

## SNORKLELLING STANDARD

# 1 Scope

This document relates to authorised JCU snorkeling activities involving groups (refer to Scientific Diving Operations Manual for small research teams), and the supervision of those activities.

Snorkeling activities of this nature would typically include;

- JCU undergraduate and post-graduate classes on field trips (operating at OIRS or other locations)
- external organizations and secondary school groups based at OIRS
- other special interest groups or functions based at OIRS

This standard applies to all snorkelling activities (ie. recreational, research, teaching), regardless of the purpose or time, conducted from JCU owned / hired / chartered boats or during an approved field trip, and must be authorised prior to commencement through the *Riskware Field Trip Module* and *My Register*.

# 2 Objectives

- To ensure compliance with Work Health & Safety Regulations and industry Codes of Practice.
- To apply current best practice to eliminate or minimise risk in the workplace.
- To adopt a uniform approach across JCU sites and activities.

# 3 Policy

## 3.1 Fitness for Snorkelers

Snorkelling in open waters can be physically demanding and require a reasonable degree of physical stamina, mental focus and skill, especially when environmental conditions are less than ideal.

- Fitness for snorkelling means that an individual is in a state (medically, physically and psychologically) to perform work tasks assigned to them competently and in a manner which does not compromise the safety or health of themselves or others.
- An individual's fitness for work may be impaired by a variety of factors including level of medical and physical fitness, fatigue, psychological factors or impairment due to alcohol and drugs (including prescription, non-prescription and illicit drugs).
- All persons engaged in field work shall be fit for work and ensure any illness, injury or impairment is reported to the Trip Leader and Snorkelling Supervisor before the commencement of any activity.
- All persons intending to snorkel must, as a minimum, complete the **Snorkelling & Swimming Health Declaration**. (Appendix 1)
- All snorkelers will be asked by the Snorkelling Supervisor to confirm if they are fully fit to snorkel pre-dive as part of the **Pre-dive Risk Checklist**. (Appendix 3)

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### 3.2 Other

All James Cook University Policies can be found at: <https://www.jcu.edu.au/policy>

## 4 Field Trip Review and Approval

### 4.1 For JCU research and teaching snorkelling activities

- The **Field Trip Leader** must lodge a field trip activity proposal through the *Riskware Field Trip Module* and *My Register*.
- The **Field Trip Leader** must demonstrate a thorough understanding of the risk assessments and/or procedures which have been developed to eliminate or minimise the risks associated with the trip.
- The **Field Trip Leader** must ensure that all participants intending to snorkel have completed the **Snorkelling Health Declaration** as part of the field trip proposal.
- Field trips must be reviewed and approved in the *Riskware Field Trip Module* and *My Register* by authorised persons prior to the commencement of the trip.

### 4.2 For external groups (non-JCU) based at OIRS

At the time of confirming a booking;

- A field trip activity plan should be provided to the **OIRS Manager**.
- Any procedures and/or risk assessments which the external organisation has developed to manage risk for the activities should also be provided.
- If possible, all participants intending to snorkel should completed the **Snorkelling Health Declaration** in advance, and forward to the **OIRS Manager** (or otherwise this must be done before any in-water activity commences).
- Field trips must be reviewed and approved by the **BDO** and **OIRS Manager** in *My Register* prior to the commencement of the trip.

For detailed information, see Field Trip Procedure (HSE-PRO-007) at: <https://www.jcu.edu.au/work-health-and-safety/index>

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## 5 Personnel

### 5.1 Roles and Responsibilities

#### 5.1.1 Boating & Diving Officer (BDO)

The Boating & Diving Officer oversees boating, diving and snorkelling activities undertaken by staff, students and/or by individuals conducting such activities at JCU facilities or research stations.

The **BDO** shall;

- Review and approve risk assessments, boating, diving and fieldwork plans in accordance with legislative requirements and JCU policies and procedures.
- Ensure all snorkelers and boat operators are appropriately trained, qualified and competent to perform the intended tasks.
- Ensure all record keeping and relevant information is entered and kept up to date in the JCU Register.
- Appoint an appropriately qualified and competent person as the **Snorkelling Supervisor**.
- Ensure, through monitoring and oversight, that snorkelling activities are being conducted in a safe and compliant manner.

#### 5.1.2 OIRS Manager

The Manager is responsible for the day to day operations of OIRS, including liaising extensively with JCU staff and students, visitors and other stakeholders.

The **OIRS Manager** shall;

- Develop and implement compliant WHS procedures for the station's activities including boating, diving and snorkelling.
- Liaise with station users and provide information to facilitate and plan their visit.
- Enable and support research and education activities on the station by ensuring the provision of fit-for-purpose infrastructure and logistical support.
- Appoint appropriately qualified and experienced persons as **OIRS Boating & Diving Officers**.
- Ensure risk assessments and operating and emergency procedures are developed, documented and implemented for snorkelling and boating activities which are specific to OIRS operations.
- Develop and implement ongoing training and development for staff to ensure they are competent and equipped to perform their duties.

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### 5.1.3 Snorkelling Supervisor

The Snorkelling Supervisor is responsible for the safe conduct of snorkelling at the site and shall coordinate and direct the activities of all persons involved.

The **Snorkelling Supervisor** shall;

- Ensure that all activities are conducted in accordance with JCU procedures, and all appropriate risk control measures are implemented at the site.
- Implement methods to ensure that no person is left behind at the site;
  - Use the **Snorkelling Log** (*Appendix 4*) to count persons before departure to the site, if anyone leaves the site, and before departing the site.
- Before any in-water activity, and in consultation with the BDO, assess snorkelers to determine if they may 'at risk' (*Appendix 1 & 2*).
- Ensure buddy pairs have been assigned.
- Ensure 'at risk' snorkelers can be easily identified in the water and extra attention can be directed to them.
- Ensure other staff members (lookouts, rescuers and first aid providers) have been appointed and positioned appropriately at the site.
- Ensure emergency management plans are well communicated to other supervisory staff, and can be enacted quickly and effectively.
- Ensure emergency equipment is immediately available at the site – communications, first aid kit, oxygen resuscitation kit, sufficient oxygen supply, AED, floatation aids, rescue devices and rescue craft/vessel (if applicable).
  - The condition and function of first aid equipment should be checked daily.
- Ensure the snorkelling site is clearly marked with use of dive flags, buoys, floating lines or other devices which make the boundaries of the site obvious to passing vessels.
- Provide pre-activity briefings and instruction to snorkelers to enhance understanding and increase the likelihood of directions being followed.
- Act as **Lookout** (unless the role of Lookout has been delegated to other staff at the site)
- Act as **Rescuer** (unless the role of Rescuer has been delegated to other staff at the site)
- If required, provide first aid to a casualty, or direct a competent person to provide first aid, and assist as necessary.
- Provide help and advice to snorkelers about the use of equipment and as they enter and exit the water.

### Competence of Snorkelling Supervisor

- Have a thorough working knowledge of the operating and emergency procedures and risk assessments which have been developed to safely manage the activities at the site.
- Have reasonable experience of the site, and/or has experience in supervising snorkelling / diving activities at similar locations.
- Be able to recognise hazards and risks in the marine environment.
- Be able to recognise changes to risks due to snorkeler's abilities and behaviour.
- Be able to respond quickly to changes in risk and alter or abort activities as necessary.
- Be a capable swimmer and experienced snorkeler.

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- Be competent to carry out a rescue of a snorkeler (unless the role of rescuer has been delegated to other persons at the site) (*Appendix 2*)
- Be competent to provide first aid, oxygen resuscitation, and operation of an AED (unless the role of first aid provider has been delegated to other persons at the site) (*Appendix 2*)
- Be capable of directing a rescue and coordinating the emergency management plan.

### 5.1.4 Lookout

At all times while snorkelers are in the water, one or more **Lookouts** shall be present at the surface of the site.

The **Lookout** shall;

- Be positioned to achieve full and un-obstructed vision of the area where snorkelers are at all times.
- Continually scan and observe the whole area and snorkelers effectively.
- Act appropriately to keep people within boundaries.
- Observe and help persons with entry and egress.
- If required, either rescues a person or directs a person to conduct a rescue.
- If necessary, have access to binoculars and polarized sunglasses.
- Wear a brightly colored shirt (or other) so is easily recognized by snorkelers.
- Be part of an effective and pre-planned communication system for the transfer of information between snorkelers, supervisors and other staff.
- Be aware of breath-hold diving taking place and apply additional supervision.

#### Competence of lookout;

- Be able to recognize hazards or changes which may lead to problems, identifies problems that require adjustments on the operation (tides, currents, marine animals, behavior, fatigue etc.)
- Be able to detect when a snorkeler is in trouble or needs assistance.

### 5.1.5 Rescuer

At all times while snorkelers are in the water, one or more **Rescuers** shall be present at the surface of the site.

A **Rescuer** shall;

- Be positioned so as to minimise the distance between themselves and the snorkelers.
- Be in a state of readiness to immediately enter the water and rescue a snorkeler.
- Have rescue devices and floatation aids readily accessible.
- Be part of an effective and pre-planned communication system for the transfer of information between snorkelers, supervisors and other staff.

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### Competence of a Rescuer

- Have a thorough working knowledge of the operating and emergency procedures which have been developed to safely manage the activities at the site.
- Be a strong swimmer, experienced snorkeler and have an acceptable level of fitness.
- Possess qualifications and/or skills and/or experience for in-water rescue of a person, and also knowledge in the management of snorkelling related injuries and illnesses (*Appendix 2*)
- Be qualified and competent to operate vessels and other rescue craft as necessary.

### 5.1.6 Snorkelling Guide

A **Snorkelling Guide** accompanies a snorkeler in the water and remains with them as both a buddy and in-water supervisor.

The **Snorkelling Guide** shall;

- Be a capable swimmer and experienced snorkeler and be able to rescue a snorkeler (*Appendix 2*).
- Have a good understanding of the snorkeler's abilities and potential problems that may occur.
- Stay with snorkelers at all times unless they are deemed competent to snorkel with another buddy.
- Be able to recognize relevant hazards and snorkelers in difficulty
- Be able to respond quickly to changes in risk and alter or abort activities as necessary.
- Be aware of breath-hold diving and apply additional supervision
- Be part of an effective and pre-planned communication system for the transfer of information between snorkelers, supervisors and other staff.

### 5.1.7 First aid provider

At all times while snorkelers are in the water, one or more **First Aid Providers** shall be present at the surface of the site.

The **First Aid Provider** shall;

- Be in a state readiness to assist in the rescue of a person and provide first aid if required.
- Have first aid equipment readily accessible.
- Be part of an effective and pre-planned communication system for the transfer of information between snorkelers, supervisors and other staff.

### Competence of First Aid Provider

- Possess current qualifications in First Aid, CPR, and administration of oxygen (Advanced Resuscitation) and operation of an AED (*Appendix 2*).
- Be familiar with the type and use of the oxygen equipment and AED's at the site.

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# 6 Risks & Control Measures

Hazards and risks must be identified through the risk assessment process by experienced staff with knowledge of sites and conditions.

- Control measures will be determined and incorporated into coherent procedures which shall be applied at the site during activities.
- An on-site risk evaluation (TAKE 5) must be done by the Supervisor before activities commence (*Appendix 3*).

## 6.1 The Table is a summary of common risks and controls which are used to develop procedures.

Risk factors	Control measures (summary)	Risk rating (post control)
At risk snorkelers	Declaration and Assessment process	Medium
Marine stingers (jellyfish)	Induction, PPE	Low
Venomous creatures	Induction, PPE	Low
Sharks	Induction, supervision and EMP	Low
Crocodiles	Induction, supervision and EMP	Low
Coral cuts / abrasions	Induction, PPE	Low
Barnacle / oyster cuts	Induction, PPE	Low
Hydroids	Induction, PPE	Low
Currents	Induction, supervision and site control	Medium
Rough seas	Induction, supervision and site control	Medium
Sun burn	Induction, PPE	Medium
Hypothermia	Induction, PPE	Medium
Drowning or near-drowning	Supervision, site control and EMP	Medium
Medical emergency	Induction, EMP	Medium
Dehydration	Induction, EMP	Low
Shallow water blackout	Induction, EMP	Medium
Ear / sinus injury	Induction, EMP	Medium
Panic	Induction, supervision and EMP	Low
Boat strike	Supervision and site control, Engineering	Low
Entry / egress	Induction, supervision, engineering	Medium
Missing person	Induction, supervision, site control, EMP	Medium
Definitions; EMP – emergency management plans / procedures Induction – includes all briefings and instruction given to staff and snorkelers PPE – personal protective equipment includes wetsuits, boots, gloves and hoods.		



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# 7 Emergency Management Plans (EMP)

OIRS and Supervisors operating at remote sites shall develop emergency management plans for;

- Responding to a medical emergency
- Responding to a missing person or vessel
- Evacuation of persons
- See *Appendix 5, 6 & 7*

# 8 Operating Procedures, Instruction and Planning

## 8.1 OIRS Sites (or Remote Sites where applicable)

### 8.1.1 Inductions, briefings and planning

- Before arrival at OIRS, visiting groups will be provided with sufficient information to plan their visit and activities.
- Upon arrival at OIRS, groups will receive operational and safety inductions to the OIRS site and specific activities.
  - Special attention must be given to non-English speaking persons – The use of interpreters with instruction feedback is mandatory.
- BDO will conduct assessment of Supervisors and snorkelers. (*Appendix 1 & 2*)
- Supervisors and support staff will receive an induction and operational briefing (refer to Roles and Responsibilities, EMP's and Risk Assessments).
- Activities and schedules will be planned around tides, conditions, staffing and availability of vessels and equipment.
- The BDO will decide on the appropriate level of supervision for groups (ratios). As a general rule;
  - A **minimum of 2 supervisory staff** shall be present at the snorkelling site when the number of snorkelers in the water is **between 2 and 10**.
  - There shall be present at all times a minimum of one staff who is competent to be **Snorkelling Supervisor, Lookout, Rescuer and First Aid Provider**.
  - **One extra staff** should be added when the number of snorkelers is **between 10 and 20**, and there should be at least 2 staff competent as **Rescuers and First Aid Providers**.
- When **'at risk'** snorkelers are involved;
  - **One extra staff** should be added to above-mentioned ratios;
  - The extra staff can act either as a **Snorkel Guide**, or extra **Lookout** and **Rescuer**, who provides extra attention to 'at risk' snorkelers.



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### 8.1.2 Site setup, control and supervision

- The snorkelling site should be marked with boundaries if possible (typically using buoys and floating ropes).
- One or more **Dive Flags** must be raised centrally at the site (consider also using extra dive flag buoys at the site boundaries).
- If a mothership is present, a long mermaid line should be deployed.
- The Supervisor shall arrange other staff into appropriate positions.
- Emergency communications systems should be tested before the commencement of activities.
- A rescue vessel or craft should be positioned and ready for rapid deployment.
  - Special attention should be given to the movement of currents which may sweep snorkelers out of the site.
- For shore-based snorkelling;
  - The Supervisor (or delegate) shall be positioned to count and record snorkelers into and out of the water on the **Snorkelling Log Sheet**. (Appendix 4)
  - The First Aid Kit, Oxygen Resuscitation Kit and AED should be positioned at the egress point (unless the EMP provides for rapid communication and delivery of equipment from the central location).
- A site briefing should be given by the Supervisor to re-inforce;
  - Snorkelling techniques and equipment instruction
  - Forming buddy pairs and remaining in close visual contact
  - Site boundaries
  - Hazards present
  - Entry and egress method
  - Emergency assistance signals
  - Recall signal
- When **'at risk'** snorkelers are involved;
  - Ensure floatation devices are provided and fitted correctly.
  - Ensure they can be easily identified by the **Lookout** when they are in the water (if PFD's are not used, then a coloured vest or hood is preferred)
  - Re-inforce the buddy system and signalling for help.
- Breath-hold diving;
  - Re-inforce risks of breath-hold diving and shallow water blackout
    - Freediving must not exceed depth greater than 4m
  - Ensure no snorkeler is negatively weighted
  - Ensure buddy pairs operate one up / one down
- All staff should scan and monitor the area and make continual counts of snorkelers during the activity.

### 8.1.3 Emergency response and aborting activities

- Consideration for aborting activities and recalling all snorkelers from the water should be considered if;
  - A significant hazard becomes evident at the site.

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- If one or more staff members need to leave the site.
- If a medical emergency occurs.
- If weather or environmental conditions deteriorate.
- If it becomes impossible to constrain snorkelers in an area.
- Recalling snorkelers and aborting activities must occur if;
  - A crocodile or dangerous large shark is sighted in the immediate area.
  - A snorkeler goes missing.
  - Hazardous marine stingers are present
- Procedure for treating a drowning or diving incident is in *Appendix 7*
- Procedure for responding to a missing person is in *Appendix 6*
- Procedure for other emergencies at OIRS is in *Appendix 5*

## 9 Equipment

The following is recommended equipment to be used, including types and specifications.  
(All **Rescue**, **First Aid** and **Communications** equipment must be at the site and immediately accessible for use if required).

### Standard snorkeler's equipment should include;

- Appropriate exposure protection for cold, sun burn and stinger protection (wetsuit or lycra suit)
  - Protection from stingers includes full length steamer, gloves, boots and hood.
- Mask, snorkel and fins

### Extra floatation devices;

- Personal Floatation Devices (PFD) AS4758.1 Level 50 minimum
- Pool noodles

### Rescue devices and aids;

- Binoculars
- Buoyant ropes
- Throw lines
- Mermaid lines
- Life buoys
- Kayak / rescue boards
- Lifesaver buoys / tubes.

### First Aid equipment and supplies;

- First Aid Kit – NSCV scale G minimum
- Vinegar – 4 litres minimum
- Oxygen resuscitation kit - DAN kit or Bag Valve Mask (BVM) capable of delivering ANAP 100% oxygen to a breathing or non-breathing person.
- Oxygen supply cylinder(s);
  - for OIRS - minimum of 1x E-size
  - for remote sites - within 2hrs of professional medical assistance: minimum 1 x C-size, 2-6hrs: minimum 1 x D-size, >6hrs: minimum 2 x D-size.

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- Automated External Defibrillator (AED)

### Communications and signalling devices;

- Dive flag (flag Alpha) – for dive site marking: minimum 50cm x 50cm, for dive floats: minimum 30cm x 30cm
- VHF and/or 2-way radio
- Loudspeaker
- Air horn
- Mobile phone
- Whistle / siren
- Nautilus life-line

## 10 Records

All relevant records must be entered and maintained in *My Register* and *Riskware*, and also be retained in accordance with the retention and disposal schedules governed by the Queensland State Archives:

- [General Retention and Disposal Schedule](#)
- [University Sector Retention and Disposal Schedule](#)

## 11 Related Documents, Legislation and Other Resources

### 11.1 Related Documents and Other Resources

Guideline	
Procedure	JCU Diving Operations Manual
Process	Riskware My Register

### 11.2 Related Legislation, Codes of Practice and Standards

Legislation	QLD Safety in Recreational Water Activities 2011
Codes of Practice	QLD Recreational Diving and Snorkelling 2018
Standards	AS2299.2 Occupational Scientific Diving 2002

## 12 Administration

NOTE: Printed copies of this procedure are uncontrolled, and currency can only be assured at the time of printing.

### 12.1 Approval Details

<Doc #> Guideline Sponsor	Divisional Executive Officer, Services & Resources
Approval Authority	Divisional Executive Officer, Services & Resources
Consultation Committee	Boating & Diving Safety Committee
Contact Unit	<a href="mailto:safety@jcu.edu.au">safety@jcu.edu.au</a>

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## SNORKLELLING STANDARD

### 12.2 Revision History

[Use the table below to record information regarding changes to this Process. Version control should be applied. Major amendments (approved by the Approval Authority) should be numbered 2, 3 etc]

Version	Date Amended	Description of changes	Author
1	dd/mm/yyyy	Original version	Glen Ewels, BDO

## 13 Appendices

### 13.1 Snorkelling & Swimming Health Declaration

### 13.2 Snorkelling Competency Assessment

### 13.3 TAKE 5 pre-dive checklist

### 13.4 Snorkel Log Sheet

### 13.5 OIRS Medical Emergency Evacuation Procedure

### 13.6 Procedure for Missing Person

### 13.7 Procedure for Treating Injured Diver / Snorkeler

**SNORKELLING & SWIMMING HEALTH DECLARATION**

Surname		Preferred Title (Mr. Ms. Dr. etc)	
First Name(s)		Date of Birth	
Department		Staff/Student ID	
Position at James Cook		Phone	
What year did you start snorkelling?		Snorkelling experience in open waters: <input type="checkbox"/> Less than 10 hours <input type="checkbox"/> 10-50 hours <input type="checkbox"/> More than 50 hours	

**SWIMMING PROFICIENCY AND FITNESS**

Are you able to swim or tread water for 10 minutes non-stop?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Are you able to swim 200m in less than 5 minutes?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	Do you have more than 15 hours experience in breath-hold diving?  <input type="checkbox"/> YES  <input type="checkbox"/> NO	
<b>FITNESS</b> (circle one)	<b>Low</b>	<b>Average</b>	<b>Good</b>
Minutes of vigorous exercise per week:	0 – 30min total	30 – 180min total	More than 180min

**DO YOU HAVE ANY OF THE FOLLOWING CONDITIONS? (circle)**

Heart disease	YES	NO
High or low blood pressure	YES	NO
Shortness of breath (especially when exercising)	YES	NO
Asthma	YES	NO
Emphysema or other chronic lung disease	YES	NO
Epilepsy	YES	NO
Fits or faints	YES	NO
Recent head injury or concussion	YES	NO
Diabetes (type.....)	YES	NO
Do you smoke cigarettes?	YES	NO
Are you pregnant?	YES	NO
Are you taking prescribed medication?	YES	NO

Signature (Parent/Legal Guardian if under 18 years old) .....

Name in .....(Print)

Date:.....

COMPETENCY ASSESSMENT CRITERIA FOR SNORKELLING	
<p align="center"><b>Snorkelling Supervisor</b>  <i>Acceptable qualifications may include;</i></p> <ul style="list-style-type: none"> <li>• SIS30413 – Certificate III in Outdoor Recreation</li> <li>• SISOSNK201A – demonstrate snorkelling activities                             <ul style="list-style-type: none"> <li>• SISOSNK403A – Instruct snorkelling skills</li> <li>• SISOSNK302A – Guide snorkelling</li> </ul> </li> <li>• SCUBA Dive Leader, Dive Master, Dive Instructor</li> </ul>	
Theory (induction content)	Practical
<ul style="list-style-type: none"> <li>• Knowledge of operating procedures, emergency procedures, risk assessments for the site.</li> <li>• Knowledge of site risks and control measures.</li> <li>• Knowledge of recognising problems in snorkelers</li> </ul>	<ul style="list-style-type: none"> <li>• Can swim 200m in less than 5min</li> <li>• Can fin 400m in less than 10min</li> <li>• Use of communications equipment</li> </ul>
<p align="center"><b>Lookout</b>  <i>Acceptable qualifications may include;</i>                      Not Applicable</p>	
<ul style="list-style-type: none"> <li>• Knowledge of changes in site conditions and risks</li> <li>• Knowledge of recognising problems in snorkelers</li> </ul>	<ul style="list-style-type: none"> <li>• Use of communications equipment</li> </ul>
<p align="center"><b>Rescuer</b>  <i>Acceptable qualifications may include;</i></p> <ul style="list-style-type: none"> <li>• Recognised Rescue Diver Certification</li> <li>• SISCAQU002 – perform basic water rescues</li> <li>• Bronze Medallion – Royal Life Saving</li> </ul>	
<ul style="list-style-type: none"> <li>• Knowledge of operating and emergency procedures for the site.</li> <li>• Knowledge of snorkelling related illness, injury and treatment.</li> </ul>	<ul style="list-style-type: none"> <li>• Can swim 200m in less than 5min</li> <li>• Can fin 400m in less than 8min</li> <li>• Can tow a person (or proxy) 100m in less than 4min</li> </ul>
<p align="center"><b>First Aid Provider</b>  <i>Acceptable up-to-date qualifications must include;</i>                      HLTAID003 – Provide First Aid (or minimum equivalent) HLTAID001 – Provide Cardiopulmonary Resuscitation HLTAID002 – Provide basic emergency life support HLTAID007 – Provide advanced resuscitation, or VU21763 – Apply basic oxygen resuscitation therapy</p>	
<ul style="list-style-type: none"> <li>• Knowledge of operating and emergency procedures for the site.</li> <li>• Knowledge of snorkelling related illness, injury and treatment.</li> <li>• Knowledge of first aid and emergency equipment at the site.</li> </ul>	NA
<p align="center"><b>Snorkelling Guide</b>  <i>Acceptable qualifications may include;</i></p> <ul style="list-style-type: none"> <li>• SISOSNK302A – Guide snorkelling</li> </ul>	
<ul style="list-style-type: none"> <li>• Knowledge of site risks and control measures.</li> <li>• Knowledge of recognising problems in snorkelers</li> </ul>	<ul style="list-style-type: none"> <li>• Can swim 200m in less than 5min</li> <li>• Can fin 400m in less than 8min</li> <li>• Can tow a person (or proxy) 100m in less than 4min</li> </ul>

**Assessment of Snorkelers**

*Instructions for using the Snorkelling & Swimming Health Declaration and Competency Assessment*

- The primary purpose of assessing snorkelers is to determine which persons may be **'at risk'**.
- All snorkelers must complete the **Snorkelling & Swimming Health Declaration** form.
- Direct observations which are also part of the assessment include;
  - Is the person either very young or older
  - Are overweight
  - Appear in bad health
  - Exhibit stressed behaviour
  - Have mobility issues
  - Have difficulties understanding instructions
- If a person declares existing health / medical conditions, or the above-mentioned observations have identified concerns, the Manager and Supervisor may, at their discretion;
  - Request the person to seek written advice from a medical practitioner, or
  - Allow the person to snorkel, but treat the person as **'at risk'** and apply additional controls at the site as required, or
  - Prohibit the person from snorkelling.
- If a person declares poor swimming ability, or zero snorkelling experience, the person should be treated as **'at risk'** until the Manager and Supervisor are satisfied they are not 'at risk'.
  - It may be decided that a practical assessment of the person's swimming / snorkelling ability can be done before the person is allowed to snorkel in a group, or
  - A snorkelling guide may be appointed to have direct control of one or more 'at risk' persons.



<b>‘TAKE 5’</b> <b>PRE-DIVE SCUBA &amp; SNORKELLING RISK CHECKLIST</b>	
To be completed by the Dive / Snorkel Supervisor prior to in-water activities.	
<p><b>Is this activity in accordance with your Dive Plan and JCU Diving &amp; Snorkelling Procedures?</b></p> <p style="text-align: center;"><b>Are all divers / snorkelers fit for work?</b></p> <p style="text-align: center;"><b>Have divers / snorkelers been informed of working within their ability?</b></p> <p style="text-align: center;"><b>Divers / snorkelers have been properly briefed about;</b></p> <p style="text-align: center;"><b>The tasks being performed</b></p> <p style="text-align: center;"><b>Dive profiles</b></p> <p style="text-align: center;"><b>The risk control measures being applied</b></p> <p style="text-align: center;"><b>Emergency procedures – lost buddy, injured diver, rescue, recall, first aid &amp; evacuation</b></p> <p style="text-align: center;"><b>Review of communications</b></p> <p style="text-align: center;"><b>All SCUBA equipment is checked and functional</b></p> <p style="text-align: center;"><b>All emergency equipment is checked and functional</b></p> <p style="text-align: center;"><b>All communications equipment is checked and functional</b></p> <p style="text-align: center;"><b>Are there unforeseen risks present at the site?</b></p> <p style="text-align: center;"><b>Is there a risk from boat traffic at the site?</b></p> <p style="text-align: center;"><b>Have you considered the presence of sharks or crocodiles?</b></p> <p style="text-align: center;"><b>Do the current environmental conditions elevate risk?</b></p> <p style="text-align: center;"><b>Do you have adequate control of the dive site?</b></p>	<p><b>Y / N</b></p> <p><b>Y / N</b></p> <p><b>Y / N</b></p> <p><b>Y / N</b></p> <p><b>Y / N</b></p> <p><b>Y / N</b></p> <p><b>Y / N</b></p> <p><b>Y / N</b></p> <p><b>Y / N</b></p> <p><b>Y / N</b></p> <p><b>Y / N</b></p> <p><b>Y / N</b></p> <p><b>Y / N</b></p> <p><b>Y / N</b></p> <p><b>Y / N</b></p> <p><b>Y / N</b></p> <p><b>Y / N</b></p> <p><b>Y / N</b></p> <p><b>Y / N</b></p>
<p><b>Extra control measures / actions implemented .....</b></p> <p>.....</p> <p><b>Notes:</b> .....</p> <p><b>Date:</b> ..... <b>Supervisor:</b> .....</p>	

**Orpheus Island Research Station****Snorkeling Log**

<b>Date:</b>	
<b>Group:</b>	
<b>Supervisor:</b>	
<b>Location:</b>	
<b>Person count before going to site:</b>	
<b>Person count before leaving site:</b>	

Surname	First name	Gr	Time In	Time Out	Initial
		1			
		1			
		2			
		2			
		3			
		3			
		4			
		4			
		5			
		5			
		6			
		6			
		7			
		7			
		8			
		8			
		9			
		9			
		10			
		10			

## ORPHEUS ISLAND RESEARCH STATION

### Emergency Management & Response Plan

MEDICAL EMERGENCY	
INCIDENT	ACTION
GENERAL INJURY	<p><u>All OIRS Staff</u></p> <ol style="list-style-type: none"><li>1. Survey the area and determine whether it is safe.</li><li>2. Remove/reduce hazards if it is safe to do so.</li></ol> <p><b>IF DANGER CANNOT BE REMOVED FROM NEAR THE CASUALTY OR THE CASUALTY CANNOT BE REMOVED FROM THE SOURCE OF DANGER, DO NOT PROCEED.</b></p> <ol style="list-style-type: none"><li>3. Send another staff member to call the emergency services. Bring radio or mobile phone back to the scene if possible.</li><li>4. Access for life threatening injuries: Check the casualty's:<ul style="list-style-type: none"><li>• Response</li><li>• Airway</li><li>• Breathing</li><li>• Severe bleeding</li></ul></li><li>5. Take casualty to first aid room if possible; continue first aid, if required.</li><li>6. Record all relevant details relating to the incident and subsequent actions by all participants.</li><li>7. Call Royal Flying Doctor's Service (RFDS) if required</li><li>8. Follow RFDS advice.</li></ol> <p><b>If deemed necessary patient will be evacuated from the OIRS to either Lucinda for transport to Ingham Hospital, to Palm Island Hospital or to the Orpheus Island Resort for transfer to Helicopter. Severity of the injury and tide height determine the evacuation process.</b></p> <p><u>OIRS Manager and/ or Operations Assistant</u></p> <ol style="list-style-type: none"><li>1. Limit access to scene</li><li>2. Ensure limited disruption to the scene to assist investigation.</li><li>3. Ensure all RFDS paperwork and incident report is completed in a timely manner.</li><li>4. Enter the incident on Riskware and implement any control measures if required.</li></ol>

<b>CORAL / OYSTER CUTS &amp; ABRASIONS</b>	<p><b><u>All OIRS Staff</u></b></p> <ol style="list-style-type: none"> <li>1. Cuts or abrasions should be cleaned in fresh water (not salt) and dried. Apply betadine.</li> <li>2. Monitor the wound for signs of infection, keep applying betadine when required.</li> <li>3. Should wound become infected call RFDS for advice.</li> </ol> <p><b><u>OIRS Manager and/ or Operations Assistant</u></b></p> <ol style="list-style-type: none"> <li>1. Ensure all RFDS paperwork and incident report is completed in a timely manner.</li> <li>2. Enter the incident on Riskware and implement any control measures if required.</li> </ol>
<b>FATALITY</b>	<p><b><u>All OIRS Staff</u></b></p> <ol style="list-style-type: none"> <li>1. Survey the area and determine whether it is safe.</li> <li>2. Remove/reduce hazards if it is safe to do so.</li> </ol> <p><b>IF DANGER CANNOT BE REMOVED FROM NEAR THE CASUALTY OR THE CASUALTY CANNOT BE REMOVED FROM THE SOURCE OF DANGER, DO NOT PROCEED.</b></p> <ol style="list-style-type: none"> <li>3. Send another staff member to call the emergency services. Bring radio or mobile phone back to the scene if possible.</li> <li>4. First Aid shall be administered until such time death is confirmed by the Emergency Services or other factors prevent continuance of first aid at the scene.</li> <li>5. Unless safety issues dictate, DO NOT move the body or alter the scene until authorised by the Police or Emergency services personnel.</li> </ol> <p><b><u>OIRS Manager and/ or Operations Assistant</u></b></p> <ol style="list-style-type: none"> <li>1. Limit access to scene</li> <li>2. Ensure limited disruption to the scene to assist investigation.</li> <li>3. Ensure all RFDS paperwork and incident report is completed in a timely manner.</li> <li>4. Monitor other people for any signs of stress or shock; even if they were not directly involved in the incident.</li> </ol> <p><b><u>Dean of Research and/or JCU WHS Unit officer</u></b></p> <ol style="list-style-type: none"> <li>1. Travel to the scene of the incident as soon as possible.</li> <li>2. Upon arrival liaise with personnel on the current situation and assist if required.</li> <li>3. Once the information has been confirmed notify security to activate the critical incident procedures.</li> <li>4. Arrange for debrief and counselling of all involved in the emergency.</li> </ol>

FIRE	
INCIDENT	ACTION
FIRE IN ANY OF THE BUILDINGS	<p><b><u>All OIRS Staff</u></b></p> <ol style="list-style-type: none"> <li>1. Survey the area and determine whether it is safe to enter.</li> <li>2. People to be evacuated from the vicinity of the fire to the muster area.</li> <li>3. If necessary and safe to do so, immediate first aid will be applied to any casualties and a call made to RFDS as required.</li> <li>4. Fire extinguishers and /or fire blankets located in the areas adjacent to the fire will be used immediately to extinguish the fire if the fire is small and it is safe to do so.</li> </ol> <p><b><u>OIRS Manager and/or Operations Assistant</u></b></p> <ol style="list-style-type: none"> <li>1. Perform a head count; ensure all people are accounted for.</li> <li>2. Do not allow anyone to re-enter the building.</li> <li>3. Ensure power is isolated.</li> <li>4. Keep log of events.</li> </ol> <p><b><u>OIRS Maintenance Officer</u></b></p> <ol style="list-style-type: none"> <li>1. Isolate power if required.</li> <li>2. In the event of a large fire, after evacuation of the area, staff should try and stop fire spreading to vegetation and/or other buildings using fire extinguishers, water truck, salt water pump and fire hose.</li> </ol> <p><b><u>Users and Visitors</u></b></p> <ol style="list-style-type: none"> <li>1. Follow directions of OIRS staff.</li> <li>2. Remain at muster point until the manager gives the all clear.</li> </ol>
FUEL FARM FIRE	<p><b><u>All OIRS Staff</u></b></p> <ol style="list-style-type: none"> <li>1. People to be evacuated from the vicinity of the fire to the muster area.</li> <li>2. All operations in the area to cease immediately.</li> <li>3. If necessary and safe to do so, immediate first aid will be applied to any casualties and a call made to RFDS as required.</li> <li>4. Do not attempt to extinguish the fire unless trained for the situation and it is safe to do so.</li> <li>5. In the event of a large fire, after evacuation of the area, staff should try and stop fire spreading to vegetation and/or other buildings using fire extinguishers, water truck, salt water pump and fire hose to hose building walls, rooves, eaves and gutters.</li> </ol> <p><b><u>OIRS Manager and/or Operations Assistant</u></b></p> <ol style="list-style-type: none"> <li>1. Perform a head count; ensure all people are accounted for.</li> <li>2. Do not allow anyone to re-enter the area of the fire.</li> <li>3. Ensure power is isolated.</li> <li>4. Keep log of events.</li> </ol>

<b>FUEL FARM FIRE continued</b>	<p><b><u>OIRS Maintenance Officer</u></b></p> <ol style="list-style-type: none"> <li>1. Isolate power if required.</li> </ol> <p><b><u>Users and Visitors</u></b></p> <ol style="list-style-type: none"> <li>1. Follow directions of OIRS staff.</li> <li>2. Remain at muster point until the manager gives the all clear.</li> </ol>
<b>BUSHFIRE</b>	<p><b><u>All OIRS Staff</u></b></p> <ol style="list-style-type: none"> <li>1. Survey the area and determine whether it is safe to approach.</li> <li>2. People to be evacuated from the vicinity of the fire to the muster area.</li> <li>3. If necessary and safe to do so, immediate first aid will be applied to any casualties and a call made to RFDS as required.</li> <li>4. Fire extinguishers located in the areas adjacent to the fire will be used immediately to extinguish the fire if the fire is small and it is safe to do so.</li> <li>5. Only if it is safe to do so, if fire is in the vicinity of the of the station buildings and other infrastructure efforts will be made to protect these structures using fire extinguishers, water truck, salt water pump and fire hose to hose building walls, rooves, eaves and gutters.</li> </ol> <p><b><u>OIRS Manager and/or Operations Assistant</u></b></p> <ol style="list-style-type: none"> <li>1. Perform a head count; ensure all people are accounted for.</li> <li>2. Do not allow anyone to re-enter the area of the fire.</li> <li>3. Ensure power is isolated to buildings in the line of the fire if required.</li> <li>4. A continuous watch and monitoring will be kept on the bushfire and its ongoing condition, along with weather conditions, which will be reported to National Parks.</li> <li>5. Keep log of events.</li> <li>6. After bush fire has been extinguished or burnt itself out, continuous watch will be kept on areas to prevent further flare up. Weather conditions and forecasts will be monitored during and after bushfire to be able to assess any change in potentially hazardous weather conditions, which may lead to further flare up.</li> </ol> <p><b><u>OIRS Maintenance Officer</u></b></p> <ol style="list-style-type: none"> <li>1. Isolate power if required.</li> </ol> <p><b><u>Users and Visitors</u></b></p> <ol style="list-style-type: none"> <li>1. Follow directions of OIRS staff.</li> <li>2. Remain at muster point until the manager gives the all clear.</li> </ol>

VESSEL INCIDENT	
INCIDENT	ACTION
ABANDON SHIP	<p><b><u>Vessel Master</u></b></p> <ol style="list-style-type: none"> <li>1. Advise OIRS/or Coastguard by radio if possible.</li> <li>2. Sound air horn to alert crew and passengers.</li> <li>3. Give instructions to crew (if available) to direct passengers to assembly areas.</li> <li>4. The order to abandon ship will be given.</li> <li>5. Radio Mayday.</li> <li>6. Disengage propeller.</li> <li>7. Endeavour to keep all people in a group.</li> <li>8. Keep people calm and instruct them how to transfer to the life rafts easily.</li> <li>9. Manage the use of equipment and stores.</li> <li>10. Grab bag and EPIRB, set off EPIRB.</li> <li>11. Keep log of events.</li> </ol> <p><b><u>Vessel Crew or Vessel Master</u></b></p> <ol style="list-style-type: none"> <li>1. Ready all lifesaving equipment, collect warm clothing and blankets if available.</li> <li>2. Address passengers and tell them what is happening and keep them calm.</li> <li>3. Conduct a head count and distribute life jackets and ensure they are worn correctly.</li> <li>4. Launch life rafts and assemble them on the lee side of the vessel.</li> <li>5. At least one crew or master should be in each life raft where possible.</li> <li>6. Assign lookout duties.</li> <li>7. Passenger safety.</li> <li>8. Substitute person if the Master is disabled.</li> </ol> <p><b><u>OIRS staff</u></b></p> <ol style="list-style-type: none"> <li>1. On receiving message from Master or crew follow their directions.</li> <li>2. Notify coastguard if required by Master.</li> </ol> <p><b><u>Passengers</u></b></p> <ol style="list-style-type: none"> <li>1. Follow directions of Master and crew.</li> </ol>
FIRE ON VESSEL	<p><b><u>All on vessel</u></b></p> <ol style="list-style-type: none"> <li>1. Raise alarm when fire evident i.e. flame, smoke, heat alarm sounds.</li> </ol> <p><b><u>Vessel Master</u></b></p> <ol style="list-style-type: none"> <li>1. Instruct crew and passengers to assembly area.</li> <li>2. Identify type of fire and specific location.</li> <li>3. Assess severity.</li> <li>4. Conduct a head count.</li> <li>5. Contain fire by shutting off fuel lines.</li> </ol>



<b>FIRE ON VESSEL continued</b>	<ol style="list-style-type: none"> <li>6. Position ship to reduce wind or oxygen to fire.</li> <li>7. Prepare lifesaving equipment and personal flotation devices for deployment.</li> <li>8. Radio call OIRS or Coastguard as soon as possible.</li> <li>9. Cool fire boundary with hand pump/buckets.</li> <li>10. Dispose of dangerous goods (petrol/oxygen in the vicinity).</li> <li>11. Monitor situation and put out pan pan call or other alarm if necessary.</li> <li>12. Wait until fire has been completely extinguished and there is not a possibility of flashback.</li> <li>13. Assess further action, update OIRS or coastguard.</li> <li>14. Recover equipment.</li> <li>15. Keep log of events.</li> </ol> <p><b><u>OIRS staff</u></b></p> <ol style="list-style-type: none"> <li>3. On receiving message from Master or crew follow their directions.</li> <li>4. Notify coastguard if required by Master.</li> </ol> <p><b><u>Passengers</u></b></p> <ol style="list-style-type: none"> <li>16. Follow directions of Master and crew.</li> </ol>
<b>VESSEL COLLISION OR GROUNDING</b>	<p><b><u>All on vessel</u></b></p> <ol style="list-style-type: none"> <li>1. Brace for impact</li> <li>2. Follow directions of Master and crew</li> </ol> <p><b><u>Vessel Master</u></b></p> <ol style="list-style-type: none"> <li>1. Alert crew and passengers to imminent danger if possible</li> <li>2. Tend to injured</li> <li>3. Assess damage to own vessel</li> <li>4. Control ingress of water (if serious follow flooding procedure)</li> <li>5. Assist other vessel if needed and possible</li> <li>6. Contact OIRS and advise situation, radio pan pan or mayday if required</li> <li>7. Control and report any pollution</li> <li>8. Lay out anchors as required</li> <li>9. Liaise with OIRS regarding actions</li> <li>10. Log of events</li> </ol> <p><b><u>OIRS staff</u></b></p> <ol style="list-style-type: none"> <li>1. On receiving message from Master or crew follow their directions</li> <li>2. Notify coastguard or other authorities if required by Master</li> </ol>

<b>FLOODING OF VESSEL</b>	<p><b><u>All on vessel</u></b></p> <ol style="list-style-type: none"> <li>1. If breach is dangerous raise alarm and position of the flood shout “flood, flood” (bilge alarm may sound)</li> <li>2. Follow directions of Master and crew</li> </ol> <p><b><u>Vessel Master</u></b></p> <ol style="list-style-type: none"> <li>1. Instruct crew and passengers to assembly area</li> <li>3. Conduct a head count</li> <li>4. Rescue any people from the flooded areas</li> <li>5. Isolate area if possible</li> <li>6. Start pumping or shoring</li> <li>7. Begin repairs if possible</li> <li>8. Position vessel to reduce stress</li> <li>9. Contact OIRS</li> <li>10. Consider lifesaving appliance deployment</li> <li>11. Monitor stability action correction may be required.</li> <li>12. Log all actions in vessel log</li> </ol> <p><b><u>OIRS staff</u></b></p> <ol style="list-style-type: none"> <li>1. On receiving message from Master or crew follow their directions</li> <li>2. Notify coastguard or other authorities if required by Master</li> </ol>
<b>MEDICAL EMERGENCY ON VESSEL</b>	<p><b><u>First person on the scene</u></b></p> <ol style="list-style-type: none"> <li>1. Perform DRSABCD if qualified to do so</li> </ol> <p><b><u>Vessel Master</u></b></p> <ol style="list-style-type: none"> <li>2. Recall all divers/snorkelers to boat using pre-arranged recall procedure</li> <li>3. Contact OIRS and carry out emergency radio call on Channel 16 –panpan</li> <li>4. Ascertain if there are other trained medical persons on board or in the vicinity and is able to help. Seek medical treatment advice from RFDS via OIRS</li> <li>5. Conduct secondary survey and get patient stats every 10 minutes</li> <li>6. Keep OIRS or RFDS up to date of any changes in patient status</li> <li>7. Make your way back to shore ASAP or arrange to evacuate injured person by helicopter or another vessel.</li> <li>8. Log all actions in the vessel log</li> </ol> <p><b><u>OIRS staff</u></b></p> <ol style="list-style-type: none"> <li>1. On receiving message from Master or crew follow their directions</li> <li>2. Notify coastguard or other authorities if required by Master</li> <li>3. Notify JCU security of critical incident</li> </ol> <p><b><u>Crew</u></b></p> <ol style="list-style-type: none"> <li>1. Report to Master for instructions unless involved in DRSABCD</li> </ol>

<p><b>PERSON OVERBOARD - IF WITNESSED</b></p>	<p><b><u>Witness</u></b></p> <ol style="list-style-type: none"> <li>1. Raise alarm</li> <li>2. Keep person overboard in view, point – do not leave this duty</li> <li>3. Dispatch buoys/life rings if in reach</li> <li>4. First person to arrive throws life ring and positioning aids</li> <li>5. Assist Master as required</li> </ol> <p><b><u>Vessel Master</u></b></p> <ol style="list-style-type: none"> <li>1. Activate MOB marker on GPS, reduce power (disengage propeller if Master sees the person fall)</li> <li>2. Note ships heading and current speed in log as soon as they become aware of person overboard</li> <li>3. Initiate actions starting with assembling passengers in assembly area and perform head count</li> <li>4. Manoeuvre vessel back to person overboard (guided by witness)</li> <li>5. Prepare retrieval gear</li> <li>6. Commence recovery procedure – come alongside to leeward side of person in water</li> <li>7. Lower lifting gear and instruct person in the water</li> <li>8. Apply first aid to person as necessary</li> <li>9. Notify OIRS of the situation</li> <li>10. Recover equipment</li> <li>11. Record events in vessel log</li> </ol> <p><b><u>OIRS staff</u></b></p> <ol style="list-style-type: none"> <li>1. On receiving message from Master or crew, follow their directions</li> <li>2. Notify coastguard or other authorities if required by Master</li> </ol> <p><b><u>Crew</u></b></p> <ol style="list-style-type: none"> <li>1. Follow directions given by Master</li> </ol>
<p><b>PERSON OVERBOARD - NOT WITNESSED OR AT NIGHT – WHEN NOTICED</b></p>	<p><b><u>Vessel Master</u></b></p> <ol style="list-style-type: none"> <li>1. Note ships heading and current speed in log as soon as they become aware of person overboard</li> <li>2. Reciprocal course (Williamson turn)</li> <li>3. Initiates actions starting with assembling passengers in assembly area and perform head count</li> <li>4. Man spotlights, post lookouts, be vigilant, person overboard may be shouting</li> <li>5. Radio OIRS, pan pan and/or coastguard</li> <li>6. Maintain search pattern</li> <li>7. Steps 4-8 if person spotted</li> <li>8. Record events in vessel log</li> </ol> <p><b><u>OIRS staff</u></b></p> <ol style="list-style-type: none"> <li>1. On receiving message from Master or crew, follow their directions</li> <li>2. Notify coastguard or other authorities if required by Master</li> </ol>

<p><b>MISSING DIVER – IF WITNESSED</b></p>	<p><b><u>Witness</u></b></p> <ol style="list-style-type: none"> <li>1. Raise alarm</li> <li>2. Keep person overboard in view, point – do not leave this duty</li> <li>3. Dispatch buoys/life rings if in reach</li> <li>4. First person to arrive throws life ring and positioning aids</li> <li>5. Assist Master as required</li> </ol> <p><b><u>Vessel Master</u></b></p> <ol style="list-style-type: none"> <li>1. Activate MOB marker on GPS, reduce power (disengage propeller if Master sees the person fall)</li> <li>2. Notes ships heading and current speed in log as soon as they become aware of person overboard</li> <li>3. Initiates actions starting with assembling passengers in assembly area and perform head count</li> <li>4. Manoeuvre vessel back to person overboard (guide by witness)</li> <li>5. Prepare retrieval gear</li> <li>6. Commence recovery procedure – come alongside to leeward side of person in water</li> <li>7. Lower lifting gear and instruct person in the water</li> <li>8. Apply first aid to person as necessary</li> <li>9. Notify OIRS of the situation</li> <li>10. Recover equipment</li> <li>11. Record events in vessel log</li> </ol> <p><b><u>OIRS staff</u></b></p> <ol style="list-style-type: none"> <li>1. On receiving message from Master or crew, follow their directions</li> <li>2. Notify coastguard or other authorities if required by Master</li> </ol> <p><b><u>Crew</u></b></p> <ol style="list-style-type: none"> <li>1. Follow directions given by Master</li> </ol>
<p><b>MISSING DIVER - NOT WITNESSED OR NIGHT – WHEN NOTICED</b></p>	<p><b><u>Vessel Master</u></b></p> <ol style="list-style-type: none"> <li>1. Notes ships heading and current speed in log as soon as they become aware of person overboard</li> <li>2. Reciprocal course (Williamson turn)</li> <li>3. Initiates actions starting with assembling passengers in assembly area and perform head count</li> <li>4. Man spotlights, post lookouts, be vigilant, person overboard may be shouting</li> <li>5. Radio OIRS, pan pan and/or coastguard</li> <li>6. Maintain search pattern</li> <li>7. Steps 4-8 if person spotted</li> <li>8. Record events in vessel log</li> </ol> <p><b><u>OIRS staff</u></b></p> <ol style="list-style-type: none"> <li>1. On receiving message from Master or crew, follow their directions</li> <li>2. Notify coastguard or other authorities if required by Master</li> </ol>

<b>SEVERE WEATHER</b>	<p><b><u>Vessel Master</u></b></p> <ol style="list-style-type: none"> <li>1. Monitor meteorological forecasts and changes in weather observations</li> <li>2. Contact OIRS for weather forecast updates and live readings from weather stations</li> <li>3. Secure and stow all equipment on deck and throughout vessel.</li> <li>4. Plan route and navigate to avoid bad weather</li> <li>5. Check ship Safety Management System or owner's manual to check vessels capabilities in adverse conditions</li> <li>6. If winds expected to exceed 30 knots cease operations and return to OIRS if safe to do so.</li> <li>7. Navigate to take shelter in or around islands</li> <li>8. Communicate with OIRS and other vessels</li> <li>9. Seek coastguard assistance if required</li> <li>10. In event of severe westerly wind contact OIRS prior to arrival for assistance in manage vessel mooring when coming ashore</li> <li>11. Record events in vessel log</li> </ol>
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<b>CYCLONE ACTION PLAN</b>	
<b>INCIDENT</b>	<b>ACTION</b>
<b>BEFORE THE CYCLONE SEASON</b>	<p><b><u>OIRS Manager</u></b></p> <ol style="list-style-type: none"> <li>1. Ensure all OIRS staff are aware of the Cyclone Action Plan for OIRS.</li> </ol> <p><b><u>All OIRS Staff</u></b></p> <ol style="list-style-type: none"> <li>1. Ensure all emergency stores and equipment have been purchased and stored in a central location and used only for emergencies. This should include but not limited to: plastic sheeting, tape, batteries, battery radio, torches, matches, portable stove/BBQ, cooking gear, tin food, water containers.</li> </ol> <p><b><u>OIRS Boating Officer</u></b></p> <ol style="list-style-type: none"> <li>1. Conduct training for all crew in cyclone procedures.</li> <li>2. Research locations to moor Challenger IV, Inge and Pioneer 1 on the mainland in the event of a cyclone, make any necessary contacts.</li> <li>3. Check cyclone storage locations for Research 5 (on trailer near Workshops) and 4 x dinghies (on copper logs between Managers Office and Workshop, as per Appendix 1).</li> <li>4. Ensure vessels are in excellent operational condition and annual service has been carried out before cyclone season.</li> </ol>
<b>TROPICAL CYCLONE ADVICE</b>	<p><b><u>OIRS Maintenance Officer</u></b></p> <ol style="list-style-type: none"> <li>1. Ensure that walls, roof and eaves are secure on buildings.</li> <li>2. Check cyclone shutters on buildings.</li> <li>3. Trim tree tops and branches well clear of buildings.</li> <li>4. Clear area of loose material that could blow about and possibly cause injury or damage during extreme winds.</li> </ol>

<p><b>TROPICAL CYCLONE ADVICE continued</b></p>	<p><b><u>JCU Emergency Controller</u></b></p> <ol style="list-style-type: none"> <li>1. Advise via general email that a Cyclone Advice has been initiated and the current state of the cyclone.</li> </ol> <p><b><u>OIRS Manager and/or Operations assistant</u></b></p> <ol style="list-style-type: none"> <li>1. Advise all OIRS staff of the cyclone status.</li> <li>2. Liaise with Dean of Research as to course of action to be taken.</li> <li>3. Monitor progress of cyclone status.</li> </ol> <p><b><u>All OIRS Staff</u></b></p> <ol style="list-style-type: none"> <li>1. Ensure there is no loose equipment around station that could be picked up by strong winds and become missiles.</li> </ol> <p><b><u>OIRS Boating Officer</u></b></p> <ol style="list-style-type: none"> <li>1. Ensure Challenger IV, Inge and Pioneer 1 fuel and water tanks are full and kept this way till the all clear is given.</li> <li>2. Monitor meteorological forecasts and changes in weather observations</li> <li>3. Secure and stow all equipment on deck and throughout the vessel</li> </ol>
<p><b>TROPICAL CYCLONE WATCH</b></p> <p>Issued if a cyclone is expected to affect coastal communities within 48 hours, but not expected within 24 hours.</p>	<p><b><u>JCU Emergency Controller</u></b></p> <ol style="list-style-type: none"> <li>1. Advise via general email that a Cyclone Watch has been initiated and the current state of the cyclone.</li> </ol> <p><b><u>OIRS Manager and/or Operations Assistant</u></b></p> <ol style="list-style-type: none"> <li>1. Advise all OIRS staff, users and visitors of the cyclone status.</li> <li>2. Liaise with the Dean of Research as to course of action to be taken.</li> <li>3. Suspend all land based activities and assist the Boating and Diving Officer for the evacuation of all users and visitors.</li> <li>4. Institute continuous radio and telephone watch.</li> <li>5. Monitor meteorological forecasts and changes in weather observations.</li> <li>6. Secure and protect all office equipment, records and documents.</li> <li>7. Backup server to external hard drive.</li> <li>8. Charge batteries for portable radios, mobile and satellite phones.</li> <li>9. Keep log of events.</li> </ol> <p><b><u>All OIRS Staff</u></b></p> <ol style="list-style-type: none"> <li>1. Prepare your belongings and accommodation for evacuation.</li> </ol> <p><b><u>OIRS Boating and Diving Officer</u></b></p> <ol style="list-style-type: none"> <li>1. Ensure Challenger IV is fuelled and ready for cyclone securing at short notice.</li> <li>2. Suspend all boating and diving activities.</li> <li>3. Prepare evacuation of all users and visitors on the next available tide.</li> <li>4. Take all users and visitors off station.</li> </ol>

<p><b>TROPICAL CYCLONE WATCH continued</b></p> <p>Issued if a cyclone is expected to affect coastal communities within 48 hours, but not expected within 24 hours.</p>	<ol style="list-style-type: none"> <li>5. Ensure all other vessels are taken out of the water and secured at their designated cyclone station.</li> <li>6. Refuel Challenger IV if required.</li> </ol> <p><b><u>OIRS Maintenance Officer</u></b></p> <ol style="list-style-type: none"> <li>1. Ensure both loader and gator are fuelled and oiled.</li> <li>2. Check all lashings required to secure equipment.</li> <li>3. Check security of all doors, windows and all amenities.</li> <li>4. Arrange for all loose items around the station to be removed or secured.</li> </ol> <p><b><u>Users and Visitors</u></b></p> <ol style="list-style-type: none"> <li>1. Pack up all personal gear and lab work.</li> <li>2. Be prepared to leave the island when the OIRS staff advises.</li> </ol>
<p><b>TROPICAL CYCLONE WARNING</b></p> <p>Issued if a cyclone is affecting or is expected to affect coastal communities within 24 hours.</p>	<p><b><u>JCU Emergency Controller</u></b></p> <ol style="list-style-type: none"> <li>1. Notify via general email that a Cyclone Warning has been issued and advise the University Community to implement the second stage of their emergency plan.</li> </ol> <p><b>Safety of staff has precedence over safety of station property.</b>  OIRS staff to be evacuated as soon as practicable to ensure they have time to return to their residences and families to prepare for the impending cyclone. It is intended that the station will be as secured as far as possible by the Tropical Cyclone Warning notification, so staff can attend to their own affairs. A safety margin must be taken into consideration and allowance for staff to collect their vehicles at Lucinda.</p> <p>In the event there is insufficient time to evacuate from OIRS, staff are to bunker down in the dive shed compressor room. Mattresses, blankets, food, clothing, sturdy footwear, torches, battery operated radio, medical supplies, mobile phones, sat phone, radio books, games, BBQ etc are to be taken to this area. Staff must remain inside the shelter until the official all clear is given. Challenger IV, Inge and Pioneer 1 are to be relocated to the southern end of Pioneer Bay.</p> <p><b><u>All OIRS Staff</u></b></p> <ol style="list-style-type: none"> <li>1. Prepare your belongings and accommodation for evacuation.</li> <li>2. JCU cannot accept responsibility or liability for any items stored in the residences.</li> </ol> <p><b><u>OIRS Manager and/or Operations Assistant</u></b></p> <ol style="list-style-type: none"> <li>1. Advise all OIRS staff, users and visitors of the cyclone status.</li> <li>2. Liaise with Dean of Research as to course of action to be taken.</li> <li>3. Institute continuous radio and telephone watch.</li> <li>4. Monitor meteorological forecasts and changes in weather observations.</li> <li>5. Inform all OIRS staff to prepare to evacuate OIRS.</li> <li>6. Disconnect and cover computers and other electrical office equipment with plastic and move to a safe position.</li> <li>7. Collect external hard drive containing server back up and remove from site.</li> <li>8. Disconnect all electrical appliances and store in safe position.</li> <li>9. Keep log of events.</li> </ol>



<p><b>TROPICAL CYCLONE WARNING continued</b></p> <p>Issued if a cyclone is affecting or is expected to affect coastal communities within 24 hours.</p>	<p><b><u>OIRS Boating and Diving Officer</u></b></p> <ol style="list-style-type: none"> <li>1. Ensure Challenger IV is fuelled and ready for evacuating at short notice.</li> <li>2. Prepare evacuation of all staff on the next available tide.</li> <li>3. Ensure all other vessels are taken out of the water and secured at their designated cyclone station. Ensure all loose items are removed from vessels and placed in a secure location.</li> <li>4. Shutdown and seal dive compressor.</li> <li>5. Evacuate staff off site prior to winds exceeding 30 knots.</li> <li>6. Anchor vessel in sheltered mangrove area of Herbert River Creek.</li> <li>7. Switch off battery and hide engine key in vessel toilet.</li> <li>8. Remove any loose items from vessel, secure deck equipment inside cabin, lock windows and doors.</li> <li>9. Launch tender and transfer staff to Lucinda jetty.</li> <li>10. Haul out tender and store on OIRS vehicle roof rack.</li> <li>11. All staff depart area preferably heading to Townsville, Cairns or further afield.</li> </ol> <p><b><u>OIRS Maintenance Officer</u></b></p> <ol style="list-style-type: none"> <li>1. Check all lashings required to secure equipment.</li> <li>2. Check security of all doors, windows and all amenities. Secure cyclone shutters.</li> <li>3. Arrange for all loose items around the station to be removed or secured.</li> <li>4. Fuel caddies to be secured inside structure and lashed down.</li> <li>5. Secure all fuel drums in fuel store building.</li> <li>6. Turn off all gas bottles.</li> <li>7. Tape any windows not protected by shutters.</li> <li>8. Shutdown 2 generators and seal motors.</li> <li>9. Disconnect all electrical appliances and store on higher ground.</li> </ol>
<p><b>POST CYCLONE ACTIVITIES</b></p>	<p><b><u>Before returning to OIRS</u></b></p> <p><b><u>OIRS Manager</u></b></p> <ol style="list-style-type: none"> <li>1. Liaise with Dean of Research to determine when it is safe for staff to return to island.</li> <li>2. Contact OIRS staff who are rostered to return to work.</li> </ol> <p><b>No users are to attend site until the station is deemed functional.</b></p> <p><b><u>OIRS Boating and Diving Officer</u></b></p> <ol style="list-style-type: none"> <li>1. Meet staff at Lucinda Jetty, launch tender and thoroughly inspect Challenger IV</li> <li>2. If vessel sustained any damage or suspected damage, remain at Lucinda until repairs completed and test drive confirms 100% operational</li> <li>3. If vessel considered 100% operational proceed to OIRS with caution</li> <li>4. On arrival at OIRS use extreme caution coming ashore and using mooring lines until a full inspection is undertaken.</li> <li>5. Refuel Challenger IV as soon as safe to do so to ensure adequate fuel for return to Lucinda if station conditions unsafe.</li> </ol>

## POST CYCLONE ACTIVITIES continued

### Returning to OIRS

Remember your workplace may not be the same as when you left it!! Be alert to possible dangers as you move around the station.

### All OIRS Staff

1. Check around accommodation and other areas carefully: be safety conscious.
2. Note damage, take photos if possible.

### OIRS Manager and/or Operations Assistant

1. Check office and arrange resumption of normal office functions.
2. Attend to problems involving staff welfare and housing.
3. Commence process for insurance claims if required.

### OIRS Boating and Diving Officer

1. Check boats to see if any damage has been sustained, if they are undamaged return to beach/water.
2. Assist maintenance officer with securing buildings, plant, equipment to prevent further damage/ access as required

### OIRS Maintenance Officer

1. Assess damage to infrastructure report to Faculty Resource Manager. Take photos of damage where possible.
2. Arrange repairs/secure buildings, plant, equipment to prevent further damage/ access.
3. Check generators and resume normal operations if safe to do so.

## Response to a missing person at sea



