# Risk Analysis Management System

**Swiftwater Breathing Apparatus Training: example only**

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|  | | **Risk** | | **C** | **L** |
| Risks  Accident, Injury, other forms of loss | | 1. Slip, trip of fall around river 2. Sprains & Breaks 3. Shoulder dislocation 4. Drowning 5. Hit by other river users (boats etc) 6. Hypothermia 7. Loss of equipment or PPE 8. Damage to equipment or PPE 9. Hit by vehicles near/on roadways 10. Loss or damage to PPE 11. Medical conditions 12. Unsuitable weather preventing exercises from running 13. Washed away downstream 14. Strangulation by throw bag 15. Psychological harm 16. Damage to environment 17. Spread of Didymo or other biosecurity threat 18. Unaccounted student 19. Decompression/Dive Injury | | M  M  M  H  H  M  L  L  H  L  M  L  M  H  M  L  H  H  H | M  M  L  M  L  M  L  L  L  L  L  L  L  L  L  L  L  M  L |
| Causal Factors  Hazards, perils, dangers | **People** | 1. Untrained participants or observers 2. Buddy system not adhered to 3. Trainers in unsafe position 4. Observers not aware of safety practices 5. Distractions or lack of attention 6. Tiredness or fatigue 7. Lack of warm clothing 8. Running or horsing around on river bank 9. Not using correct lifting techniques 10. Not wearing PPE or incorrect PPE 11. Prior medical conditions or allergies 12. Other river users 13. Psychological harm – phobia, fears. 14. Unauthorised or accidental diving | | | |
| **Equipment** | 1. Incorrect equipment or PPE 2. Not wearing correct PPE 3. Faulty equipment 4. Insufficient equipment available. 5. Rescue cache not available. 6. Throw bag line used incorrectly. 7. Spare warm clothing not available. 8. Poor quality air used in recharging of cylinder. 9. Entanglement of SWBA whilst in flow. | | | |
| **Environment** | 1. Water flow and quality 2. Water and environmental conditions/temperature 3. Traffic 4. Weather – Wind, rain, coldness or sun 5. Anchors causing damage to trees 6. Biosecurity contamination from equipment previous used elsewhere 7. Dark environment due night time (if applicable) | | | |
| **Risk Management Strategy** | **Normal Operation** | **People** | 1. Prior Training 2. Refresh signals including help and attention. 3. Trainers to follow normal safe practices. 4. Full site briefing given prior to arrival or at Assembly Area on arrival 5. Downstream/upstream spotters to be used where required. 6. Opportunities to have rest and fluids (and hot drinks) between activities 7. Check for prior medical conditions prior to course or assessment, collect signed form from participants. 8. Ensure Trainers and Safety are 1st aid qualified 9. Designate cold/warm/hot zones. 10. Advise no running/fooling around. 11. Buddy up students to ensure buddy checks 12. Medical monitoring of students/staff for water re-entry during cold seasons 13. Reinforce SWBA is for surface water respiratory protection – NOT diving 14. Pre-Operation Check: B~~W~~RAF as per training notes 15. Secondary Operator ready to intervene. | | |
| **Equipment** | 1. Provide Staging Area in safe location for personal equipment and PPE 2. Check participants PPE is correct and undamaged prior to commencing activity 3. Ensure correct PPE is worn at all times while in warm/hot zones including:    1. PFD    2. Wet/Dry Suit    3. Booties    4. Whistle    5. Throw bag (optional)    6. River Knife (recommended) 4. Provide 1st aid kit (AED and Oxygen if available) 5. Disclose medical conditions to instructing team 6. Rescue cache to be available. 7. Instructors to take spare clothing, hot drinks and/or blankets 8. Emergency action & communications plan discussed with students. 9. Water equipment checked, cleaned and dried. 10. Night time operations (if applicable) require all to have light stick and headlamp 11. PFD must be used, and no weight belt/system to be worn by SWBA operator 12. SWBA system must be mounted and trimmed to ensure no entanglements 13. Recharging of SWBA cylinders only by Approved Filler or under direct supervision. 14. Air quality must be certified as decanted from SCBA/SCUBA cylinder filled at dive or fire station. | | |
| **Environment** | 1. Check site during planning and immediately prior to activity to ensure stability 2. Cordon activity areas and provide signage for traffic/pedestrians applicable) 3. Advise site owners and users of activities (if private location) 4. Check weather report and postpone if weather is unsuitable. Provide shelter if weather is adverse (including sun, wind and coldness) 5. Designate hot/warm/cold zones. 6. Identity entry and exit points on river. 7. Identify hazards such as strainers, holes etc. 8. Activate lighting system (or test to ensure functioning) for night activities. 9. Do not operate in Class IV or higher or flows exceeding 25 kmph | | |
| **Emergency** | | Prior to activity   * Check river flow/hydro line information. * Check weather forecast * Ensure communications/help plan is understood, * Check first aid supplies (and AED/Oxygen if available) * Locate a suitable Arrival Area for Emergency Services including helicopter * Fully brief students (SMEACTQR) including   + hazard identification   + SWBA team positions (primary, secondary, attendant, supervisor)   + designation of zones   + refreshing signals/communications including operator recall, low and out of air   + free flowing/frozen regulator action   + swab hose or system entrapment (escaping from PFD or jettison)   + buddy and equipment checks   + unintended diving (not holding breath)   + normal and emergency procedures, including first aid arrangements   + verification of operating training (i.e. QR code check) * Lesson specific safety briefing * Students complete recreational dive medical screening questionnaire (must be medically cleared if any “yes”.   During activity   * Exercise or training is stopped (use signals as required) * Trainer to take control of situation * If required: * Effect rescue * Provide 1st Aid * Call emergency services and advise of situation and response location * Persons dispatched to entrance (or main road for remote areas)   After Activity   * Complete documentation (incident register, Internal Report) * Inform authorities (Worksafe etc if mandated). * Debrief/interview personnel. | | |
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| **Relevant Industry Standards Applicable** | * Swiftwater Rescue manual * SWBA online course material * H&SAW Regulations (Hazardous Materials) | |
| **Policies And Guideline Recommended** | * Instructor Field Guide * PSI Good Practice Guide – SWBA | |
| **Skills Required By Staff** | * Swiftwater Breathing Apparatus (SWBA) Instructor * Approved Filler * Rescue Diver or above * Swiftwater Rescue Technician as assistants * Current First Aid Certificate | |
| **Final Decision On Implementing Activity** | **Accept** | Reject |
| This event will go ahead with the above listed safety requirements and preparation  If weather is unsuitable, exercise is to be deferred or find alternative venue unaffected (i.e. river flow acceptable). | |