



National Marine Safety Committee

The National Marine Guidance Manual

GUIDELINES FOR RECREATIONAL BOAT OPERATOR COMPETENCIES

Edition 1 – November 2000

Manual 4 of the NMGM

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BACKGROUND

The National Marine Safety Committee (NMSC), which comprises representatives of all Australian government marine safety agencies, was established under an Intergovernmental Agreement to introduce a national marine safety system. The goals of the NMSC include the development of common standards for operators of vessels and creating a system, which provides for the safety of those operators and other persons who use vessels.

In Australia, there has been no national system established for the education, training or licensing of operators of recreational boats. Of the marine safety agencies in Australia, only those in Queensland, New South Wales, Tasmania, Victoria and South Australia currently require operators of recreational boats to be licensed. These licensing systems use varying standards and generally apply to mechanically powered recreational boats.

Formal education and training in the operation of recreational boats is voluntary and courses are generally developed and administered by non-government boating organisations. While some courses are aimed primarily at providing prerequisite training for participation in club events or search and rescue activities, a number provide training for the general boating public. In some instances, courses are accredited with the Australian National Training Authority (ANTA).

While all government marine safety agencies have, on an individual basis, established various initiatives to improve the safety of recreational boating, all have expressed support for a uniform national approach to this issue.

There is also growing support from the general public and the recreational boating community itself for a system that requires persons to possess (and be able to demonstrate) a knowledge of the minimum competencies for safe boat operation and boating safety, prior to being allowed to operate a recreational boat.

NMSC published in January 2000 "Principles for A Common Standard for Recreational Boat Operator Licences", which provided a basis for mutual recognition of licences throughout Australia and set out principles for consistency of licensing systems.

NMSC also recognised that there was a need to develop some guidelines for minimum competencies, which would underpin education, training and licensing of operators of recreational boats.

The core competencies were developed by the University of Technology, Sydney for the NMSC, after extensive national consultation with and input by a diverse range of marine agencies, recreational boating groups, search and rescue bodies, individuals, boating safety trainers and educators and boat manufacturers and distributors.

Although there is extensive national and international literature, courses and licence assessment systems, NMSC was not able to identify the existence of a structured set of competencies. Accordingly, these competencies have been developed to conform to ANTA best practice guidelines.

Aim

The aim of these guidelines is to meet the objective of improved safety for those persons, who operate recreational boats, their passengers and other water users.

The guidelines represent a minimum set of core competencies, which have been adopted by all government marine safety authorities to contribute to and promote:

- Safe use of waterways , and
- Awareness of boating safety

The expected outcome is that over time all recreational boat operators in each State and Territory will have common minimum competencies.

It is not intended that these competencies would form a common template for education programs, training courses or the assessment of operators of recreational boats. The competencies are about the underpinning knowledge. The method of learning or demonstrating the competencies is achieved through the development of training or education course curriculum or assessment methods, such as licence tests. These matters and licensing of operators are not the subject of these guidelines.

Scope

The guidelines were developed specifically for operators of mechanically powered recreational boats, including personal watercraft. However, it is recognised that a number of the competencies may also be applicable to recreational boats that do not have an engine as their means of propulsion.

Application

It is intended that these minimum core competencies be adopted on a national basis. They may be used to provide a –

- (a) consistent means to promote a recreational boat operator's understanding of boating safety and the safe use of waterways;
- (b) common basis for the design and development of State/Territory government-funded/accredited education programs and training courses for recreational boat operators in each jurisdiction;

- (c) means of accrediting the providers of such education programs and training courses;
- (d) source of information and guidance for designers and providers private boating education safety and training courses and programs; and/or
- (e) common basis for the development of licence assessment methodologies, such as licence tests

As such, the competencies are designed to be capable of being taught, learned or demonstrated by one or a combination of one of the following methods:

- classroom instruction, or
- practical instruction or demonstration, or
- distance learning

Minimum competencies

As the guidelines are a set of minimum core competencies, they form the base knowledge or foundation for operator learning and knowledge. As such they do not address all knowledge requirements nor all potential situations and conditions. However, their structure has been designed to allow them to be extended to meet additional requirements, should that be desired by the user of these guidelines.

MINIMUM CORE COMPETENCIES

Structure of competency units

A unit of competence contains the following components:

- **Unit title**
Defines the area of competency.
- **Unit description**
Describes the purpose of the unit.
- **Elements**
Further describe the particular competency and specify the major components of the competency unit.
- **Performance criteria**
Specify the required level of performance.
- **Range of variables**
These are included to take into account the varying conditions, situations and contexts in which the boating competencies may be performed. The list is not exhaustive, nor will all variables be relevant in a particular boating situation or context. This means that an individual would not be expected to demonstrate competence in all the contexts but only in those which apply to his/her boating situation.
- **Evidence guide**
This provides additional information to assist in the interpretation and assessment of the competency unit. The evidence guide is not prescriptive and is intended to be of assistance only if the competency unit was being formally assessed.

Description of competency units

The competency units cover the following areas:

Unit 1 – Carry out trip preparation and planning

This unit covers the competency to undertake the required steps to plan and prepare for a safe boating trip. It includes maintenance of the boat and safety equipment; maintenance of mooring and berthing apparatus and planning a trip.

Unit 2 – Safely operate a mechanically powered recreational boat

This unit covers the competency to safely handle/operate a powered recreational boat on coastal and inland waters. It includes manoeuvring and handling the boat; navigating safely and anchoring the boat.

Unit 3 – Respond to boating emergencies and incidents

This unit covers the competency to deal with boating emergencies and incidents, including the use of safety equipment and the provision of assistance to others in distress. It includes using safety equipment; raising alarms; dealing with on-board emergencies and assisting other boat users in distress.

COMPETENCY UNIT 1 – Carry out trip preparation and planning

Unit Descriptor

This unit covers the competency to undertake the required steps to plan and prepare for a safe boating trip.

ELEMENTS		PERFORMANCE CRITERIA
1.1	Maintain the boat and safety equipment	1.1.1 Boat is maintained/serviced on a regular basis
		1.1.2 Safety equipment complies with relevant legislation
		1.1.3 Safety equipment is serviceable, accessible, its location identified and securely and appropriately stowed
1.2	Maintain mooring and berthing apparatus	1.2.1 Mooring and berthing apparatus is maintained/serviced on a regular basis
		1.2.2 Mooring apparatus is appropriate to the vessel and location
1.3	Plan trip	1.3.1 Weather, conditions, vessel and personnel are checked for suitability for planned trip
		1.3.2 Trip activity plan takes into account area and type of operation and emergency contact
		1.3.3 Adequate provisions, including fuel, for the trip are carried
		1.3.4 Trip details are communicated to an appropriate person
		1.3.5 Check is made to ensure the number of passengers does not exceed boat design limitations and/or legislative requirements
		1.3.6 Check is made to ensure equipment, stores and personal items are securely stowed and do not adversely affect the boat's stability
		1.3.7 Appropriate person is informed of safe return from the activity

RANGE OF VARIABLES

Maintenance/service of the motor may include but is not limited to:

- Oil levels and mix
- Belts
- Spark plugs
- Regular running and flushing of motor including manual starting
- Raw water intake filters
- Fuel lines, fillers and tanks
- Hoses
- Compliance with program maintenance
- Electrical wiring
- Dead Man's switch
- Steerage
- Propeller and shaft condition

COMPETENCY UNIT 1 – Carry out trip preparation and planning

RANGE OF VARIABLES (continued)

- Safety equipment may include:
- Lifejackets
 - Bailers
 - Dinghy/life-raft
 - Paddles/oars
 - Bilge pump
 - Bucket and line
 - First aid kit
 - Fire extinguisher
 - Distress signalling equipment
 - Marine radio
 - Waterproof torch
 - Charts
 - Anchor/Sea anchor
 - Lifebuoy
 - Compass
 - Sound signal
 - Drinking water
 - Towing harness
 - Isolating switches
 - Tow rope
 - Local emergency procedures book
 - Sounding equipment
 - EPIRB
 - GPS
 - Divers flag
 - Suitable clothing
 - Emergency steering
 - Alternative means of propulsion

-
- Weather and conditions:
- Current forecast
 - Wind
 - Latest weather and conditions information
 - Source of weather information
 - Tides (flood and ebb tides)
 - Rips and bars
 - Wave height
 - Visibility
 - Day / night

COMPETENCY UNIT 1 – Carry out trip preparation and planning

RANGE OF VARIABLES (continued)

- Area of operation may include:**
- Hazards
 - Local knowledge, rules and protocols
 - Events
 - Emergency response
 - Access and exit points
 - Safe havens
 - Launching ramps
 - Destination port
-
- Trip activity may include:**
- Adequate fuel for distance to be travelled
 - Way points
 - Suitability of boat for the activity
 - Radio used and frequency
 - Call signs
 - Trip intention forms
 - Description of boat
 - Registration number
 - Trip departure and return time
 - Area and nature of operation
-
- Persons to advise may include:**
- Family member
 - Neighbour(s)
 - Water Police
 - Recognised marine rescue services
 - Local police
 - Relative
 - Organisation
 - Club
 - Harbour master
 - Note in car, if appropriate
 - Coastal radio stations
-
- Provisions may include:**
- Water
 - Food
 - Ice
 - Sun protection
 - Wet weather gear
 - First aid kit
 - Personal medication for all passengers

COMPETENCY UNIT 1 – Carry out trip preparation and planning

RANGE OF VARIABLES (continued)

Provisions may include (continued):	<ul style="list-style-type: none">• Batteries• Gas• Adequate emergency fuel (reserve) and a method of fuel transfer
Mooring and berth maintenance may include:	<ul style="list-style-type: none">• Appropriateness of mooring/berthing• Regularity of checks• Services by recognised contractor• Serviceable mooring and berthing lines• Fenders• Anchors and other ground tackle
Activity details to be communicated may include:	<ul style="list-style-type: none">• Vessel description or photo• Number of people in boat• Departure/arrival times• Types of radios• Must advise trip conclusion• Shore contact details• Trailer registration number• Fuel capacity and usage
Pre-start check may include:	<ul style="list-style-type: none">• Fuel is connected• Battery is charged and connected• Kill switch• Fumes, petrol• Fuel and water leaks• Open hatches/windows/doors• Ventilation• Sea-cock opening• Secure loose gear• Turn on marine radio• Checking bilge water levels• Navigation lights• Raising radio aerials

COMPETENCY UNIT 1 – Carry out trip preparation and planning

EVIDENCE GUIDE

Critical aspects of evidence:	Boat is regularly maintained and serviced and pre-departure check completed to ensure readiness for the planned activity. The activity is planned and trip details communicated to an appropriate person.
Interdependent assessment of units:	Nil
Underpinning knowledge:	<ul style="list-style-type: none">• Weather information• Vessel maintenance and service schedule requirements• Capabilities of boat• Safety equipment required on board boat• Safety procedures• Marine legislation, regulations and rules• Area of activity• Legislative requirements regarding the use of safety equipment
Underpinning skills:	Interpret weather forecasts
Resource requirements:	Nil
Consistency in performance:	Competence in this unit may be assessed over time in a range of boating contexts.
Context of assessment:	Competence in this unit may be assessed in an actual or simulated boating context.

COMPETENCY UNIT 2 – Safely operate a mechanically powered recreational boat

Unit Descriptor

This unit covers the competency to safely handle/operate a powered recreational boat on coastal and inland waters.

ELEMENTS	PERFORMANCE CRITERIA
2.1 Manoeuvre and handle boat	2.1.1 A pre-start check is undertaken
	2.1.2 Motor is prepared and started
	2.1.3 Boat is manoeuvred safely according to conditions and in accordance with water traffic regulations
	2.1.4 Performance of the boat and personnel is monitored at all times
	2.1.5 Impact of boat use on others and the environment is considered
	2.1.6 Safety equipment is used, stowed and if required, worn in accordance with legislation and recognised regulations and rules
2.2 Navigate safely	2.2.1 Aids to small craft navigation are identified
	2.2.2 Collision avoidance techniques are applied when required in accordance with relevant legislation, recognised regulations and rules
	2.2.3 Operation of the boat is carried out at all times in accordance with relevant legislation, recognised regulations and rules
	2.2.4 Navigational aids and landmarks are used to determine and monitor boat position
	2.2.5 Hazards and conditions are taken into account in navigating the boat
2.3 Anchor the boat	2.3.1 Anchorage site is selected in accordance with prevailing and forecast conditions and in accordance with legislation
	2.3.2 Type of anchor used is suitable for location
	2.3.3 Anchor is lowered, set and monitored according to prevailing conditions
	2.3.4 Anchor is retrieved and securely stowed

RANGE OF VARIABLES

Manoeuvring conditions may include:

- From or to a ramp, pontoon, wharf, mooring, anchor
- Confined areas (narrow channels, marinas, moorings, obstructions)
- Sea-states: bars, waves, rips, high seas, tidal surges, choppy conditions
- Low speed/high speed
- Wakes
- Poor visibility
- Effect of wind
- Large vessels

COMPETENCY UNIT 2 – Safely operate a mechanically powered recreational boat

RANGE OF VARIABLES (continued)

- Safe manoeuvring may include:
- Steer straight line
 - Astern
 - Figure-eight
 - Right of way
 - Port-starboard
 - Throttle control
 - Emergency stop
 - Trim and stability of vessel
 - Towing or being towed
 - Berthing
 - Standing-on/stemming the tide
 - Retrieval of person overboard

-
- Monitoring may include:
- Cooling system
 - Bilge, portholes and hatches
 - Location and welfare of persons on board
 - Oil, fuel and water
 - Radio
 - Position of boat
 - Other water users
 - Battery and electrical systems
 - Ventilation

-
- Hazards and conditions may include:
- Weather
 - Set and drift
 - Effect of wind, tides and currents
 - Submerged objects
 - Other boats/wash
 - Restricted waters
 - Crossing bars

-
- Types of anchors may include:
- Danforth
 - Grapnel/Reef
 - Bruce
 - Plough
 - Admiralty
 - Sea anchor
 - Sarca

COMPETENCY UNIT 2 – Safely operate a mechanically powered recreational boat

RANGE OF VARIABLES (continued)

Anchoring systems may include:

- Multiple anchors
- Bow and stern anchors
- Mooring buoy

Aids to small craft navigation may include:

- IALA Buoyage System "A"
- Charts
- Compasses
- GPS
- Sounder
- Tide Tables
- Passage plan
- Marine references
- Notices to mariners
- Radio navigational warnings

Impact of boat use on others and the environment may include:

- Noise
- Wake
- Safety of others
- Disturbance or injury to wildlife
- Disposal of waste
- Effects of detergent
- Anti-foul
- Disposal of bilge water
- Fuelling arrangements

Legislation, procedures and rules may relate to:

Collision regulations such as:

- Navigating in narrow channels
- Giving way to other vessels
- Overtaking
- Proper lookout
- Sound signals, lights and shapes
- Responsibilities and duty of care
- Use of buoyage system
- Speed
- Recognition of lights and markers
- Rules of road
- Recognition of operation areas
- Specific activity rules eg PWC's, water skis
- Equipment requirements
- Accident/Incident reporting

COMPETENCY UNIT 2 – Safely operate a mechanically powered recreational boat

RANGE OF VARIABLES (continued)

Legislation, procedures and rules may relate to (continued):

Marine regulations such as:

- Safety regulations
- Licensing and registration
- Speed limit restrictions
- Distance off requirements
- Port limits/rules
- Marine incident reporting
- Carrying capacity
- Alcohol limits
- Age of operators

Environmental and wildlife regulations:

- Relevant and applicable State/Territory rules as they apply to the operations of boats

EVIDENCE GUIDE

Critical aspects of evidence:

Operation and anchoring of the boat is conducted safely at all times and in accordance with relevant legislation, regulations and rules.

Interdependent assessment of units:

Pre-requisite units: Nil

Co-requisite units: Nil

Underpinning knowledge:

- Boating and other relevant legislation, rules and regulations
- Area of activity hazards and prevailing conditions
- Boating information resources
- Legislative requirements regarding the use of safety equipment
- Environmental awareness

Underpinning skills:

Nil

Resource requirements:

Nil

Consistency in performance:

Competence in this unit may be assessed over time in a range of boating contexts.

Context of assessment:

Competence in this unit may be assessed in an actual or simulated boating context.

COMPETENCY UNIT 3 – Respond to boating emergencies and incidents

Unit Descriptor

This unit covers the competency to deal with boating emergencies and incidents including the use of safety equipment and the provision of assistance to others in distress.

ELEMENTS	PERFORMANCE CRITERIA
3.1 Use safety equipment	3.1.1 Nature, type, location, accessibility and serviceability of safety equipment is known and understood by all personnel on board
	3.1.2 Briefing of personnel is conducted before departure
	3.1.3 Safety equipment is used in a manner appropriate to the emergency or incident
	3.1.4 Safety equipment is used for the purpose for which it was designed
3.2 Raise alarms	3.2.1 Nature of emergency is identified
	3.2.2 Alarm is communicated to on-board personnel
	3.2.3 Recognised distress signals are used to indicate need of assistance
3.3 Deal with on-board emergency	3.3.1 On board personnel are informed of actions required to deal with the emergency
	3.3.2 Procedures are implemented to combat emergency and protect persons on board
	3.3.3 Position is identified, recorded and communicated
	3.3.4 Injured persons are provided with assistance
	3.3.5 Communication with rescuers is maintained
	3.3.6 Preparation for abandoning the boat is undertaken, if required
	3.3.7 Cessation of emergency is communicated to appropriate personnel
3.4 Assist others in distress	3.4.1 Distress signals from others are recognised
	3.4.2 Nature of assistance required is identified
	3.4.3 Capability to safely assist or relay emergency is determined taking into account own safety and physical proximity to the emergency incident
	3.4.4 Appropriate response to the emergency is prepared for and implemented
	3.4.5 Cessation of emergency incident is communicated to appropriate personnel

RANGE OF VARIABLES

Emergencies may include:

- Fire (smoke or heat)
- Collision
- Grounding
- Man overboard

COMPETENCY UNIT 3 – Respond to boating emergencies and incidents

RANGE OF VARIABLES (continued)

Emergencies may include:
(continued)

- Person retrieval from water
- Capsize
- Swamping
- Sinking
- Motor breakdown or malfunction (electrical/mechanical)
- Fouled propeller
- Anchoring
- Flooding
- Lost
- Injuries/illnesses
- Hypothermia
- Lack of fuel
- Contaminated fuel

Distress signals may include:

- Pyrotechnic distress flares
- Flags
- Radio
- Hand signals
- Dye marker
- International Code Signal of Distress
- Sound signals (including voice)
- EPIRB
- V-sheet
- Reflective mirror
- Light signals
- Mobile phone

Preparation for abandoning includes:

- Brief on-board personnel
- Drinking water
- Donning of life jackets
- Identifying location of vessel
- Communicating to rescuers of actions taken or to be taken
- Readiness of life raft/life rings
- Activate EPIRB
- Identification and collection of emergency equipment, provisions and clothing
- Deployment of anchor or sea anchor

COMPETENCY UNIT 3 – Respond to boating emergencies and incidents

RANGE OF VARIABLES (continued)

- Briefing information may include:
- Vessel operation
 - Personnel assessment such as swimming skills, boating knowledge, medication and dietary requirements
 - Location and use of safety equipment
 - Emergency procedures
 - Abandoning procedures

Evidence Guide

Critical aspects of evidence: Nature of emergency is communicated accurately to on-board personnel, potential rescuers and/or marine authorities. Safety equipment is deployed to suit the nature of the emergency.

Interdependent assessment of units: Pre-requisite units: Nil
Co-requisite units: Nil

Underpinning knowledge:

- Range of safety equipment
- Types of boating emergency incidents and situations
- Common emergency actions
- Boating legislation, regulations and rules

Underpinning skills:

- Correct use of safety equipment
- Communication
- Leadership skills
- Delegation skills
- First-aid

Resource requirements: Nil

Consistency in performance: Competence in this unit may be assessed over time in a range of boating contexts.

Context of assessment: Competence in this unit may be assessed in an actual or simulated boating context.

NOTES



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