the activity.

3.4.2 *Flood Operator PPE & Equipment – Land-based*

To provide minimum flood rescue Personal Protective Equipment (PPE) and other required equipment for NSW SES members who have completed the Flood Rescue Awareness Course and/or have become FRO Land-Based, the following minimum flood rescue equipment will be on all NSW SES vehicles:

- 2 x NSW SES Flood Rescue SOS PFD's
- 2 x Throw bags
- 1 x Child PFD set
- 1 x Flotation Device (e.g. Rescue Tube)

For more detail refer to the Approved Equipment List (AEL).

3.4.3 *Flood Operator PPE & Equipment – On-Water*

FRO On-Water – additional equipment:

- Issue of a minimum of two (2) yellow flood rescue helmets within all flood rescue boats (these are not personal issue)

All NSW SES Flood Boats – additional minimum equipment:

- 3 x NSW SES Flood Rescue SOS PFD for crew (note this changes to 2 PFDs for Inflatable Rescue Boats (IRBs) and rigid hull buoyant boats of length 4.2m or less)
- 2 x Throw Bags
- 3 x PLB allocated to boats in accordance with the *PLB Guideline*

For more detail refer to the AEL.

3.4.4 *Flood Operator PPE & Equipment – In-Water*

Flood rescue equipment lists for In-Water FRO are provided through the NSW SES State Warehouse.

3.4.4.1 Wetsuit and Equipment Maintenance

Wetsuits are designed to hold a thin layer of water between the body and neoprene. Any flushing of this water will reduce the body temperature which may occur from poorly fitting, stretched or unsealed ends of the wetsuit. To ensure wetsuit integrity and health and safety are maintained:

- Take off wetsuits inside-out in a cold shower
- Only use shampoo or mild detergent and disinfectant to clean wetsuits, never bleach or harsh chemicals
- Rinse in cold or warm water after every use
- Hang wetsuits inside out to drip dry out of direct sunlight with zippers open
- Avoid sharing wetsuits
- Store wetsuits flat or hanging and in a cool dry location
- Degrease any grease from rescues from vehicles and rinse out the degreaser
- Never put a wetsuit in a washing machine, dryer or iron

- Repair any holes as soon as possible

All equipment should be maintained in accordance with manufacturer's instructions and washed appropriately after contact with floodwater, including wetsuits. Fire and Rescue NSW teams may be used for additional decontamination as required.

3.5 NSW SES Vessels

3.5.1 *Flood Rescue Boats*

NSW SES maintains a fleet of Flood Rescue Boats of various types for the various categories of flood rescue (persons, animals, emergency transport and medical transport) detailed in the NSW SES Vessel Fleet Guide. Any vessel that is used operationally and is exposed to elements (floodwater, dust, debris etc.) will require a post-operational event service to ensure it is inspected and returned to an operationally ready state.

Unpowered inflatable rescue rafts (currently the Ark Angel raft) have been provided to various Zones and Units. Refer to the *Rescue Raft and Accessories Instructions* for instructions on the use and maintenance of these rafts. Only members trained in the use of rafts as FRO In-Water Operators can use this equipment.

3.5.1.1 Flood Rescue Boat Equipment

Each type of flood boat has a list of minimum equipment to be carried on board in line with Schedule 8 of the *Marine Safety Regulation 2016* (for vessels operating in enclosed waters).

Equipment items, and their quantities, are detailed in the NSW SES Vessel Capability and Functional Specifications.

Flood Rescue Boats, and associated equipment, need to be maintained so that they meet operational readiness. Units, with the support from Zones, are responsible for maintaining and servicing allocated Flood Rescue Boats within NSW SES and manufacturer's guidelines. Any vessel or equipment used during operations must be inspected and returned to an operationally ready state.

3.5.1.2 Registration of Boats

All powered NSW SES Flood Rescue Boats have a unique vessel identifier (registration number) which is issued with the boat in accordance with the *Marine Safety (Domestic Commercial Vessel) National Law Act 2012*, Marine Safety (Certificates of survey) Exemption 2. NSW SES boats may also have a call sign consisting of letters and numbers issued by Fleet Branch, which is separate to the unique vessel identifier.

3.5.1.3 Use of Emergency Signals

NSW SES members are authorised to use emergency patrol signals (all-round blue and red lights) on their vessels when responding to emergencies (*Maritime Safety Regulation 2016 clause 7*).

Vessels fitted with these lights may activate them, provided all of the following apply:

- The vessel is operating in circumstances of 'an urgent patrol or duty arising from an accident, hazard or other emergency'

- Weather, location and vessel traffic have been considered by the vessel operator and the display of the emergency signal will not cause safety risks on the waterway
- The lights are clearly visible from every direction

Displaying an Emergency Patrol Signal on a vessel does not give that vessel any special right of way over other vessels, or any exemption from speed limits or other restrictions or rules governing navigation or waterway use.

3.5.1.4 Boat Driver Licences

NSW SES members operating NSW SES powered boats must have one of the following types of boat driver licences:

- A Statement of Attainment for the Flood Boat Operations competency (subject to the conditions below), or
- An RMS General Boat License (refer to the RMS website), or
- A commercial certificate of competency as a master, mate or coxswain

Holders of the RMS or commercial boat licences must also complete the NSW SES Flood Boat Operations course to operate flood boats.

On-Water Flood Rescue Operators driving NSW SES Flood Rescue Boats must always carry service SES ID and be able to produce a copy of their statement of attainment for the Flood Boat Operations or boat license when requested by Maritime Safety Officers or NSW Police Officers.

3.5.2 *Operating Areas for Flood Rescue Boat Use*

NSW SES Vessels are not to operate in Open Waters, including Limited Open Waters (Marine Safety Regulation 2016).

Several areas in Schedule 2 (as noted in relevant RMS Boating Maps) and Schedule 3 (as specified in the schedule) are excluded as enclosed waters when the wave height in any part of that area exceeds 0.5m from trough to crest. These are marked as 'Limited Open Waters', on RMS Boating Maps. These areas are often areas where rivers or bays meet sea conditions that can be particularly hazardous, such as large and steep waves, reduced visibility and winds.

In these locations where NSW SES boats cannot operate it may be possible to engage Marine Rescue NSW, Surf Life Saving NSW or NSW Maritime for assistance.

3.5.3 *Water Conditions*

The surface of the water in enclosed waters, e.g. some parts of rivers, shallow dams or storage areas, can become extremely rough in windy conditions. Waves are generally short and steep and can be as high as those encountered in coastal areas.

Flood Rescue Boats can encounter waves caused by turbulence and wind action on flooded areas. Operators should undertake a dynamic risk assessment and only work within their training and experience in that type of vessel.

NSW SES Flood Rescue Boats can be operated as follows:

Task group	Area of operation	Time of day
Training and general professional	Enclosed waters (including smooth waters and partially smooth waters)	Daylight

Task group	Area of operation	Time of day
development of NSW SES boat operators	**excluding areas marked as limited open waters on RMS boating maps**	Night training in smooth conditions
Flood (including flood rescue) operations	Floodplains covering enclosed waters and flooded areas including: Relatively high-water level which overtops the natural or artificial banks in any part of a stream, river, estuary, lake or dam, and/or local overland flooding associated with drainage before entering a watercourse. (Note that any vehicular or pedestrian access way is deemed to be an artificial bank). Note that flooded areas and floodplains do not cover limited open waters	Day or night
Inland waterway search and recovery operations Body recovery operations	Enclosed waters (including smooth waters and partially smooth waters) **excluding areas marked as limited open waters on RMS boating maps**	Day or night
Support operations to other emergency services, port authorities, boating races etc.	Enclosed waters (including smooth waters and partially smooth waters) **excluding areas marked as limited open waters on RMS boating maps**	Day Night subject to risk assessment

Note that in flooded areas that have waves (due to wind action and/or turbulence) and when operating in partially smooth waters, due consideration is to be given to the appropriate level of training and type of boat.

3.6 NSW SES Motor Vehicles

3.6.1 *Using NSW SES Motor Vehicles in Flood Operations*

NSW SES does not currently have dedicated high clearance vehicles for flood operations, all NSW SES vehicles carry the minimum equipment for land-based flood rescues and may be used in support of flood operations. A Zone or Unit may reserve one or more vehicles to be dedicated to flood rescue (e.g. to transport In-Water teams).

At all times, NSW SES vehicles and drivers are subject to the provisions of the *Safe Driver Guideline*.

3.6.2 *Driving NSW SES Vehicles Through Flood Water*

The NSW SES maintains a firm policy of advising the public to never walk, ride, drive or play in flood waters. This policy stance should be maintained during the execution of flood rescues and any use of SES vehicles in the flood rescue environment must be carefully risk assessed.

Driving through flowing water across a roadway or through a river crossing poses several specific risks to drivers:

- Moving water can easily push a vehicle, including heavy trucks, off the roadway or crossing. As water depth increases, the greater the surface area exposed to moving water, and the greater the forces exerted on the vehicle. Faster flowing water multiplies this effect
- Road surfaces can become slippery, such as at a river crossing, where friction is further reduced as water, sand or mud replaces the frictional forces that hold the vehicle to the road.
- As little as 300mm of flowing water can move most cars off the road.
- Flood waters can scour the road surface or wash away whole sections of the roadway, which may not be visible.

Driving through flood water is a high-risk activity. It can cause major damage to the vehicle and may result in serious injury or death. Risk assessments should be undertaken prior to entering flood water and repeated if/as situations change.

If approaching a flooded road, undergo a risk assessment including:

- Is there an alternative?
- Can you see the bottom of the entire extent of the drive?
- Is there potential for a deeper section to sweep you off the road (e.g. on a bridge or causeway)?
- Is the water moving fast?

In a life-critical situation, if there is no other alternatives, drive in the middle of the road (highest point). Stop or take extreme care if you cannot see the lane markings, as this may indicate deep water or changes in road surface, such as where the road has washed away.

Any vehicle that is used in floodwater above axle height should be inspected by a licensed mechanic. A 'post operational event' service should be undertaken to ensure that vehicle remains in an operationally ready state.

3.6.3 *Using NSW SES Vehicles in a Flood Rescue*

There may be occasions where it may be necessary to use vehicles entering floodwaters to assist in a flood rescue.

As a rule, the following should be considered, as part of the risk assessment, when using vehicles in the execution of flood rescues:

- Vehicles of any type should only be used as a last resort in flood rescues
- Never move victims from a safe place through an unsafe place unless changing conditions warrant it.
- The wading depth specified by the manufacturer for a given vehicles is not a reliable indicator that it is safe to operate in this depth of floodwater, as there are many factors that determine the safety and stability of a vehicle in water
- The risk assessment before using a vehicle for flood rescue should include:
    - The buoyancy effect on the vehicle
    - The depth and velocity of flood waters (refer to the Depth x Velocity diagram in Appendix 1)
    - A visual or other evaluation of the condition of the road/ground surface below the flood water (e.g. potentially washed out culvert, subsidence of the road surface)
    - Risk of further damage to the road surface

Using a vehicle does not negate the need for 'normal' flood rescue safety strategies being in place.

3.7 Communications

3.7.1 *Radio Communications*

Team Leaders are to ensure, as far as possible, back-to-base communications are maintained such as ‘boat following’.

Normal Zone/Unit radio channels or those specified in Incident Action Plans (IAPs) should be used by the Team Leader to communicate back to the Unit or Zone Headquarters.

Refer to the *Flood Rescue Management Procedure* and the relevant *Internal Zone Radio Communications Plan* for all external and internal communication channels.

NSW SES radios are used for communications between NSW SES and other agency flood rescue resources on site through allocated ESO channels as required. They can also be used to communicate with rescue helicopters assigned to the flood rescue incident.

PFD Instructions details how to use NSW SES handheld radios with the NSW SES Flood Rescue PFD.

3.7.2 *Boat Following*

Where Flood Rescue Boats are operating for extended periods of time well away from supporting vehicles (for training and operations), the Unit, Zone or State Operations Centre should track the movement of the boat and crew status through frequent communication with the boat operator, known as “boat following”. This should occur at least once every 30 minutes, and accurate records should be made of the times and details of the contacts during boat following.

3.8 Identification Standards

3.8.1 *Site Control Identification*

To enable clear identification of the Flood Rescue Commander, a tabard or other form of identification should be worn where available.

3.8.2 *Operator Identification*

Flood Rescue Operators should wear the colour helmet according to their level of training. To ensure teams and individuals are correctly tasked and recognised at the incident according to their capability, as outlined in the table below.

Role	Helmet Colour
Flood Rescue Operator In-Water	Red Flood Rescue Helmet
Flood Rescue Operator On-Water	Yellow Flood Rescue Helmet

3.8.3 *Identification for Night Operations*

During the night and periods of poor visibility, teams should be identifiable and locatable using either chemical light sticks or battery-operated equivalents. This light should be affixed to the helmet:

- Firstly, to avoid the light being a distraction should it be wrongly attached to the NSW SES Flood Rescue PFD
- Should the wearer enter the water the light will always be visible as the head is above water and the NSW SES Flood Rescue PFD is mostly below the water line

Ropes used as rescue throw lines should have a bag marked with a **green** light, so this is more easily located if deployed into the water.

Personnel and equipment will be identifiable as follows:

Role	Light Colour
Flood Rescue Operator In-Water	Red light
Flood Rescue Operator On-Water	Yellow light
Flood Rescue Operator Land-based	Green light

Team leaders should wear the appropriate colour light at night to match their team skills, i.e. an In-Water flood rescue team leader should wear a red light and a FRO Land-Based wear a green light. This is to avoid confusion with personnel wearing headlamps and torches which are predominantly white.

All personnel should have access to a headlamp to assist with personal task lighting.

Each team should use search lighting (using existing NSW SES lighting equipment) to enable the team to illuminate an area sufficient for carrying out searches and navigation of both urban and rural areas on foot or by boat.

Consideration should also be given to the use of thermal image cameras (if available) to assist with navigation and searches. The use of night vision devices may also assist with night operations.

Caution should be exercised in the use of lighting when working with helicopters at night. The aircrew could be using night vision goggles which will be adversely affected by powerful search lights shining up into the sky directly at the helicopter.

3.9 Flood Rescue Teams

Flood rescue may involve the integrated use of one or more of the following:

- **Land**-based resources (to provide upstream , and downstream spotters , search support and communications as part of the Risk assessments etc.)
- **Water**-based resources (boats/watercraft with FRO On-Water and/or FRO In-Water personnel or in the water, etc.)
- **Air** resources (e.g. rescue helicopters, helicopters used to provide intelligence on the flood rescue site from the air, or move In-Water operators to task locations etc.)

Flood Rescue Teams can be deployed in various combinations of Land-based, On-Water and In-Water to meet the wide variety of flood rescue situations encountered in flood operations.

Table 1 summarises the composition of deployable Flood Rescue Teams.

Table 1 Flood Rescue Team Composition

Team	Composition	Support
Land-Based Flood Rescue teams	Consisting of at least 2 FRO Land-Based	All operational vehicles carry the minimum equipment for land-based flood rescues
On-Water Flood Rescue teams	Consisting of at least 2 FRO On-Water	The crew normally operates a Flood Rescue Boat. Most operational vehicles have towing capacity and can be used to transport boats to launching points. Where resources allow, the Zone or Unit may allocate a dedicated vehicle for the duration of a flood event.
In-Water Flood Rescue teams	Consisting of one of the following combinations: - 1 FRO In-Water supported by 1 FRO Land-Based and/or FRO On-Water - 2 FRO In-Water - 2 FRO In-Water supported by 1 FRO Land-Based or 1 FRO On-Water	Most operational vehicles could be used transport an In-Water Flood Rescue Team. Where resources allow, the Zone or Unit may allocate a dedicated vehicle for the duration of a flood event.

These resources may be sourced from the NSW SES, other accredited flood rescue agencies or other support bodies/agencies as approved (refer to the *Flood Rescue Management Procedure*).

Helicopters can be a useful resource to support land and water-based flood rescues as identified in the State Rescue Policy. All requests for aviation assets, including down the wire technicians, must be made through the State Air Desk, in accordance with the *NSW SES Aviation and Remotely Piloted Aircraft System (RPAS) Procedure.* Aviation resources such as rescue helicopters and other aviation assets may also be used to support or conduct the flood rescue. Examples include using:

- A helicopter with a FRO In-Water to provide enhanced air observation to flood rescue resources on land and water
- A helicopter to transport resources to a flood rescue scene
- Lift capable helicopters to transport an IRB to the flood rescue site
- Rescue helicopters with winch capability and qualified down the wire technician to conduct a rescue, where approved

The use of aviation resources will be dependent on a range of factors including weather conditions, availability of night or IFR rating, availability of landing areas, etc.

3.10 Flood Rescue Management

Flood Rescue Management will be consistent, scalable, effective and managed in accordance with AIIMS principles.

All requests for flood rescue assistance will be categorised, triaged and prioritised based on risk to ensure the most effective use of resources in accordance with the *Flood Rescue Management Procedure*.

If an area of operations is established, the Incident Controller will establish a Flood Rescue Cell to manage flood rescues in the most appropriate location, in accordance with the NSW SES *Flood Rescue Management Procedure*.

3.10.1 *Control, Command and Coordination*

A designated NSW SES Team Leader will take control of the team attending specific flood rescue incidents.

The Flood Rescue Commander:

- Has overall responsibility to control the flood rescue incident and determine the priorities and outcomes
- Reports through to the NSW SES Flood Rescue Coordinator (if that position is established) or the relevant NSW SES Operations Officer or NSW SES Incident Controller
- Maintains active coordination and liaison with all other agencies present at the site

The various attending agencies each retain command of their resources.

Flood rescues can be controlled at site level from:

- Land – typically for flood rescues resulting from people driving, walking, wading or riding through flood waters
- Water – typical for flood rescues involving flood rescue boats working in flood waters well away from land e.g. rescues of people from flooded homes
- Air – for flood rescues conducted solely by rescue helicopters

3.10.1.1 Site Control from Land

These types of flood rescue often include multiple flood rescue and other resources operating initially from land.

The AIIMS structure will be used for flood rescues controlled from land by the NSW SES Commander.

3.10.1.2 Site Control on Water

Where flood rescue boats are operating well away from land (i.e. in the floodplain) the Boat Team Leader will be the Flood Rescue Commander.

Where two or more flood rescue boats are working together to affect a flood rescue, then one of the team leaders is to assume the role of the Flood Rescue Commander.

Where a helicopter is providing support to flood rescue boats the helicopter will work under the overall control of the Flood Rescue Commander who may direct the tasking of the aircraft. The final decision on whether to perform the task will rest with the pilot following their assessment of the task.

3.11 After Action Reviews and Debriefs

At the completion of the operation, all issues, opportunities for improvement and actions to sustain should be raised during the After Action Review (AAR) process. All agencies involved must be invited to participate in the AAR. Refer to the Incident Management Framework for further information. The Incident Controller should also consider the need for hot and cold

debriefs, particularly where fatalities occur. Critical incident (CISP), peer support and chaplaincy can be contacted for support if required through 1800 626 800.

4. Roles and Responsibilities

4.1 Director Operational Capability and Training

Has overall responsibility and accountability for ensuring this document is current and supports the objectives of the NSW SES.

4.2 Assistant Commissioners, Regional and Metro Operations

Responsible for the implementation, communication and adherence to this document by the Zones under their authority.

4.3 Manager Operational Communications

Responsible for the accreditation process and the implementation of this document within the SOC, including the alignment of supporting processes.

4.4 Capability Branch

The Flood Operations and Rescue Capability Development Group advises and makes recommendations to the Director of Operational Capability and Training. The Capability Branch coordinates the development, implementation and management of the decisions regarding the services flood rescue capability, including this document.

4.5 Zone Commanders

Responsible for the implementation of this document in their Zone and the development and maintenance of the Zone flood rescue capability.

4.6 Local and Unit Commanders

Responsible for ensuring accredited Units meet the State Rescue Policy requirements and notify the SOC when units are unavailable/available. They also are responsible for ensuring personnel in their area are aware of and adhere to this document.

5. Related Legislation and Documents

- *Marine Safety Regulation 2016 (NSW)*
- *State Emergency and Rescue Management Act 1989 (NSW)*
- *State Emergency Service Act 1989 (NSW)*
- *Work Health and Safety Act 2011 (NSW)*
- *Work Health and Safety Regulation 2017 (NSW)*
- *Workplace Injury Management and Workers Compensation Act 1998 (NSW)*
- *Marine Safety (Domestic Commercial Vessel) National Law Act 2012*
- State Rescue Policy v4 2018
- State Emergency Management Plan (EMPLAN)

- NSW State Flood Plan

5.1 NSW SES Policy Documents

Role	Before Operations	During Operations

Field Personnel	• NSW SES Flood Operations Policy
	• NSW SES Accreditation Procedure
	• NSW SES Flood Rescue Field Procedure
	• NSW SES Work Health and Safety Policy
	• NSW SES Aviation and Remotely Piloted Aircraft System (RPAS) Procedure
	• Flood Rescue Instructions:
	  ○ Flood Rescue Fit for Task
	  ○ Personal Floatation Device
	  ○ Rescue Raft and Accessories
	  ○ Reach and Rescue Pole
	  ○ Inflatable Hose Kit
	• Flood Rescue Training
		• Flood Rescue Field Procedure
		• NSW SES Work, Health and Safety Operational Fatigue Management Procedure
		• Flood Rescue Instructions:
		  ○ Rescue Raft and Accessories
		  ○ Reach and Rescue Pole
		  ○ Personal Floatation Device
		  ○ Inflatable Hose Kit

IMT Personnel	• Flood Operations Policy • NSW SES Incident Management Framework • Flood Rescue Management Procedure • NSW SES Work Health and Safety Policy	• NSW SES Incident Management Framework • Incident Management Documentation, Recording and Storage - Operational Instruction • Emergency Service Organisation Liaison Channel Guide • Relevant Internal Zone Radio Communications Plan • Flood Rescue Management Procedure • Work, Health and Safety Operational Fatigue Management Procedure

6. Support and Advice

Advice and clarification about these procedures can be obtained from the following:

- Local/Unit Commanders
- Managers or Zone Commanders
- Capability Branch, capability@ses.nsw.gov.au

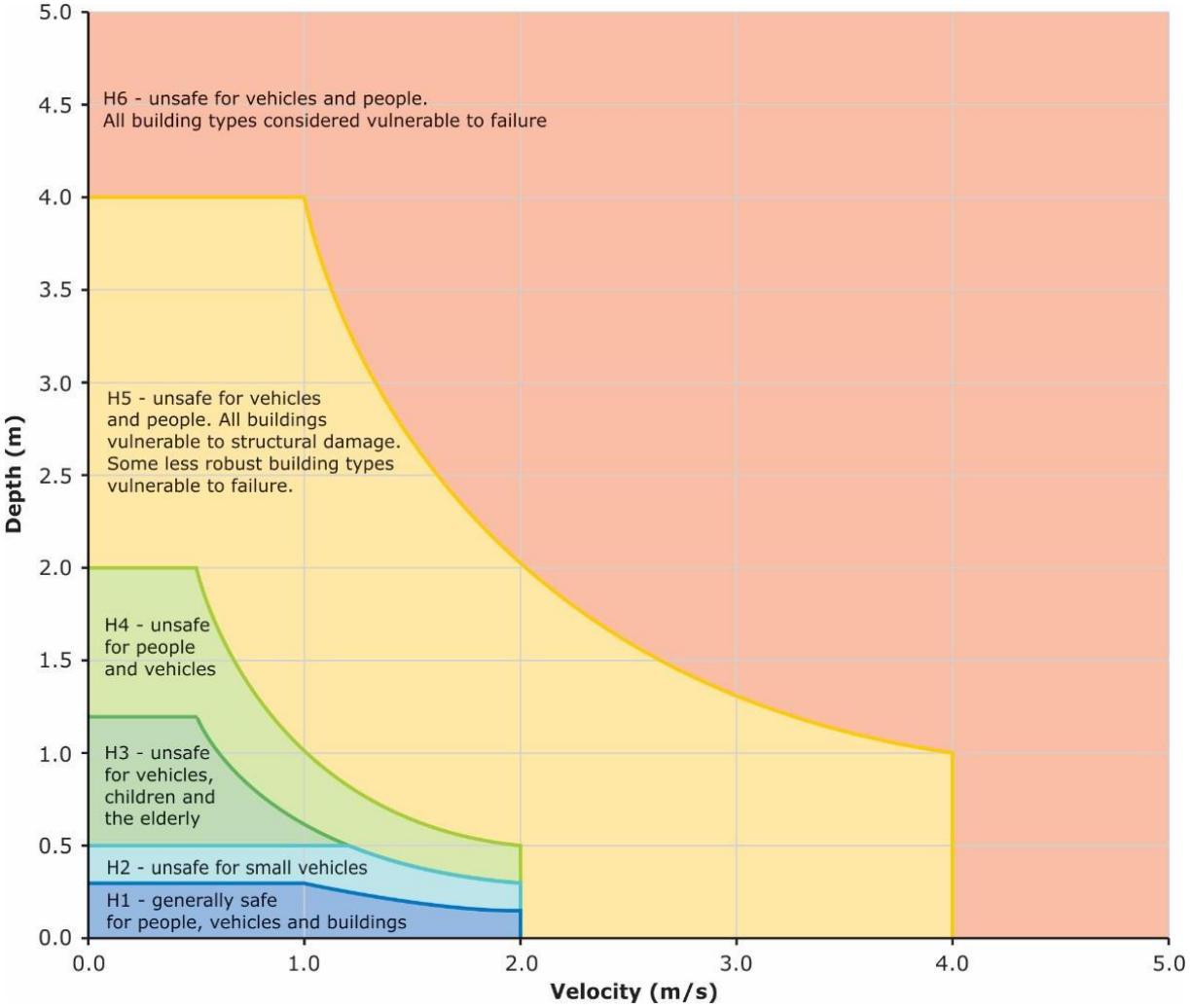
7. Definitions

Term	Definition
Accredited	Units that have received Accreditation, the formal approval by the Minister to undertake rescue in NSW. Once accredited that Unit is obliged to respond in accordance with their accreditation 24 hours, seven days a week.
Area of Operations	In accordance with AIIMS (2017), a geographic area may be defined/described to manage a specific operational situation. If an area of operations is established the consequence to other political and organisational boundaries need to be considered.
Authorised	Those authorised by emergency services agencies to perform specific tasks.
Combat agency	The agency identified in the State Emergency Management Plan as the agency primarily responsible for controlling the response to a particular emergency.
Command	Internal direction of the members and resources of an agency in the performance of the organisation's roles and tasks (by agreement and in accordance with relevant legislation). Command operates vertically within an organisation.
Control	The overall direction of the activities, agencies or individuals concerned. For the purpose of this policy, authority for control may carry with it responsibility for tasking other emergency management agencies in accordance with the needs of the situation. Control relates to the situations and operates horizontally across organisations.
Co-ordination	Bringing together of agencies and individuals to ensure effective emergency or rescue management but does not include the control of agencies and individuals by direction.
Enclosed waters	Enclosed waters means navigable waters within the land mass of New South Wales such as inland and coastal rivers, inland and coastal lakes and similar waters, and enclosed coastal bays and harbours and includes the waters specified in Schedules 2 and 3 of the Marine Safety Regulation 2016. Schedule 2 - Partially Smooth Waters, includes various harbours and bays. Schedule 3 - Smooth Waters, lists various lakes, bays, rivers and also includes: •All other coastal navigable waters (such as rivers, creeks, lakes and lagoons) except those listed in Schedule 2. •All inland navigable waters (such as rivers, lakes and dam waters). Smooth waters and partially smooth waters are commonly defined as follows:

Term	Definition
	•Partially smooth waters - 'waters where the significant wave height does not exceed 1.5 meters 90% of the time' •Smooth waters - 'waters where the significant wave height does not exceed 0.5 meters for 90% of the time'. Note that Schedule 3 also includes alpine waters by definition. Alpine waters means: (a) The waters of: (i) Lake Burrinjuck, (ii) Lake Eucumbene, (iii) Lake Jindabyne, (iv) Khancoban Pondage, (v) the Swampy Plains River, (vi) Mannus Lake, (vii) Googong Reservoir, (viii) Blowering Reservoir, (ix) Pejar Dam, (x) Yass River, (xi) Lake Oberon, and (b) All navigable waters within the boundaries of the Kosciuszko National Park.
Flood	Defined in the NSW State Flood Plan (a Sub-plan of the NSW EMPLAN) as follows: *"Relatively high-water level which overtops the natural or artificial banks in any part of a stream, river, estuary, lake or dam, and/or local overland flooding associated with drainage before entering a watercourse, and/or coastal inundation resulting from super-elevated sea levels and/or waves overtopping coastline defences."* Note that any vehicular or pedestrian access is deemed to be an artificial bank
Flood Rescue	Flood rescue is to be contrasted with evacuation: • Evacuation is the pre-emptive movement of people and animals from areas that may be inundated by flood waters • Rescue is the reactive movement of people (and/or domestic animals) once flood waters have impacted the area See also, Rescue.
Flood Rescue Area of Operations	Formally established geographical area for the co-ordination and management of flood rescues. It is generally distinct to, and within, an area of operations for the incident management team.
Flood Rescue Cell	The area responsible for flood rescue co-ordination and tasking. In the AIIMS structure it comes under the 'Operations' functional area.
Limited Open Waters	Areas marked as "limited open waters" in RMS boating maps.
Open Waters	Open waters means navigable waters that are not enclosed waters.
Powered boat	Any boat powered by a motor.

Term	Definition
Rescue	Defined in the NSW *State Rescue Policy* as: 'the safe removal of persons or domestic animals from actual or threatened danger of physical harm'
Victim	For the purpose of the NSW *State Rescue Policy*, this document and associated documents, means the person or animal that is being rescued

Appendix 1 – Depth and Velocity Guidelines



Source: **Australian Emergency Management Handbook: Managing the Floodplain: Best Practice in Flood Risk Management in Australia, (AEMI Handbook 7, 2014)**

Document Control Sheet

Title	*Flood Rescue Field Procedure*
Current Version #	3.0
Document Approval Status	In Effect
Directorate	Operational Capability and Training
Branch/Zone/Unit	Capability Branch
Document owner	Senior Manager Capability
Classification	For Official Use Only
Effective date	11/08//2020
Next Review Date	11/08/2025
Rescinds	Flood Rescue Guidelines
Key Words	Flood Rescue

Version History

Version #	Version creation date	Author/Position	Summary of changes
1.0	29 June 2012		Initial Release
2.0	5 December 2019		Approved
2.3	July 2019	Policy and FORCDG Focus Group	Updated references to Marine Safety Regulation and depth velocity guideline in Appendix 1
2.4	May 2020	Operational Policy Officer	Feedback included, in line with the Aviation and RPAS Policy, In-water, Land-based and On-water references updated, Regions updated to Zones, links and document references updated
2.5	August 2020	Operational Policy Officer	Feedback addressed from all members and Work Health Safety, including a specific section on hazards and risks

Approvals

Name	Title	Date	Version signed off
Michael Hammond	Senior Manager Capability	06/08/2020	3.0
Dean Storey	Director, Operational Capability and Training	06/08/2020	3.0
Daniel Austin	Deputy Commissioner, Operations	11/08/2020	3.0

Quick Reference Manual

Flood Boat Safety Management System

NSW STATE EMERGENCY SERVICE

This manual is the second tier of the three-tiered **Safety Management System (SMS)** required by law for all NSW SES vessels. The first tier is the SMS sticker fitted to all NSW SES vessels that links to this document via a QR code. The third tier consists of the various policies, training materials, instructions and systems (e.g. Beacon) that govern the safe operation of NSW SES vessels.

This manual collates and summarises the key safety messages contained in these underlying documents, and is optimized for review in the field on mobile devices prior to or during a deployment.

The safety sticker and this manual may be shown to a Marine Safety Inspector to demonstrate carriage of a SMS, and further detail on these third-tier documents can be provided at a later stage if requested.

Contents

Quick Reference Manual

Flood Boat Safety Management System

NSW STATE EMERGENCY SERVICE

1. PRE-DEPARTURE CHECK

Check before leaving the Unit:

- Safety equipment (see below), operational equipment, keys and safety lanyards are on board and stowed correctly
- Fuel, oil and battery charge levels are adequate
- Vessel is secured to the trailer, motor is in towing position and trailer is securely hitched to the tow vehicle (with safety chains attached and jockey wheel stowed)
- Trailer lights and brakes are functioning correctly and tyres (including spare) are correctly inflated

Check before launching the vessel:

- Bungs are inserted
- Motor supports are removed and motor in position for launch
- Trailer lights are removed (if necessary)
- Painter lines attached to vessel where required for safe launch
- Battery isolator switches are on and fuel lines are connected

Safety equipment required on class 2, 3 and 4 Flood Boats*:

- Lifejackets for each occupant
- Fire extinguisher
- Secondary means of propulsion such as a paddle
- Bailing bucket or bilge pump
- Anchor, chain and line
- First aid kit
- Radio and Personal Locator Beacon(s)
- Waterproof floating torch and sound signal (e.g. whistle, horn)

Class 1 vessels have alternate arrangements due to their limited capacity, with safety equipment worn by operators rather than carried in the vessel.

2. BEACON LOGBOOK ENTRY

All vessel usage must be logged in Beacon, both for operational activities (against the Request for Assistance) and for training or other activities (under Non-Incident Time Capture).

This is required under Commonwealth legislation, as these Beacon records form our mandatory vessel logbook system.

Your Beacon report must include (in the 'Notes' field if necessary):

- Your Vessel Call Sign
- Names of Master/Team Leader and all crew on board
- Date and time of departure and anticipated return
- Location of usage (e.g. waterway) and launch site
- Activity or tasking (e.g. rescue, training, resupply)

If you are in an area where there is no phone/internet reception, use your radio to provide preliminary details to your Unit or the SOC, and enter details into Beacon later.

All vessel Masters and Operators must be under 0.02

3. TAKE 5 RISK ASSESSMENT

Complete a 'Take 5' risk assessment (in Beacon where possible) and continually assess risk during the deployment. The Team Leader is responsible to ensure this dynamic risk assessment is conducted, and should follow these steps:

- Stop, stand back and observe
- Think through the task
- Identify hazards
- Assess and control risks
- Continually monitor risks

Typical factors that should be considered in assessing risk prior to and during vessel usage include:

- Current and predicted local weather conditions, visibility and other environmental factors
- The activity or task, and the suitability of the vessel for the activity or task in the prevailing conditions
- The experience and ability of the crew
- Capacity of the vessel and anticipated load (weight and type, how to secure etc.)

NSW SES vessels must be operated with at least two qualified members on board (except launch & retrieval)

4. CONDUCT A CREW BRIEFING

It is a legal requirement for the Team Leader/Master on a NSW SES vessel to conduct a crew safety briefing prior to each usage or trip. The following should be addressed when conducting a briefing:

- Vessel features, safety gear and storage locations
- Seating locations, grab handles and safely moving about the vessel
- Crew member responsibilities and what to do in an emergency

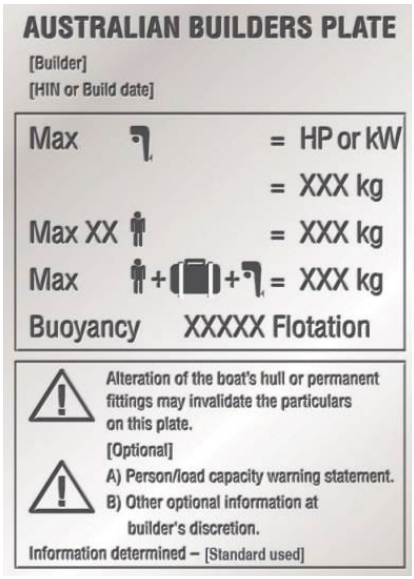
Additionally, the Team Leader may need to brief the crew on the task, location and conditions. This can be done in the SMEACS format (Situation - Mission - Execution - Administration - Command - Safety).

5. MAINTAIN RADIO CONTACT

For the safety of the crew and for situational awareness, radio contact must be maintained with Incident Control (where established), the Unit or the State Operations Centre. At the conclusion of the task when the flood boat is off the water this must also be reported by radio.

6. SAFE CARRYING CAPACITY

A capacity plate or sticker is fitted to every vessel showing the maximum number of people or weight capacity it can carry. Heavier loads should be secured to ensure vessel stability is not compromised.



You must not exceed the legal capacity of the boat unless it is a sudden or extraordinary emergency where not acting may cause loss of life. Even in these situations the Team Leader must **Stop and Take 5 before acting.**

7. OPERATE TO YOUR QUALIFICATIONS

Vessels must have a Master responsible for the operation of the vessel and safety of the crew. Usually this will be the Team Leader, provided they hold a NSW SES Flood Boat Certificate of Attainment. If the Team Leader does not hold this qualification the function of vessel Master must be delegated to a team member who does hold it. At such times the Master is in command of the vessel, and should work with the Team Leader to safely support the overall operation.

The Master is responsible for the command and safe operation of the vessel and for complying with this safety management system and relevant marine legislation.

The Master may delegate the task of driving the flood boat to another qualified Operator, or may be in the process of instructing a member being trained for this qualification. An Operator is responsible for driving the boat safely, following the directions of the Master, and complying with relevant marine legislation.

All crew members are responsible for following the directions of the Team Leader, reporting any issues or risks to the Team Leader and working safely to their level of training.

8. OPERATE SAFELY AT ALL TIMES

Vessel Masters must fulfil general safety duties under marine legislation such as ensuring the safe operation of the vessel, complying with this SMS, taking reasonable care of persons and not placing persons at unreasonable risk. This includes operating within the operational and environmental limitations of the vessel design and category, as outlined in the NSW SES Fleet Guide.

Always operate a vessel safely with respect to waterway conditions and vessel characteristics, travel at a safe speed for the conditions and maintain a proper lookout. Check weather forecasts to ensure you are prepared for potential changes in weather conditions that may impact on the activity and/or the safety of the vessel.

NSW SES vessels must not operate in open waters (i.e. offshore or on coastal bars). Check NSW Maritime boating maps for open water limits in coastal areas.

9. REPORTING INCIDENTS

If an incident occurs:

- Secure the vessel and occupants and render first aid where necessary using the on-board first aid kit
- If you are in immediate danger, call 000 or use radio to request emergency assistance through the State Operations Centre
- Where neither of these is available, activate a personal locator beacon and use any other means available to attract attention
- If assistance is required but there is no immediate danger, contact the State Operations Centre for assistance from another Unit or from NSW Marine Rescue where available (or call them directly on 02 9450 2468).

All safety incidents, including near misses, must be reported to NSW SES WHS Branch through Safehold on **1800 SES OHS** (1800 737 647) as soon as possible, and to the relevant Zone Command. This is critical to meet legislative obligations, ensure the welfare of members and enable improvement of assets, equipment, policy and training.

Some incidents must also be reported to the Australian Maritime Safety Authority. Check the AMSA website or seek advice from Fleet or Capability where necessary.

Consider engaging the Incident Support Program (1800 626 800) to support members following an incident. This can be arranged in advance for immediate support at the conclusion of a difficult task.

10. MAINTENANCE AND READINESS

After use, flood boats should be refueled and checked over to ensure they are ready for their next deployment (refer to section 1 above for items to check). PLBs and torches should be tested, and charge indicator gauges on fire extinguishers should be checked.

Bungs should be removed to allow bilges to drain. Vessels operated in salt water it should be washed down with fresh water and engines flushed out. Flood boats should be stored ready for deployment with batteries switched off and hatches open to allow air to circulate.

After a prolonged deployment vessels, engines and trailers may require servicing. Any issues requiring repair or maintenance must be rectified as soon as possible and reported to Fleet where necessary.

Further elements of this Safety Management System
The third tier of this SMS consists of these documents available on MySES:
NSW SES Flood Operations Policy
NSW SES Flood Rescue Field Procedure
NSW SES Flood Boat Operations Learner Guide
NSW SES Field Team Leader Learner Guide
NSW SES Beacon Take 5 Safety Management Sheets Guideline
NSW SES Safety Management System
NSW SES WHS Risk Management Procedure
NSW SES Personal Locator Beacon Guideline
NSW SES Vessel Fleet Guide

Further information
Australian Maritime Safety Authority: *amsa.gov.au*
NSW Transport Maritime website: *rms.nsw.gov.au/maritime*