Water safety for small vessels and wading

Couple of takeaways

- Working in and around water presents a number of unique hazards, including the risk of drowning and hypothermia.
- All work occurring on or around water requires the use of a Safe Work Method Statement (SWMS).
- A certified Coxswain must be on board and in charge of any vessel operated for the Hydro Tasmania group.
- All workers wading in flowing water above knee level or still water above waist level must complete wader training.

What is this procedure for?

This procedure describes the requirements for working safely when wading or working from small vessels at any Hydro Tasmania group workplace.

This procedure applies to all Hydro Tasmania workers travelling in small vessels or undertaking wading. It does not deal with land-based work activities adjacent to water bodies (e.g., work on dams, canals, flumes, etc.). A SWMS must be completed prior to commencing work in water, along with all relevant checklists, to ensure that the risks and hazards associated with working in water have been identified and appropriate control measures have been put in place.

What are the roles and responsibilities?

Asset owner shall

- Request work to be done

Work planner shall

- Plan and schedule the work

Line manager/ Project manager/ PIC or Worker with direct control of work shall

- Authorise the work to be done
- Liaise with the work supervisor to complete voyage operational checklist
- Implement this procedure, ensure that workers can undertake field activities safely
- Ensure that the records described in this procedure are kept
- Ensure that delegated safety responsibilities are fulfilled by competent, authorised workers
- Ensure appropriate supervision is always provided at the workplace
- Ensure that all workers working in water comply with this procedure
- Be responsible for any associated work instructions or plans.

Coxswain (Work supervisor) shall

- Liaise with the PIC to complete and assume control of voyage operational checklist

- Be the master of a commercial vessel
- Fulfil their specific responsibilities under maritime legislation over and above the requirements of this procedure
- Act as the PIC for operations requiring the use of small vessels.

Workers shall

- Work in a manner that does not adversely affect their own health and safety, or that of others
- Comply with the terms of this procedure
- Immediately report any matter that may affect their own or others' health and safety to the PIC or their line manager.

WHS team shall

- Coordinate the WHS risk assessments
- Maintain and review WHS documentation
- Communicate and provide training in the application of WHS processes.

How is the process managed?

Overview

Field operations involving the use of small vessels and/or wading may potentially require workers to perform work in hazardous situations. Workers who undertake these tasks must give careful consideration to the potential hazards and implement safe work practices to avoid or minimise the risks.

Additionally, a Safe Work Method Statement (SWMS) must be prepared prior to undertaking any work involving small vessels or wading. The SWMS shall include the assessment of the following hazards involved in the work, including, but not limited to:

- Drowning
- Exposure or hypothermia
- Collision with boats and infrastructure
- Slip and fall
- Snagging and entanglement.

Voyage Operational Checklist shall be completed and controlled for each vessel voyage.

Weather and water conditions shall be reviewed prior to commencing the work in water, and work postponed if weather conditions are unsuitable.

Also, the Remote and Isolated Work procedure must also be followed where appropriate.

Small boats

A certified Coxswain must be on board, and in charge of, any boat. The Coxswain is responsible for the safety of all persons on board. A SWMS must be completed before starting the work, and must include:

- The certification details (qualifications, licences, etc.)
- The limitations (number of persons, engine size, etc.) of the boat
- Name and date of the Coxswain’s qualification
- Any limitations of the Coxswain.

Water safety for small vessels and wading

Coxswain

The person in command of a boat must have a limited Coxswain certificate or other suitable certificate of competency (as specified in the vessel's certificate of survey prescribed complement Section details).

Certification of survey or commercial registration

All boats, whether powered or not, require either a Certificate of Survey (all jurisdictions) or certificate of commercial registration (Tasmania only), known as a vessel certificate.

Survey record / vessel record book

A log of all vessel activities must be maintained for all vessels (Survey records for vessels with a certificate of survey, vessel records for vessels with commercial registration, issued by MAST) and kept with the vessel at all times, except if it is physically impractical (e.g. inflatable craft or very small dinghies) in which case the survey record book should be taken to the departure point of each voyage and remain in the vehicle.

Refer to Appendix A - vessel logbook requirements for further information on using survey record or vessel record books.

The record book must be submitted to MAST (or equivalent authority) as part of a boating incident report following any reported incident (see Appendix C Boating Incident Report for further information).

Small vessel competency

All persons travelling on a vessel, except for visitors, must have demonstrated competency in small vessel operations unless under the direct supervision of the Coxswain (Refer to Appendix B - Small Vessel Competency Requirements for further information).

Pre- voyage safety requirements

A copy of the Voyage Operational Checklist must be completed for each vessel voyage or work block, as part of the SWMS. The Coxswain of the vessel must prepare a boating safety induction sheet for the vessel and ensure all persons on board are adequately informed of the safety procedures and handling of safety equipment on the vessel.

PPE

All persons on board a vessel are required to wear PPE as specified below:

- A Personal Flotation Device Level 50 (similar to PFD Type 2), Level 100 (similar to PFD type 1), and level 150 (similar to inflatable PFD Type 1)
- Rafting helmets (meeting the requirements of EN 1385 – International Standard for helmets for canoeing and white-water sports) must be worn during boating operations in turbulent flowing water and other rough conditions or when instructed by the Coxswain or where indicated in the SWMS

Water safety for small vessels and wading

General small vessel safety

Every Hydro Tasmania group vessel must be subject to a formalised maintenance schedule. Visual inspection of the vessel must form part of the Voyage Operational Checklist and the vessel must be forwarded to a recognised maritime agent for comprehensive service at least annually

Use of the engine deadman switch is recommended where practical, but ultimately is a matter for consideration by the Coxswain and should be addressed in the SWMS.

Wading

For all wading activities undertaken in flowing water above knee depth, or still water above waist depth:

• Wader training is required

• A minimum of two (2) people are required (working alone is forbidden)

• Waders in good condition with no leaks and secured with a wading belt must be used. In other situations, wader training may not be required, depending on the risks identified in the SWMS.

Wader training

All workers undertaking wading in flowing water above knee level or still water above waist level must successfully complete a wader training course that meets the requirements given in Appendix E - Wader Training Course Requirements.

Wading guidelines

Follow the safety considerations and operational techniques for wading (provided in Hydrographer's Safety Handbook (HEC, 1994) summarised as the Wader Safety Guidelines. The PIC should be familiar with these documents before completing a SWMS for wading work.

Wading equipment

- Waders in good repair, with no leaks
- Wading belt
- Additional PPE, as required as an appropriate risk control measure by the or SWMS
- Personal Flotation Device (PFD) meeting the requirements Level 50 (like PFD Type 2), Level 100 (similar to PFD type 1), and level 150 (similar to inflatable PFD Type 1) classification
- Rafting helmet (meeting the requirements of EN 1385 – International Standard for Helmets for Canoeing and White-Water Sports)
- High traction wading footwear (chains or studded)

Backpack electrofishing

The hazards associated with backpack electrofishing include electric shock, heart failure, respiratory interference, electrical burns, muscular injury, drowning and fatigue. Electrofishing work must be carried out according to the Australian Code of Electrofishing Practice.

Water safety for small vessels and wading

All electrofishing operations must be carried out under the supervision and control of a senior operator holding a certificate of competency in electrofishing procedures and safety for backpack electrofishing.

- Electrofishing workers must be certified free of major heart or respiratory complaints by a medical practitioner
- They must be trained in the fundamentals of electricity, correct and safe electrofishing procedures
- All workers undertaking electrofishing must hold current Senior First Aid Certification, including cardio-pulmonary resuscitation (CPR);
- The following PPE must be worn when electrofishing:
  - waders or rubber boots;
  - linesman gloves rated to +1000V
  - PFD Level 50 (similar to PFD Type 2), Level 100 (similar to PFD type 1), and level 150 (similar to inflatable PFD Type 1)
- No electrofishing can be performed within 50m of boats or shore viewers or 100m of people or terrestrial animals in the water, and warning must be given (verbal or signage, plus electrofisher alert sound when in use)
- Do not work in heavy rain or rough water conditions. Pay attention to weather and water conditions at all times
- Avoid contact with the electrodes and with water within the electric field.

Electrofisher maintenance

- All equipment should be carefully inspected by a senior operator for mechanical faults, worn insulation, loose components, and connections etc. prior to and following all operations
- Each electrofishing backpack unit must have its own logbook to record details of hours of use, maintenance, repairs, and inspection details
- The electrofishing backpack unit must undergo a safety check by a licensed electrician every 6 months or 600 logged hours.

Electrofishing accidents

In the event of an accident

- Switch off power supply and call for help
- If casualty is consciousness, check pulse and respiration
- Begin resuscitation if no pulse or respiration detected
- Apply first-aid for any injuries
- Have any electric-shock casualty examined by a doctor as soon as possible (even if they appear to be fully recovered).

Report all accidents involving electric shock to the National Electrofishing Safety and Training Administrator within 14 days.

Also report to WorkSafe Tasmania or equivalent interstate authorities as appropriate due to the nature of the incident.

Any electrofishing backpack unit that is not of a completely sealed type and is accidentally immersed in water must be removed from service immediately and tested for water damage by a licensed electrician before further use.

Appendix A Vessel Logbook Requirements

A Vessel Logbook is a Survey Record Book or Vessel Record Book used to log the activities of a boat operating as a Commercial Vessel (under a Certificate of Commercial Registration) or a Survey Vessel (under a Certificate of Survey). Required under the Marine and Safety (Safe Operation) Regulations and USL Code, the Vessel Logbook is a key part of Commercial Vessel operations and greatly assists safety, preventative maintenance and troubleshooting on small boats.

Vessel Log book maintenance

- The Coxswain in charge of the boat must maintain the Vessel Log Book
- The Vessel Log Book should always be kept on board, where possible
- It is an offence for a Vessel Log Book entry to be wilfully destroyed, made illegible or to omit an entry or sign an entry knowing it to be false
- Logbook entries must be:
  - accurate
  - made as soon after the occurrence as possible
  - written in ink, dated, legible
  - signed by the Person making the entry
- The following information should typically be entered into the Vessel Log Book (where applicable):
  - Safety briefing information (recorded in the Safety Induction Sheet)
  - Names and position of workgroup and any Visitors on board i.e. all persons on board
  - Activities the boat was being used for
  - Location and navigational route of the Vessel
  - Illness of, or injury to, any persons on board
  - Emergency preparedness training and any other safety training undertaken by the persons on board
  - Any Incident or Accident involving the boat or its equipment; o any assistance rendered to another boat; o details of any unusual occurrence or Incident
  - Details of any Emergency communications
  - Maintenance and services carried out on the boat and use of replacement parts
  - Any known defects of the boat.

Boating incident

- All Incidents must be recorded in the Vessel Record Book and, if necessary, also be reported to Marine and Safety Tasmania, Department of Primary Industry Water and the Environment or Worksafe Tasmania or Equivalent Interstate Authorities
- The Coxswain is responsible for instigating the report
- After reporting any incident, the Vessel Log Book must be handed to MAST (in Tasmania) or the Equivalent Interstate Authority;
- Certain accidents or incidents on a commercial vessel must be reported (to MAST or the equivalent authority) in the format prescribed by regulations (Marine and Safety (Courts of inquiry and survey) Regulations and Marine and Safety (Safe Operation) Regulations), as described in the boating incident report checklist.

  Note: each Vessel Survey Book issued by MAST contains an incident report form in the prescribed format.

Appendix B small vessel competency requirements

All persons travelling on Hydro Tasmania group vessels, with the exception of visitors, who are not qualified Coxswains and are not under the direct supervision of a Coxswain, must have demonstrated competence in small vessel operations by:

- Completion of the 4-hour MAST Practical Tuition for recreational boat operator course, available state-wide from accredited course providers
- Completion of an equivalent certified course endorsed by WHS management. The course must include the components listed below.

Exceptions: Where it is impractical for visitors or workers to meet the above requirements, these persons should receive a full safety briefing by the Coxswain following completion of the SWMS. Such persons are only permitted to act as observers and are not permitted to engage in work whilst on board the vessel.

Practical Boat Operator Course – Minimum Core Competencies

Unit 1 - Trip preparation and planning

Before You Leave Home

This can be done in a group before the participants are split into various boat crews.

Participants can demonstrate:

- That up-to-date boating weather forecast is checked prior to leaving home (refer to (MAST Tasmanian Safe Boating Handbook)
- Adequate provisions, including warm clothing, fuel and oil are carried
- That a responsible person has been notified where you are going and when you will return. A responsible person may be:
  - A family member, relative or neighbour
  - Coastal radio station or recognised marine rescue service
  - Water police, local police or harbour master.
- A check is made to ensure that the number of persons does not exceed the recommended maximum capacity (MAST Tasmanian Safe Boating Handbook)
- The correct distribution of gear and equipment on board
- That the boat and motor is maintained on a regular basis.

Activities:

- Outline that radio telephone and internet weather forecasts are more up to date than newspaper and television
- Discuss what the information in a boating weather forecast means including:
  - Wind and associated wave heights
  - Tide (flood and ebb tides)
- Also discuss the importance of safe havens and seeking local knowledge and the potential risks associated with barways and lee shores.

Safety equipment

Participants can demonstrate:

- That safety equipment complies with current MAST legislation (MAST Tasmanian Safe Boating Handbook)
- That safety equipment is accessible and securely and appropriately stowed
- That all vessel occupants are familiar with equipment and know how to use it.

Activity:

- In one of the boats, work through safety gear explaining which items are required by law and also explain the particular use of each item.

Unit 2 – Safe Operation

Launching

Participants can demonstrate:

- A knowledge of correct ramp etiquette (MAST Tasmanian Safe Boating Handbook 2014)
- Correct procedures for launching a boat;
- How to tie the boat up to a jetty correctly with the use of fenders
- Performing a safety check.

Activity

- The instructor demonstrates the launching of one of the boats (with the aid of one of the participants, if required)

Starting your motor

Participants can demonstrate

- That fuel is connected and primed and battery connected
- Knowledge of different fuel mixing systems and mixing ratios
- Starting their motor
- Use of trim controls and kill switch
- Changing in and out of gear

Activity

- The instructor to demonstrate starting a motor on one of the boats and the use of the other controls.

Basic boat handling

Participants can demonstrate:

- Leaving a ramp, jetty or beach
- How a boat turns
- Effects of wind and tide
- The use of helm (including both wheel and tiller steering)

- Correct boat trim (and correct stowage of gear and weight distribution).

Coming alongside

Participants can demonstrate:

- Under instruction, firstly in calm conditions, the steps required in bringing a vessel alongside a jetty.

Activity:

- Demonstrate with a model on the beach showing the various steps. The instructor will then demonstrate in one of the boats, highlighting the effects of wind and tide and how to overcome them. It is recommended that fenders be used for this exercise.

Anchoring

Participants can:

- Demonstrate that their anchor is set up correctly with the correct amount of rope and chain in accordance with MAST Tasmanian Safe Boating Handbook.
- Explain advantages and disadvantages of their particular anchor
- Identify type of anchor that is suitable for the location
- Select a suitable anchorage Site in accordance with prevailing and forecast conditions
- Lower, set and monitor anchor according to prevailing conditions as well as identify length of anchor line required in current conditions
- Retrieve and securely stow the anchor.

Retrieving

Participants can:

- Demonstrate the recovery of their Vessel back onto the trailer
- Identify the importance of washing their boats and flushing their outboard
- Prepare their boat and trailer ready for towing home.

Unit 3 - Emergencies and Incidents

Person Overboard

Participants can demonstrate:

- The actions required in a person overboard situation including:
  - The importance of placing the motor in neutral
  - Always Keeping the person in sight
  - Throwing a lifebuoy or PFD
  - Demonstrate how to approach the person in the water
- That they understand the threat of hypothermia, the symptoms and treatment for it as outlined in MAST Tasmanian Safe Boating Handbook. Ways to minimise heat loss while in the water including the HELP and huddle position should also be highlighted.

Activity:

- Participants can practice with something that floats. The instructor should discuss varying techniques for coming back to the person particularly in restricted visibility where the Williamsons turn may be useful.

Collision prevention

Participants can:

- Identify the importance of keeping a good lookout
- State their actions in restricted visibility and close quarters situations
- Identify the actions required by a give way vessel
- Show a knowledge of the rules of the road as defined on (MAST Tasmanian Safe Boating Handbook including:
  - Head on situation
  - Crossing situation
  - Overtaking boats
  - Power and sailing Vessels
  - Navigating in channels.

Appendix C - Boating incident report

The Coxswain is responsible for completing Incident reports for MAST (see MAST Marine Incident Report Form) and Hydro Tasmania group (See Incident Management procedure) and notifying the appropriate authority/s. Guidance on the definition of an incident and MAST incident reporting guidelines are provided in the following pages.

Note: MAST or equivalent interstate authority, and Marine and Safety Tasmania, Department of Primary Industry Water and the Environment, WorkSafe Tasmania or equivalent interstate authorities as appropriate due to nature of incident.

General incident response steps:

Step 1: When an incident occurs or complaint received from special personnel, enter the details in vessel logbook. Check to see if a MAST incident report is required or not.

Step 2: If YES then complete a MAST incident report form then proceed to step 3. If NO then just proceed to step 3.

Step 3: Is a DPIWE Pollution report required? If YES, then complete a DPIWE Pollution report form and then proceed to step 4. If NO, also proceed to step 4.

Step 4: Is a WorkSafe Tasmania report required? If YES, then notify WorkSafe Tasmania then proceed to step 5. If NO, proceed to step 5.

Step 5: Complete a Hydro incident report and then Coxswain is to advise relevant Hydro Tasmania group manager as soon as possible and forward form/s to authority.

Incident reporting requirements

When and what does the Coxswain report to MAST/Equivalent Authorities?

The following notes are included as guidelines for the Coxswain in deciding when Incident reports to external parties should be made, and the authority to which reports should be forwarded. All correspondence should be submitted through WHS Team.

Incident reporting to MAST (or equivalent interstate authority)

The Marine and Safety (Courts of Inquiry and Survey) Regulations define an Incident as an event that has resulted in any of the following:

1. The death of, or injury to, any person on board a Vessel, or caused by a Vessel
2. The loss of a person from a Vessel
3. The loss or presumed loss of a Vessel
4. The collision of a Vessel with another Vessel or with any object
5. The grounding, sinking, flooding, or capsizing of a Vessel; vi. a Vessel being disabled requiring assistance
6. A Vessel where a fire occurs on board; viii. damage caused to a Vessel or by a Vessel
7. Loss of stability affecting the safety of a Vessel; and/or x. structural failure of a Vessel.

As a result of which:

- Serious damage to a Vessel or structure might reasonably have occurred

- Serious damage to the environment might reasonably have occurred
- It is reasonably suspected that the safety of a person was imperilled by the operations of a vessel.

Note: It is an offence under Section 5 of the Marine and Safety (Courts of Inquiry and Survey) regulations if an owner or master fails to notify MAST in the event of an Incident to a vessel or persons on the vessel, or in the event of a Vessel being lost.

Pollution report notification (DPIWE guidelines)

The department of primary industries, water, and environment (DPIWE) is responsible for coordinating pollution responses and administering reporting procedures in Tasmania. The equivalent authority should be reported to for incident in other jurisdictions.

Reports of incidents caused by Hydro Tasmania group activities must be made in writing.

Pollution reports should include:

- The date and time of the Incident and the report
- The location of the Incident
- The nature of the Incident
- The point of discharge from the source
- The location and identity of other Vessels in the area (if source unknown)
- The cause of discharge
- The extent of the spill
- The movement of the spill
- The wind and sea/flow conditions.

Telephoned reports of observed pollution Incidents caused by the activities of other parties can be made to DPIWE.

It is also a requirement to submit an Incident Report through the Hydro Tasmania Group incident reporting system. Refer to the Incident Management and Investigation procedure for further information.

Appendix D wading guidelines

Wading in stationary or flowing water is Hazardous, particularly when either the depth and/or flows are excessive. The following paragraphs provide general guidance on recommended safer wading protocols.

A SWMS should be completed before undertaking wading activities, and it is important that hazards specific to the worksite of type of work to be undertaken are identified and managed appropriately.

This information is adapted from the Hydrographer's safety handbook (HEC, 1994).

Assessing the situation

Water depths are often deceptive, and the force of flowing water must not be underestimated. Before entering the water, a person intending to wade must assess the safety of wading at a particular site.

These factors can include but are not restricted to:

- Stream depth
- Stream velocity
- Rate of change of level
- A person's height, weight, confidence, and ability
- Prior knowledge of the stream
- Stream bed characteristics

If onsite inspection indicates that wading cannot be completed safely then another site or alternative risk control methods should be used. It is highly recommended that wading be undertaken with a minimum of two people, particularly in elevated risk situations. Because of the Risks involved in gauging rivers, a second person must be present. The only exception to this instruction is that a lone wading gauging may be done if the water is below knee depth, and the hydrographer conducting the gauging is of the opinion that the gauging is safe.

Note: A useful guide to an upper wading limit is: when the depth of water in metres is multiplied by the velocity in meters per second exceeds 0.8 the river should be assumed to be unsafe to wade.

Water depth (m) * flow velocity (m.s-1) >0.8 = unsafe to cross

At lesser depths and velocities (Water depth * flow velocity < 0.8) the river may still be unsafe to wade due to site conditions and the individual's capabilities.

A tagline or rope fixed to the bank may be carried as a safety line, but it must not be tied to the person. Once fixed securely to both banks this line can serve as a useful support, providing it is only used whilst standing downstream of the anchor point.

If you need to cross a river a suitable fording place must be found:

- Where the river widens or divides, the water flows quietly, is shallow and clear
- At a shingle bar above shallow rapids
- Between river bends (deeper water and stronger currents occur on the outside bank of a curve).

Find a ford where the riverbed as a smooth shingle bottom. Avoid boulders, logs, and smooth rock slabs. It is worth spending time looking for the best crossing place. A bad ford is a wide stream close to a swiftly

flowing river, or where the runoff below the ford has dangerous rapids, bluffs, deep holes or obstacles.

Wading Apparel

Due to Tasmania's cold climate, chest waders are usually worn for wading activities. The waist of the waders should be "sealed" around the wearer's body by securing the drawstring (if fitted) in a quick release bow and by fastening a quick release divers webbing belt securely around the waist. In cold and wet conditions, the use of wet weather jackets and PFD's may be necessary. The webbing belt should be worn in the following manner:

- When wearing a raincoat over the waders fasten the webbing belt around the waist over the coat
- When wearing a PFD over rain gear, the webbing belt should be tied around the latter.

Adopting the above methods of dress will help restrict the loss of air and ingress of water in the case of accidental immersion and resulting in increased buoyancy.

PPE

- *Personal floatation devices*

  An appropriate PFD Level 50 (similar to PFD Type 2), Level 100 (similar to PFD type 1), and level 150 (similar to inflatable PFD Type 1) must be worn when specified as an appropriate Risk Control Measure in the JHA or SWMS. Thermofloat type jackets should be used when cold water temperatures increase the Risk of hypothermia following accidental immersion.

  PFDs should also be worn in any situation where there is a Risk of falling or slipping into calm water above crotch level or flowing water above knee deep. Not all Wading operations require the wearing of a PFD. It is the responsibility of the PCMW to decide whether Wading activities require a PFD after assessing the Risk via a SWMS. It is the responsibility of the PIC or person with direct control of workplace to ensure that sufficient PFDs are available for the Workgroup.

- *Helmets*

  Helmets must be worn when specified in the SWMS as an appropriate Risk Control Measure: For example, when gauging in an "upper Wading limit" situation.

Sport and recreation guidelines

These guidelines are taken from "Have Waders, Gone Fishing" section of the Angling for Safety brochure.

Waders is considered by anglers as an essential piece of equipment for keeping the person dry in a wet environment. They are mandatory for the shore-based angler and are often worn when fishing from a boat. Waders also are potentially the most lethal piece of equipment used by the angler. It is widely known that if you fall in the water, the likelihood of drowning is high if you are wearing waders. This is because they can quickly flood with water and drag you under. Even the shore-based angler can misstep, overbalance or be swept by fast flowing water into deeper waters.

Both fresh and saltwater anglers have been advised for many years to not wear waders when in a boat and over those years this advice has generally been ignored. As a result, Bill Stewart of the Tasmanian Water

Safety Unit has developed a technique that will help keep a person afloat while wearing waders.

Belt up to buoy up and stay afloat

To restrict the flooding of water into your waders simple fasten a belt around your waist. This practice will also trap air inside the waders giving the wearer some buoyancy that will help keep them afloat. To be effective the belt must be as firm as possible but always comfortable to the wearer. The drawstring found on most waders will not keep the water out. Although any belt will be adequate divers belts or Velcro fastened belts are recommended.

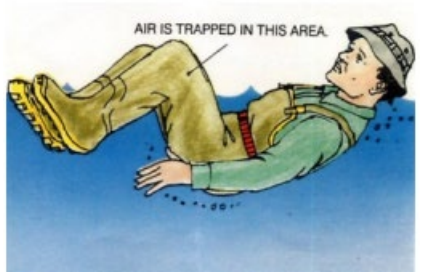
What to do if you fall in

Immediately tuck up. In a tuck position less, water will leak in and the air in your waders will be trapped buoying you up and also keeping you drier.

Roll onto your back keeping your knees tucked. You will need to put your arms in the water to balance yourself. If close to shore, you can use a backsculling action to get back.

Don't panic. You must not try to swim, tread water or float in an upright position.

- It is advisable that you master this technique in a pool. It will give you confidence if ever an Accident does occur
- If swept into fast flowing water, face downstream and go with the current feet first. Use your feet and hands to push away from rocks. Try to stay on your back and in the tucked position.



Preparation

The safety and success of any fishing trip is dependent on the level of preparation before you leave. By carefully preparing yourself and your equipment before you leave your ability to cope with changes or emergencies is greatly improved.

- Know your weather: Before you set off, check the weather forecast. Watch out especially for expected changes in the weather. A knowledge of the predicted weather conditions will help you to decide where the safest and most sheltered fishing spots are.
- Know the area: If you don't know the area, ask someone who does. Most local anglers or shack-owners are willing to point out local Hazards, sheltered fishing spots or where to seek shelter from squalls or sudden changes in the weather.
- Inform others: Tell someone nearby where you are going and when you will return. Even if the fish are biting stick to your schedule. If an Accident does occur the time taken for rescue is vital (survival time in cold water is very short). Why not fill in a trip report (available at Police Stations) and leave it with a responsible person.
- Know your boat: Ask yourself these questions:
  - Is the boat suitable for where I plan to go fishing?
  - Does it have enough buoyancy?
  - Is it seaworthy when fully loaded?
  - Is the outboard reliable?
  - Is there enough fuel for the trip and any unforeseen change in plans?

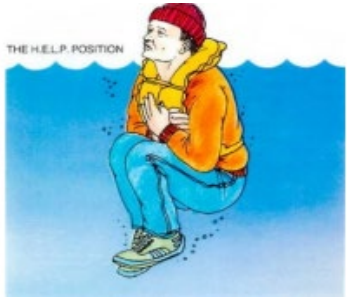
  Do I have these on board?

  - Anchor, chain, and line
  - Oars or auxiliary outboard
  - Bailing bucket
  - PFD (life jacket or buoyancy garment) for every person on board)
  - Fire extinguisher; o flares, torch, first aid kit
  - Waterproof matches
  - Make sure you can answer "yes" to all of these – one day your life might depend on it.
- Clothing: Appropriate clothing can not only make your day's outing more pleasurable but can also prolong your survival time if you end up in the water.
  - Wear protective warm clothing. Wool or approved thermal clothing is the most preferred material for cold climates. Make sure your head and neck are covered
  - Wear a buoyancy aid. The thermofloat jacket not only acts as a wet weather jacket but also provides flotation and prolongs survival in the water.
- Alcohol: The old story about having a sip of rum to warm you up is false. In fact, in cold climates alcohol actually does the reverse – it causes your body to cool even quicker. If you accidentally fell in the water those few drinks could be fatal. Why not take a thermos of coffee tea or soup instead. Save the alcohol for when you are telling those fishy stories around the fire after the trip.
- Weather: "Some people are weatherwise. Most are otherwise" Earlier you were asked to check the weather forecast before you left on your trip. However, it is equally important that you keep an eye on the

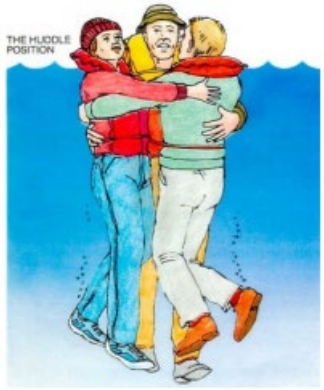
weather while fishing. The weather in the Tasmanian highlands may change rapidly especially in Spring. Cold fronts move quickly in from the Southern Ocean at 40-80 km/h causing sudden deterioration in the weather. Snowfalls, low temperature, and gusty winds often follow. These sudden changes are most common early in the season. The most stable weather conditions usually occur around Autumn.

- Hypothermia: When the Titanic sank hundreds of people were found floating dead in their life jackets. They didn't drown they died of hypothermia. Hypothermia has already claimed victims in the Tasmanian Highlands. Both anglers and walkers have been killed by the wet cold and windy conditions that are common to this area.
- What is hypothermia? :Your body core contains all the vital organs needed to maintain life and is normally kept at 37°C. When the core temperature falls below 35°C hypothermia has set in. If nothing is done to prevent the loss of body heat, a person will progress from intense shivering to a loss of coordination unconsciousness and ultimately death. A person can lose body heat 25 times faster in water than in air, meaning that a person in cold water has a shorter survival time. In fact, in a water temperature of 10 degree Celsius a normally dressed angler has only a 50% chance of surviving 1 hour. Water temperatures in our lakes can plummet to 3-4 degrees or less.
- How to increase survival time: Obviously if you have properly prepared and planned your fishing trip as explained earlier you have already greatly reduced any risk of hypothermia. Accidents do occur however and the risk of capsize or falling in is ever present. If this happens there are many things that you can do to extend your survival time.

  Remember rescue is not always immediate. By increasing your survival time, you improve the odds of being found alive.



- Keep your clothes on. They will help to trap some heat.
- Wear a buoyancy aid preferably one which offers thermal protection e.g. a Thermofloat jacket.
- Keep movement to a minimum. A buoyancy aid will help you to do this.
- Keep your head out of water. If possible, climb aboard your overturned boat. This will also help you to be spotted by searchers.
- If alone adopt the H.E.L.P. position - cross both arms, put hands under armpits and raise legs to cover the groin area.
- If in company huddle in a group and maintain the maximum amount of chest contact as possible. (Both the H.E.L.P. and HUDDLE positions can more than double your normal survival time).
- Don't try to swim for it unless you are absolutely certain of reaching shore. You lose heat 35% faster when swimming.
- Don't take alcohol while boating. Alcohol increases the cooling rate by 25%. You would die happier but sooner.



- Treatment

The hypothermic victim must always be handled very gently and rewarmed slowly. The following procedures should be follows:

- Remove the victim from the water
- shelter from wind and rain immediately
- Create a sheltered dry and warm place
- Put the victim into dry clothes between blankets, space blankets or a sleeping bag
- Cover all the victim's body except the face
- Huddle together for warmth so body temperature can rise gradually
- Give warm sweet drinks
- The unconscious victim will need the usual first aid care of AIRWAY, BREATHING and CIRCULATION
- Don't move the victim unnecessarily
- Don't apply excessive external heat such as fire, electric blankets, or hot water bottles
- Don't rub arms and legs; and o don't give alcohol.

Note: SUDDEN COLD-WATER IMMERSION CAN BE FATAL! In some cases, cold water can kill instantly. The shock of a sudden plunge into cold water can cause heart attacks and rupture blood Vessels especially in older persons. It can also cause hyperventilation (over-breathing) which has killed even capable swimmers.

Appendix E Water training course requirements

Water training is only required where workers will be working in flowing water above knee level or still water above hip depth, however it should be considered for all wading work, depending on the risks identified in the SWMS.

A water training course must address the criteria outlined below and be delivered by an approved training organisation. The actual course details will be confirmed by the training authority we contract but should include:

Proposed course content

3 components:

- Classroom theory session
- Pool/Stillwater session, with exercises
- Flowing water session, with exercises.

Classroom theory session: this component should provide practical information on:

- Wading gear types, including:
  - Types of waders and their application
  - The importance of airtight waders and wading belts
  - PFD types and their application i.e. use risk assessment process to determine floatation requirements
- Cold water risks
- Recovery gear (e.g. throwing ropes, poles)
- Stillwater floatation and recovery techniques
- Flowing water floatation and recovery techniques
- Video demonstrating techniques

Pool/Stillwater session: this component should provide practical instruction on and practice of

- Floatation techniques
- Different types of waders (plastic vs. neoprene);
- Use of different types of PFD (i.e. thermoplastic, stormy seas, foam filled);
- Use of recovery gear
- Safe release of/escape from equipment (i.e., backpacks, clothing)

Flowing water session: this component should provide practical instruction on and practice of

- Channel assessment, crossing techniques and safety equipment for flowing water
- Employing floatation techniques in flowing water
- Practicing recovery techniques
- Experience in cold, flowing water environments