1 Introduction
Commissioned by: New Zealand Recreation Association with funding from Sport NZ and the ACC Drowning Prevention Fund, managed by Water Safety New Zealand

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February 2015


The Aquatic Facility Guidelines have been developed for use by aquatic managers. They provide detailed information covering the management and operation of an aquatic facility.

This document is a companion document to the Facility Management Manual which can be found on the Sport NZ website and the NZ Recreation Association website:

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1 Introduction and Overview

The NZ Recreation Association (NZRA), representing the aquatics facility industry, recognises the need to have up-to-date industry standards and guidelines. These Aquatic Facility Guidelines outline the current best practice in the industry.

With support from Water Safety New Zealand and Sport NZ, the 2010 guidelines have been updated with contributions and advice from industry personnel. The scope has been broadened to include a wider variety of aquatic facilities (thermal and spa pools, hospitality and school pools) and special pool features such as hydro slides, wave pools, and lazy rivers.

These guidelines have been produced in electronic form for easy navigation though the information. They contain case studies, templates, examples of signage and links to other sources of relevant information. Managers can download and customise templates to create documents like checklists, normal operating procedures and emergency action plans.

1.1 Guideline contents

Chapter 1 Introduction and Contacts: provides contact details for all organisations relevant to the aquatic industry.

Chapter 2 Health and Safety: provides information pertaining to PoolSafe, legislation, risk management and hazard awareness, emergencies, equipment, customer hygiene, faecal incidents and cryptosporidium, common injuries and first aid.

Chapter 3 Customer Care: includes topics of customer service, satisfaction, education, disability awareness, customer safety code, FAQs from customers, privacy and photography.

Chapter 4 Facility Operation: covers topics relating to normal operating procedures, supervision of facilities and activities, and communication. Customer requirements, location and equipment issues relating to childcare and fitness suites and gyms are also included as is information specific to the operation of school and community pools, hospitality pools and thermal pools.

Chapter 5 Plant Operation: includes information on water quality, water treatment procedures, filtration systems and cleaning.

Chapter 6 Facility Management: contains information on asset management.

Chapter 7 Personnel: includes legislation, recruitment and selection, training and development, managing staff, staff presentation and protection, problem solving, and information on staff qualification and training.

Chapter 8 Facility Development: covers topics of the planning process, pool specifications, design and facility upgrades.

Chapter 9 Legislation and Standards: lists all NZ standards and legislation relevant to aquatic facilities.
1.2 Acknowledgements

Special thanks to those within the industry who have provided information and guidance during the development of this document and those who reviewed the new guidelines.

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Virginia Munro, Aquatics Consultant;
Yvonne Hughey, Training Manager, Hanmer Springs Thermal Pools & Spa
2 Definitions

These guidelines have been developed specifically for public aquatic facilities, but do provide useful information for other aquatic facilities, especially relating to health and safety obligations and legal requirements.

The following definitions are derived from NZS 5826:2010 – Pool Water Quality and NZS 4441 – Swimming Pool Design.

2.1 Aquatic facility

An aquatic facility means any facility, which includes a pool(s). A pool means any water retaining structure, wholly or partially of artificial construction and generally having a circulation and filtration system, designed for recreational, training or therapeutic swimming.

2.2 Public aquatic facility

A public aquatic facility means any pool other than domestic pools. This category includes commercial, school, institutional, club, hospitality industry, community and local authority pools. This definition does not differentiate between local authority, community, trust, school or private facility ownership.

2.3 Domestic pool

A domestic pool means any pool located in the grounds of a private dwelling and intended to be used by members of the household and their invited guests.

2.4 Geothermal aquatic facility

Any pool which uses geothermal water, i.e. water which emerges from the ground at an uncontrolled temperature generated by geological forces. This includes recirculating systems and unfiltered, non-recirculating (“fill and draw”) systems.
3 Government Contacts

Accident Compensation Corporation
Tel (04) 816 7400
Business Helpline 0800 222 776
thinksafe@acc.org.nz
www.acc.org.nz

Charities Commission
PO Box 30112
Lower Hutt 5040
Tel 0508 242 748
info@charities.org.nz
www.charities.govt.nz

Commerce Commission
Tel (04) 924 3600 or 0800 943 600
Fax (04) 924 3700
contact@comcom.govt.nz
www.comcom.govt.nz

Department of Building & Housing
Tel (04) 494 0260
Fax (04) 494 0290
info@dbh.govt.nz
www.dbh.govt.nz

Department of Conservation
Tel (04) 471 0726
Fax (04) 381 3067
enquiries@doc.govt.nz
www.doc.govt.nz

Employment Relations Infoline
0800 20 90 20
www.dol.govt.nz

Human Rights Commission
PO Box 12 411
Thorndon
Wellington
Tel (04) 473 9981 or 0800 496 877
Fax (04) 471 6759
infoline@hrc.co.nz
www.hrc.co.nz

Inland Revenue Department
0800 377 772
Tel (04) 498 5800
Fax (04) 498 5801
www.ird.govt.nz

Labour Information
Ministry of Business, Innovation and Employment
Tel (04) 915 4400 or 0800 20 90 20
Fax (04) 915 4015
www.mbie.govt.nz

Local Government Association
PO Box 1214
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Private Bag 92061
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www.med.govt.nz

Ministry of Education
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info@minedu.govt.nz
www.minedu.govt.nz

New Zealand Qualifications Authority
Tel (04) 463 3000 or 0800 697 296
Fax (04) 463 3112
www.nzqa.govt.nz

Occupational Safety & Health
Tel 0800 20 90 20
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### 4 Sporting and Other Organisations

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<th>Organisation</th>
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<th>Website</th>
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<tr>
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<td>FINA (International Aquatic Federation)</td>
<td><a href="http://www.fina.org.nz">www.fina.org.nz</a></td>
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<td>New Zealand Canoe Federation</td>
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<td><a href="http://www.stjohn.org.nz">www.stjohn.org.nz</a></td>
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<tr>
<td>Paralympics New Zealand</td>
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AQUATIC FACILITY GUIDELINES

2 Health and Safety
The Aquatic Facility Guidelines have been developed for use by aquatic managers. They provide detailed information covering the management and operation of an aquatic facility.

This document is a companion document to the Facility Management Manual which can be found on the Sport NZ website and the NZ Recreation Association website:


Acknowledgements

Alex Brunt, General Manager, Water Safety New Zealand; Alison Law, Aquatic Facilities Manager, Te Kāiwhakahaere Wāhi Roto i te Wai, Kāpiti Coast District Council; Bevan Smith, H&S Development Advisor, Parks, Sport and Recreation, Wellington City Council; Brian Milne, Director, Xyst; Craig Rouse, Centre Manager, Manurewa Pool and Leisure Centre, Auckland City; Caroline Ancell, Assistant Manager, Powerco Aquatic Centre, South Taranaki District Council; David Cameron, Contracts Manager, Filtration and Pumping Commercial Ltd; David Lee, Aquatic Services Manager, Powerco Aquatic Centre South Taranaki District Council; Esther Bukholt, Community, Recreation and Sport Project Manager, NZ Recreation Association; Esther Hone-Moore, AUSTSWIM Aotearoa; Fee Botcher, Customer Service Assistant, Gore Multisports Complex; Haydn Wilton, Wellington Regional Aquatics Centre Programmes Team Leader, Wellington City Council; Halina Dorne, Administration Officer, Aquatics, Coastlands Aquatic Centre; Jamie Delich, Facilities Consultant Community Sport, Sport NZ; Jenni Pethig, Learning & Development Advisor, Community Recreation & Arts, Skills Active; Joanne Saxton, Wellington Regional Aquatics Centre Operations Team Leader, Wellington City Council; Judy Tipping, Aquatic Consultant; Kathy Moore, Aquatic Facilities Manager, Selwyn Aquatic Centre; Lauren Hudson, Facility Manager, Naenae Pool, Hutt City Council; Linda Newman, Waterworld Educare Supervisor, Hamilton City Council; Nigel Newbery, Pool Operations Manager, AC Baths, Taupo District Council; Noel Gulliver, Service Manager, Rotorua Aquatics Centre; Patrick Blackman, Team Leader, Freyberg Pool, Wellington City Council; Peter Thompson, Aquatic Services Manager, Southland Aquatic Centre, Richard Lindsay, Facilities Consultant Community Sport, Sport NZ; Rowan Cordwell, Facility Manager Freyberg Pool, Wellington City Council; Roxy Williams, Facility Manager Karori Pool, Wellington City Council; Sarah Cresswell, Senior Training Consultant, Opus International Consultants; Stephen Keatley, Community Facilities Manager, Hutt City Council; Tracey Prince, Aquatics Project Manager, NZ Recreation Association; Vaughan Hope, Facility Manager, ASB Aquatic and Fitness Centre, Richmond; Virginia Munro, Aquatics Consultant; Yvonne Hughey, Training Manager, Hanmer Springs Thermal Pools & Spa.
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1 Introduction

Thorough planning and sound preparation are the basis of any successful aquatic experience. A well managed swimming pool which is regularly maintained should provide both customers and staff with an enjoyable and rewarding experience.

Safety is paramount in any aquatic environment and overrides everything else. Managers identify potential hazards, develop plans to minimise hazards and establish management and emergency procedures. They can use risk management identification and planning tools and a safety checklist. Managers of aquatic facilities that operate facilities and services all year round should ensure regular review (minimum quarterly) of health and safety and risk management procedures and include opportunities for facility personnel to provide input for continuous improvement.

Managers of outdoor pools should take the opportunity to upgrade and repair the swimming pool, and provide training opportunities for all staff on the accepted use of the pool before the start of the summer season.

Health and safety is a major issue in the aquatic environment. Statistics on drownings provided by Water Safety New Zealand show that between 2004 and 2013 there were a total of 49 drownings in a pool environment. Of these, 16% were in public pools, 10% were in hotel/motel pools, and 6% were at thermal pools.
2 Legislation and National Guidelines

Managers of aquatic facilities must be aware of and familiar with key legislation that affects the operation of an aquatic facility, and know their role in terms of accountability for ensuring the legislation is enforced.

2.1 Health and Safety in Employment Act 1992

Under the Health and Safety in Employment Act 1992, employers are required to take all practicable steps to provide and maintain a safe working environment, provide and maintain facilities for the safety and health of employees at work, and to ensure actions at work do not result in harm to other people, including members of the public.

Employers must ensure any action or inaction does not lead directly to any harm to employees, customers or contractors while the aquatic facility is being used. The 2000 amendment to the Act, specifically addressed volunteers and outlines requirements which are similar to those for employees, namely to take all practicable steps to ensure health and safety of the volunteer while they are undertaking voluntary work with the aquatic facility (e.g. swimming officials).

Within the Act, specific reference is made to the adequate training and supervision of staff that use any kind of plant or substance. In the context of an aquatic facility, this requirement means employers must ensure any staff with the responsibility for managing the pool or using the pool are adequately trained. Unit standards are available for water quality management, and training programmes and initiatives for swim teaching are nationally available.

This Act will be replaced by the Health and Safety at Work Act 2015, which will be coming into force from 1 April 2015. It will represent a major change to the New Zealand’s health and safety system, and will include detailed classification of risks to both customers and staff. This Act will be administered by Workplace NZ.

Template: Health and safety report form (Manurewa)

Further information
Workplace NZ http://www.dol.govt.nz

2.2 Serious harm

The definition of serious harm as detailed in the Health and Safety in Employment Act 1992 means death or the following types of harm:

- Any condition that results in permanent loss of bodily function, or temporary severe loss of bodily function such as respiratory disease, noise-induced hearing loss, neurological disease, cancer, dermatological disease, communicable disease, illness caused by infected material, poisoning, chemical or hot metal burn of the eye, bone fracture, laceration, or crushing
- Amputation of body part
- Burns requiring referral to a specialist registered medical practitioner or specialist outpatient clinic
- Loss of consciousness from lack of oxygen
• Loss of consciousness or acute illness requiring treatment by a registered medical practitioner from absorption, inhalation or ingestion of substance
• Any harm that causes the person to be hospitalised for a period of 48 hours or more commencing within seven days of the harms occurrence.

2.3 PoolSafe

The PoolSafe Quality Management Scheme is an initiative jointly developed by the NZ Recreation Association (NZRA) and Water Safety New Zealand. The scheme is an independent assessment of public pools to ensure their operations and facilities are safe. The vision of PoolSafe is to have all swimming pools in New Zealand safe and well managed. PoolSafe is valid for one year and recognises a facility’s ability to deliver services to a national standard. The assessment criteria includes:
• Supervision standards
• Lifeguard qualification and training
• Water quality
• Health and safety.

2.4 PoolSafe objectives

1. Satisfy the Industry’s desire to be professional and forward thinking.
2. Encourage swimming pools to meet a minimum set of standards that provide:
   • An environment which enables a safe and enjoyable aquatic experience
   • Trained staff
   • A well maintained facility and equipment
   • Clean and comfortable water
   • Effective and current emergency action plans (EAP)
   • Good management practices.
3. Allow the public to quickly identify that a particular pool facility is safe.

PoolSafe benefits the aquatics industry in a number of ways:
• A proactive identification of standards which require attention through training or industry assistance
• Proactive professionalism
• An ability to ensure a transfer of learning takes place followed by an implementation of processes/procedures to meet the minimum standards
• A way to facilitate ongoing compliance with minimum standards through the self assessment checklist
• An ability to lead to a national benchmarking exercise which could be part of a “competitive advantage process”
• Consistency with the aquatics industry’s history of mentoring others in the industry
• Helping new/under resourced facilities to achieve a higher standard
• A marketing tool – to internal stakeholders, staff, sponsors and the community
• Potential benefits for staff once the system is well established. An employer hiring candidates with equal experience may well choose one from a proven quality facility who has the ‘quality factors’ inherent in their training.

2.5 Procedures

PoolSafe is available to all public swimming pools and involves an evaluation of a facility’s ability to deliver services, which meet appropriate standards. PoolSafe is not an evaluation of actual performance which will be measured by things such as customer satisfaction, turnover, energy usage, staff turnover and health and safety audits.

Further information
www.nzrecreation.org.nz
www.watersafety.org.nz

2.6 Guidelines for schools

Under legislation, school pools are required to meet the same standards of supervision and water quality as public pools.

School Boards of Trustees are required to follow best practice methods for the management of the school swimming pool as set out by NZRA and they are to comply with all relevant legislation and NZ Standards that apply to water safety and pool use and management.

School Boards are responsible for the health and safety of everyone using the pool with the Board’s permission, including after school use by the school and wider community.

Outside school hours, the Board could still be held responsible for harm to any unauthorised pool users, so Boards are advised to maintain and regularly check their security. When a pool is being leased by a third party e.g. a swim school, the health and safety of the users must be clearly stated under the lease agreement.

Further information
2.7 Hospitality industry guidelines

Hotel and motel managers are required to establish policies for the use of the pool. These should include the rules of the pool, use of equipment and location of amenities. It should incorporate a pool users code of behaviour.

- Supervision standards – children must be actively supervised at all times
- Never swim alone
- Never swim while under the influence of alcohol or drugs
- Take additional care if you have a medical condition
- Dangerous/prohibited behaviour, e.g. running, jumping.

Risks should be identified and a plan put in place for managing any hazards in the swimming pool area. An emergency action plan should be established and all staff made aware of the plan and its requirements.

Every pool should have clear, visible safety signage. Good signage will display the pool rules, code of behaviour and what to do in the event of an emergency.

Further information

3 Risk Management and Hazard Awareness

Risk management is the identification, reduction or elimination of hazards. The key in hazard identification and mitigation is to take all practicable steps to ensure the health and safety of staff (including volunteers and contractors) and users of the facility.

Hazard identification includes how the facility is operated and used by customers and staff. Hazards may create varying levels of risk for customers and staff. There are four distinct categories of hazards, some relate specifically to customers and others to the physical structure and operation of the facility.

3.1 People hazards

People hazards are created by staff and customers participating in or watching activities at the facility and may include:

- Customers under the influence of alcohol or drugs
- Unsupervised children
- Customers who appear nervous or timid, over confident or unfamiliar with the facility
- Crowding
- Customers poolside, such as coaches and trainers
- Paedophiles
- Physical and mental illness
- Inappropriate or anti-social behaviour.

In the pool, those who need to be carefully watched include:

- Obvious weak swimmers
- People with known health conditions
- Boisterous show-offs
- Pool overflow/channel crawlers
- Individuals using floatation aids
- Unaccompanied children
- Parents ‘teaching’, particularly diving.

Staff may also create hazards through their behaviour and its effect on customers’ behaviour; lifeguard positioning and the ability of lifeguards to observe activity in the pool.
Some practical steps to address these are included in the chapters on:

- Chapter 3 - Customer Care
- Chapter 4 - Facility Operations
- Chapter 7 – Personnel.

3.2 Activity hazards

Activity hazards are those relating to specific activities including associated equipment. Some activities can be changed to reduce risk, but others may need to be prevented. Activities generally discouraged include:

- Misuse of cellphones and cameras, especially in changing rooms
- Misuse of equipment
- Running around the pool deck
- Tag games, bombing
- Bullying, pushing, fighting
- Unsafe diving
- Swimming under diving boards.

3.3 Physical hazards

Physical hazards include those relating to the design and structure of the facility including its surroundings and related amenities such as play equipment, saunas and spas. Examples of physical hazards include:

- Pool deck and tiles
- Drain covers
- Pool overflow channel
- Water depth/sloping surfaces
- Lane ropes
- Pool shelving
- Changing rooms
- Steps
- Starting blocks
- Wave chamber outlet
- Paraplegic hoists and ramps
- Bulkheads
- Cracks in pool floor or tiles
- Water!

Specific tactics for managing these are included in Chapter 4 - Facility Operations.

3.4 Operational hazards

Operational hazards relate to the operation of the facility such as pool water quality treatment or plant room operations:

- Chemical handling, storage and use
- Plant room equipment and operations e.g. boilers, pumps
- Maintenance equipment e.g. pool vacuum
- Weather hazards for outdoor facilities e.g. lightning
- Electrical hazards, both permanent and temporary.

Specific tactics for managing these are included in Chapter 5 - Plant Operations.
3.5 Hazard management

Managing hazards will improve the health and safety of customers and staff. The first step in managing hazards is to identify them by undertaking a regular physical inspection of the building, analysing tasks and how they are undertaken by staff, looking at behaviours of customers and looking at accident and incident reports.

The Normal Operating Procedures (NOP) and Emergency Action Plan (EAP) will identify hazards and describe appropriate actions necessary to reduce or minimise them.

**Template:** Hazard identification form
4 Emergencies

In addition to Normal Operating Procedures (NOP) every facility should have an Emergency Action Plan (EAP). An EAP specifies in detail actions to be taken in the event of every foreseeable emergency. Emergencies can be caused by:

- People: security incidents, medical issues, accidents
- Equipment/facilities: fire (electrical or other), gas leak, chemical leak or spill
- Natural events: earthquakes, landslide, major storm.

For every emergency scenario, the EAP should assign responsibility for various key tasks, establish a chain of command during an emergency and specify who does what, where and when. Evacuation procedures of the facility and building also need to be included.

Emergency planning starts with identifying potential incidents and accidents. Studying accident records to determine trends in injury type or location is important.

Staff must have a thorough and detailed knowledge of the EAP, and an understanding of their role in it. In-service training programmes should take account of the need for formal instruction in, and practical implementation of, the plan. Staff should be given the opportunity to provide input to the development and revision of the EAP.

When an emergency occurs, rapid response is vital. While speed is essential, an efficient and competent response will decide the outcome. Response by staff should be automatic and this will develop through regular training and practice. Refer to staff training in Chapter 7 – Personnel.

4.1 Emergency procedures

Procedures should include:

- Personnel resources available in an emergency, number of staff on duty, their location, and relevant skills
- Who takes responsibility during an emergency
- Who will respond and in what order
- Staff safety
- Communication systems used
- Emergency equipment, location and use
- Locations where emergency care will be administered
- Identification of emergency services required, correct numbers, response time, responsibilities, access and exit for emergency services
- Procedure for customer information, communication with police, relatives and press
- Reporting procedures, follow up actions and responsibilities, i.e. who, how, when
- Aftercare for staff and customers involved in emergency situations.

Established and known procedures allow staff to focus on the situation and those requiring assistance. Confidence and teamwork will come through practice sessions. These should not be limited to lifeguards, but should include all staff including emergency service personnel.

Whenever the pool is in use, a staff member trained in rescue, resuscitation and first aid must be on site to deal with emergencies.
Key steps in dealing with emergencies

Personal safety and the safety of staff is most important. Staff are not able to assist in an emergency if they are injured.

Think: take a couple of seconds to assess the situation

Observe: and ask to quickly build your knowledge of the situation

Prioritise: formulate response as a list of priorities

Call for help: if needed

Advise: lifeguard in charge of the situation (if not you) and await instructions

Attend: to most serious situation first

Direct: those assisting to attend to jobs you allocate

Double check: for any victims not receiving attention

Secure: poolside supervision

Contact: emergency services if required

Complete: necessary documentation

Inform: appropriate managers

Templates:
- Emergency evacuation plan
- Emergency action plan
- Pool rescues and near misses report

4.2 Civil defence emergencies

During civil defence emergencies, aquatic facilities and staff employed at the facility may have an important civil defence role to play in their local community. As all staff will be trained in first aid, perform a community role and operate a community facility they are best placed to assist the wider community during emergencies. Staff therefore need to be aware of the impact this will potentially have on their ability to go home during times of a civil emergency.

Further information


NZS HB 246:2010 Guidelines for risk management in sport and recreation
www.standards.co.nz
5 Equipment

Rescue aids such as reach poles, rescue tubes and throw ropes must be strategically placed, regularly checked, maintained in good order, and fully accessible if they are to assist a rescue. Their location should be identified in the NOP. The use of rescue aids should be practiced regularly.

Location of first aid equipment, including a spinal board also needs to be strategically placed and all staff must know where their nearest first aid kit is located.

In addition to the standard first aid and rescue equipment located at an aquatic facility, there should also be civil defence equipment and grab and go bags for staff. The location of the civil defence equipment should be near a fire exit door and responsibility for it detailed in the EAP. The emergency equipment and water should be checked and water changed annually.

Templates:
- First aid, defibrillator and oxygen daily checklist
- Emergency and first aid equipment checklist
- Oxygen kit checklist
- Civil defence equipment checklist
6 Customer Hygiene

Facility contamination by customers is a constant risk, which can be reduced by basic hygiene practices and customer education. Signage and information at the facility on health and hygiene practices reduces the likelihood of infections being spread through the facility.

Pool hygiene messages should include:

- No swimming for two weeks if customers have had diarrhoea
- Taking children to the toilet before entering the pool
- Putting babies in tight fitting togs or swimming nappies, not regular nappies
- Telling staff if there has been a faecal accident in the pool
- No underwear to be worn in pool.

Basic hygiene messages such as washing hands after going to the toilet or changing nappies, before handling food and showering can also reduce the risk of contamination to customers.

Template: What to Wear signage
7 Faecal Incidents

Managing faecal incidents can be handled effectively and efficiently by staff following an established procedure. To reduce the likelihood of faecal incidents, especially in young children, encourage parents/caregivers to use appropriate swimwear. Swimwear designed especially for young children are available and could be available for sale at the facility.

Staff can be exposed to infectious material when dealing with a faecal incident. It is important that correct safety equipment e.g. gloves, gumboots, disposable aprons are worn by staff when cleaning up from an incident.

There are different procedures according to the type of faecal incident.

**Floaters/sinkers standard procedure**
1. Inform pool users and reception
2. Evacuate and isolate immediate area
3. Remove solids
4. Remove all pool equipment/toys etc. and disinfect
5. Spot super chlorinate (in excess of 100 mg/l) using a water can or similar
6. Keep area clear for 30 minutes
7. Ensure chlorine is adequately dispersed before allowing people to re-enter area. Spot test area to check chlorine dilution.

**Diarrhoea standard procedure**
1. Inform pool users and reception
2. Evacuate and isolate immediate area
3. Remove all pool equipment/toys etc and disinfect
4. Remove any solids, vacuum to waste
5. Increase FAC (free available chlorine) to no less than 5 mg/l
6. Keep area clear, long enough for faecal matter to be removed by vacuum or turn-over (pool specific)
7. Ensure chlorine is adequately dispersed before allowing people to re-enter area.
8 Cryptosporidium Outbreak

When a cryptosporidium outbreak occurs in the community or cases are associated with a pool, the local Public Health Service will contact the pool manager if there is a concern about risks to pools. During an outbreak the Public Health Service may ask the pool operator to test the water.

If any tests are positive it is possible the facility will be asked to close. The Ministry of Health criteria for closing and re-opening swimming pools will be followed, and administered by the Public Health Service and Environmental Officers for the local council in consultation with the pool manager.

If the test is negative the facility may remain open, unless advised otherwise. It is recommended that facility managers reinforce the message to customers regarding not using the pool if they have had diarrhoea in past two weeks.

In the event of an outbreak, a range of organisations can provide technical advice and guidance (Opus International Consultants, Environmental Laboratory Services now Eurofins).

8.1 Cryptosporidium testing regime

If a pool is identified by the Public Health Service as a common risk factor, the facility may be asked to test the water. It is important to determine who pays for, and who is accredited to conduct the test.

Samples are often taken by a separate organisation and care should be taken to ensure the pool manager and laboratory are satisfied that correct sampling procedure is followed. The internationally recognised test for Cryptosporidium is APHA 9711B. The sampling procedure should be provided by the laboratory carrying out the test. The quantity of water required for testing depends on the laboratory and can vary between 20L and 1000L of pool water.

It is important that pool managers ensure sampling equipment is cleaned thoroughly before each test, as specified by the accredited laboratory and according to APHA 9711B test method.

8.2 Testing laboratories

The Ministry of Health has advised that they currently recognise the following laboratories for testing Cryptosporidium.

Environmental Lab Services (Eurofins)  Watercare Services Laboratory
PO Box 36-105 Moera  PO Box 107-028 Manukau
Lower Hutt  Auckland 2150
04 576 5016 or 0800 576 5016  09 539 7600
info@eurofins.co.nz  clientsupport@watercare.co.nz
www.eurofins.co.nz  www.watercarelabs.co.nz

MicroAqua Tech
Private Bag 11-222
Massey University Palmerston North
06 356 9099 ext 81197

Further information


Opus International www.opus.co.nz;
9 Incidents, Common Injuries and First Aid

Staff need to be aware of all possible common injuries that could occur in an aquatic environment and the first aid treatment required for each injury. A comprehensive list of such injuries, how to identify and treat them is attached as a reference. These injuries are:

- Angina
- Asthma
- Bleeding
- Cardiac arrest
- Choking
- Cramp
- Dislocations and fractures
- Epilepsy
- Fainting
- Head injuries
- Heart attack
- Heat exhaustion
- Heart attack
- Heat exhaustion
- Hyper ventilation
- Hypoglycaemia (diabetic shock)
- Nose bleeds
- Shock

9.1 Shallow water blackout

Shallow water blackout is the result of a lack of oxygen causing unconsciousness. The lungs deprived of oxygen suck any remaining oxygen from the blood supply, causing blackout quickly and often without warning to the victim.

Swimmers often breathe rapidly prior to submersion (hyperventilation) to lower the level of carbon dioxide in the body, which reduces the stimulation to breathe. While this is an important tool for free diving, swimmers inexperienced in this technique often exceed basic precautionary warning signs and rob the body of vital oxygen stores.

Once submerged and underwater, a swimmer can be hidden from view of lifeguards. A series of events is then triggered, including the inhalation of water, possible convulsions, drowning and ultimately cardiac arrest and death.

Shallow water blackout can be avoided by ensuring that carbon dioxide levels in the body are properly calibrated prior to diving and that appropriate safety measures are in place; this can be achieved if underwater swimmers/divers do the following:

- Alert the lifeguard to the intended activity
- Do not hyperventilate prior to diving
- Breathe normally. Allow the body to dictate the rate of breathing to ensure carbon dioxide levels are properly calibrated
- Never swim alone. Dive in pairs, one to observe, one to dive
- Buddy pairs must both know CPR.

Breath holding underwater is extremely dangerous and should not be undertaken by children or recreational swimmers. A seemingly innocent trick, game or competition can quickly become deadly. Whenever a lifeguard sees anyone performing a dangerous activity, it must be quickly stopped.
9.2 Protocol for an accident or serious harm

If a death occurs at the facility, the EAP must clearly state the correct lines of reporting and communication plans for notifying the appropriate authorities, handling media and managing pool users.

Employers must notify WorkSafe NZ as soon as possible of workplace accidents and occurrences of serious harm. In case of emergency, call WorkSafe NZ on freephone 0800 030 040 (24 hours) and choose option 1.

- If necessary, contact emergency services by phoning 111
- If reporting a hazardous substances emergency, call the New Zealand Fire Service on 111 and then the WorkSafe NZ Response Team on 0800 030 040.

It is a legal requirement not to disturb an accident scene until clearance is authorised by a Health and Safety Inspector except in certain situations, including when persons or property are at risk, as provided for by section 26 of the Health and Safety in Employment Act 1992. If you require scene clearance or other immediate assistance from a Health and Safety Inspector, call 0800 030 040.

WorkSafe NZ must be provided with written notice of the circumstances of the accident or serious harm within seven days by using a notification form obtainable from their website. Notification can be either online or written.

Further information

9.3 Incident communication plan

It is important that all NOPs contain a communication plan for situations of serious incident or death. Ensuring staff are fully conversant with the communication plan will help them if the situation eventuates. The communication plan will cover topics such as who to contact, areas of responsibility in relation to the facility, emergency services, the media and caring for the family members of victims.

Template: Serious Incident flow chart

9.4 PoolSafe serious incident review service

In cases where a serious incident has occurred, PoolSafe can offer an independent and objective review service to any aquatic facility. The purpose of the review is to improve industry practice and identify areas where serious harm can be prevented.

As part of the review, representatives of NZRA and Water Safety New Zealand may visit the facility to gather relevant information. Facilities involved in the review process will be required to provide a copy of their NOP, EAP and a full report on the incident.

An impartial and confidential report providing a summary of the incident, findings from the review and recommendations to help prevent similar incidents occurring in future will be given to the facility manager.

Key findings from the review may also be used to help prevent similar incidents from occurring across the aquatics industry. If any findings of the report are made public, specific details of the facility and staff will not be mentioned.

Further information
www.nzrecreation.org.nz
10 Templates And Worksheets

10.1 PoolSafe criteria and checklist report
10.2 Health and safety report form
10.3 Hazard identification form
10.4 Emergency Evacuation Plan (Selwyn)
10.5 Emergency Action Plan - AC Baths
10.6 Pool rescues and near misses report
10.7 Emergency and first aid equipment checklist
10.8 First aid, defibrillator and oxygen daily checklist
10.9 Oxygen kit checklist
10.10 Civil defence equipment checklist
10.11 What to wear signage
10.12 Aquatic first aid
10.13 Serious incident flowchart
### 10.1 PoolSafe criteria and checklist report

Criteria for being PoolSafe include written and observed evidence. This information is updated regularly, and 2014 criteria are as follows.

<table>
<thead>
<tr>
<th>Documented evidence</th>
<th>Criteria</th>
<th>Method of assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pool supervision</td>
<td>All lifeguards must hold current &amp; valid PLSA or PLCA.</td>
<td>Sight current &amp; valid PLSA or PLPC certificates for all lifeguards.</td>
</tr>
<tr>
<td></td>
<td>Every body of water is supervised by a qualified lifeguard (when open for use) at all times.</td>
<td>Review facility normal operating procedures (NOPs) relating to supervision. A facility schematic/s should be included detailing: Recommended static positions Patrolling routes.</td>
</tr>
<tr>
<td>Pool Alone</td>
<td>Existence of a policy relating to child supervision.</td>
<td>Review facility NOPs relating to child supervision.</td>
</tr>
<tr>
<td>Risk Management Plan</td>
<td>Existence of a pool water risk management plan.</td>
<td>Evidence of a pool water quality risk management plan (RMP) is clearly apparent.</td>
</tr>
<tr>
<td>Health and Safety</td>
<td>Confirm the operation of a health and safety management process.</td>
<td>Review facility NOPs relating to health and safety.</td>
</tr>
<tr>
<td>Water Quality</td>
<td>Water testing programme compliant with NZS 5826:2010.</td>
<td>Review facility NOPs relating to water quality.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Observed evidence</th>
<th>Criteria</th>
<th>Method of assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water quality</td>
<td>Confirmation that staff understand and apply the faecal accident procedure.</td>
<td>Questioning to verify that staff understand the faecal accident procedure.</td>
</tr>
<tr>
<td>Supervision</td>
<td>Confirmation that all pools are supervised according to NOP.</td>
<td>Visual check and questioning to verify that staff understand and apply pool supervision policy.</td>
</tr>
<tr>
<td>Emergency Action Plan</td>
<td>Confirmation that staff understand and apply the pools EAP.</td>
<td>Visual check and questioning to verify that staff understand EAP.</td>
</tr>
<tr>
<td>Pool Alone</td>
<td>Confirmation that staff understand and apply the pools child supervision policy.</td>
<td>Visual check and questioning to verify that staff understand child supervision policy.</td>
</tr>
<tr>
<td>Health and Safety</td>
<td>Confirmation that staff understand and apply the pools health and safety policy.</td>
<td>Visual check and questioning to verify that staff understand health and safety policy.</td>
</tr>
</tbody>
</table>

Further information

A comprehensive checklist from NZRA

10.2 Health and safety report form
**AC - Investigation of Personal Health and Safety Reports**

### Is an investigation required for the event described overtly?
- [ ] Yes
- [ ] No

**Who should undertake the investigation?**
- [ ] The designated leader for the workplace.
- [ ] An elected and trained health and safety representative.
- [ ] The seriousness of the event will dictate the need for an external specialist to be involved in the investigation. If in doubt - contact your H & S Advisor.

- [ ] Complete Part A and B if an investigation is required
- [ ] Complete Part B if an investigation is not required

#### Part A

**Investigation Form**

<table>
<thead>
<tr>
<th>Further Background Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>List below names of witnesses and/or any others involved in the event</td>
</tr>
</tbody>
</table>

#### Causes Identified - Checklist (check all causes identified)

**Immediate Causes - What actions and/or conditions caused or could have contributed to this event?**

- [ ] Using equipment improperly
- [ ] Using equipment without authority
- [ ] Improper lifting
- [ ] Improper position for task
- [ ] Improper loading
- [ ] Improper placement
- [ ] Using defective equipment
- [ ] Operating at improper speed
- [ ] Failure to follow procedures for the task
- [ ] Failure to use ppe at all or used improperly
- [ ] Failure to warn
- [ ] Failure to secure
- [ ] Making safety devices inoperable
- [ ] Removing safety devices
- [ ] Horseplay
- [ ] Under influence of alcohol or other drugs

- [ ] Other

**Contribution Actions Identified**

- [ ] No written procedures in place
- [ ] Inadequate induction/training for task
- [ ] Poor housekeeping - disorder
- [ ] Congestion or restricted action
- [ ] Inadequate or excessive illumination
- [ ] Inadequate ventilation
- [ ] Inadequate guards or barriers
- [ ] Inadequate or improper pipe
- [ ] Defective tools, equipment or materials
- [ ] Inadequate warning system
- [ ] Fire and explosion hazards
- [ ] Hazardous environmental conditions, gases, dust, smoke, fumes, vapours.
- [ ] Noise exposure
- [ ] Radiation exposure
- [ ] High or low temperature exposure
- [ ] Wear and tear

**Contributing Conditions Identified**

#### Basic Causes - What specific personal or job factors caused or could have contributed to this event?

- [ ] Lack of knowledge
- [ ] Lack of leadership/supervision
- [ ] Improper motivation
- [ ] Inadequate capability
- [ ] Stress
- [ ] Inadequate tools/equipment
- [ ] Unclear role
- [ ] Incorrect design

#### Description of Causes Identified (if required)

#### Preventative Action Plan - What action may or will be taken to prevent a recurrence?

<table>
<thead>
<tr>
<th>Action</th>
<th>By Whom</th>
<th>By When</th>
</tr>
</thead>
</table>

#### Names of Investigators

- [ ] [Name 1]
- [ ] [Name 2]

#### Part B

**Manager or Designated Leader to Complete**

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
</table>

Send this completed form to your H&S Advisor on the day of occurrence or notification.

Copy sent to
- [ ] Natasha King
- [ ] Michael Groom

- [ ] If serious accident, also send a copy to Group Manager.
## 10.3 Hazard identification

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Potential harm</th>
<th>Significant hazard</th>
<th>Practical to eliminate</th>
<th>Practical to isolate</th>
<th>All practical steps to minimise</th>
<th>Controls required, action proposed</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injury</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>check, maintenance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lane Pool</td>
<td>Lane ropes</td>
<td>Diving blocks</td>
<td>Rollout channel (if broken)</td>
<td>Broken / loose tiles</td>
<td>Entry ladders</td>
<td>Pool</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10.4 Emergency Evacuation Plan

This document is an exemplar detailing the common scenarios to be considered when compiling an emergency evacuation plan for a facility.

Emergency Evacuation Procedures - Selwyn

10.5 Emergency Action Plan

This document is an exemplar of an emergency action plan for an aquatic facility and details the different scenarios to be considered and included.

Emergency Action Plan - AC Baths
10.6 Pool rescues and near misses report

A near miss is classified as a dry rescue performed from poolside using a rescue aid such as throw rope, reach pole etc. and no further treatment or follow up is required with the person rescued. If a hazard has been identified as a cause or during the rescue please follow standard hazard identification procedures.

<table>
<thead>
<tr>
<th>What happened</th>
<th>Staff member</th>
<th>Phone</th>
<th>Address</th>
<th>Name</th>
</tr>
</thead>
</table>
10.7 Emergency and first aid equipment checklist

Emergency equipment

<table>
<thead>
<tr>
<th>Essential equipment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• First aid kit(s)</td>
<td></td>
</tr>
<tr>
<td>• Spinal board</td>
<td></td>
</tr>
<tr>
<td>• Cervical collars</td>
<td></td>
</tr>
<tr>
<td>• Reach pole</td>
<td></td>
</tr>
<tr>
<td>• Rescue tube</td>
<td></td>
</tr>
<tr>
<td>• Evacuation kit</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Optional equipment (recommended)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Defibrillator</td>
<td></td>
</tr>
<tr>
<td>• Oxygen</td>
<td></td>
</tr>
<tr>
<td>• Rope throw bags</td>
<td></td>
</tr>
<tr>
<td>• Lifeguard burn bags (containing whistle, plasters, notebook, pen, antiseptic wipes, resuscitation mask, disposable gloves)</td>
<td></td>
</tr>
</tbody>
</table>

First Aid checklist

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Quantity</th>
<th>Checked (sign)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adhesive plasters</td>
<td>Min 6</td>
<td></td>
</tr>
<tr>
<td>Antiseptic towel</td>
<td>Min 6</td>
<td></td>
</tr>
<tr>
<td>Wound dressing</td>
<td>Min 3 rolls</td>
<td></td>
</tr>
<tr>
<td>Triangular bandage</td>
<td>Min 1</td>
<td></td>
</tr>
<tr>
<td>Sterile irrigation</td>
<td>Min 4</td>
<td></td>
</tr>
<tr>
<td>Med sized gloves</td>
<td>Min 2 pairs</td>
<td></td>
</tr>
<tr>
<td>Survival blanket</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Roll of bandage tape</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Scissors</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
### 10.8 First aid, defibrillator and oxygen daily checklist

#### Location, condition and supply checklist

**Month:** ______________________

<table>
<thead>
<tr>
<th>Date</th>
<th>First aid</th>
<th>Oxygen</th>
<th>Defibrillator</th>
<th>Staff sign</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td></td>
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<tr>
<td>26th</td>
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<td>27th</td>
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<td>28th</td>
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<td>29th</td>
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<td>30th</td>
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<tr>
<td>31st</td>
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</tr>
</tbody>
</table>
## 10.9 Oxygen kit check list

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Quantity</th>
<th>Date</th>
<th>Checked (sign)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen bottle</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bag mask</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxygen therapy mask adult</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxygen therapy mask child</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxygen therapy mask baby</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hi oxygen mask</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yoga mat</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Container of OPA</td>
<td>1 (of 8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scissors</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bag of gloves</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stethoscope</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood pressure cuff kit</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient assessment guide</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxygen/defibrillator checklist</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Defibrillator</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10.10 Civil defence equipment checklist

This equipment can be stored in a wheelibin and located by emergency exit doors. Quantities are for 50 people.

<table>
<thead>
<tr>
<th>Contents</th>
<th>Quantity</th>
<th>Date</th>
<th>Checked (sign)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>10L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disposable cups</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tarp 3.6 x 3.6m</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sturdy torch and batteries</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spare batteries</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency blankets</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hand sanitizer (250mls)</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disposable gloves (box)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First aid kit (large)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dust masks</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duct tape</td>
<td>2 rolls</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notebook and pen</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permanent marker</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sledge hammer</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crowbar</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glass cutting resistant gloves</td>
<td>1 pr</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10.11 What to wear signage

What to Wear

Togs / Tankini
Shorts (above knee)
Rash shirts

Singlets / T-shirts
Under garments
Bras or camisoles
Denim shorts and pants

Any exceptions to the above, please ask staff.
## 10.12 Aquatic first aid

<table>
<thead>
<tr>
<th>Condition</th>
<th>Characteristics</th>
<th>Treatment</th>
</tr>
</thead>
</table>
| Angina             | Similar symptoms to a heart attack  
Condition often known to the victim  
Often triggered by exercise.       | Same as for heart attack  
Assist victim with medication.                                                   |
| Asthma             | Constriction of the inner airway, causing victim to wheeze and dry cough  
Victim will often know the symptoms.                                   | Reassure and help with medication while patient is sitting or leaning forward  
Encourage slow relaxed breathing; if symptoms persist seek medical attention. |
| Bleeding           | Blood loss (internal and external)  
Internal bleeding may be characterized by swelling, hard lumps, pain and discomfort  
Other symptoms the same as shock.                     | External – rest and reassure victim; elevate wound, cover and apply direct pressure and call emergency services  
Internal – treat as shock  
Call emergency services.                          |
| Nose bleed         | Blood loss (internal and external)  
Internal bleeding may be characterised by swelling, hard lumps, pain and discomfort  
Other symptoms the same as shock.                  | Sit, lean forward, head tilted forward & breathe through mouth  
Apply pressure to soft part of nose to stop blood flow  
Reassess after 3 minutes  
Seek medical attention if bleeding persists.          |
| Cardiac arrest     | Heart stops beating, no breathing, pulse or response to stimulation or signs of life. | CPR or defibrillation  
Call emergency services.                                                 |
| Choking            | Blockage of the airway  
Victim is having difficulty breathing, look of fear; grabbing at throat, possibly a laboured breathing or grasping sound  
May begin to turn blue in colour around lips. | Assess victim “can you breathe”, “are you choking,” check for obvious airway blockages  
Support victim: apply up to 5 back blows and up to 5 abdominal thrusts (Heimlich).  
If unsuccessful and victim loses consciousness assess situation and begin resuscitation. Take care to check the airway. |
| Cramp              | Muscles tightening involuntarily.                                                | Gentle stretching/extension of the muscle  
Gently massage the area.                                                   |
| Dislocations & fractures | Localised pain, deformities, shock, lack of movement and swelling. | Make victim comfortable, support injured area and do not attempt to move joint  
Treat for symptoms such as shock.  
Depending on seriousness call emergency services. |
| Epilepsy           | Short circuit of the brain causing symptoms including fitting, convulsions and rigid motionless. | In water: From behind keep victims face above water until seizure subsides.  
Monitor signs of life.  
Out of water: Move obstructions and keep victim safe until seizure subsides  
Monitor signs of life.                               |
<p>| Fainting           | Temporary lack of blood to the body                                              | Unconscious: Assess situation and                                                            |</p>
<table>
<thead>
<tr>
<th>Condition</th>
<th>Characteristics</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head injuries</td>
<td>Common in pools due to slippery floors. Victim may experience confusion, pain, decreasing level of consciousness, swelling and bleeding (internal and external). Skin becomes ashen in colour. Shortness in breath may occur.</td>
<td>Make victim comfortable; check for cause. Assess extent of injury and treat accordingly. (Could it be a spinal???) Seek or advise further medical care for all head injuries. Call emergency services.</td>
</tr>
<tr>
<td>Heart attack</td>
<td>Lack of blood supply to the heart. Pressure, tightness in chest, pain radiating out from chest to shoulders, face and arms. Sweating, clammy skin, vomiting, breathing and fainting. May lead to cardiac arrest.</td>
<td>Make victim comfortable in seated position with legs raised. Keep warm and reassure. Ask victim for medication. Monitor ABC and call for emergency services. If victim losses consciousness assess situation and monitor signs of life.</td>
</tr>
<tr>
<td>Hyper ventilation</td>
<td>Too much and too rapid breathing. Common where swimmers have swum long distances underwater. Over excitement may be cause. Risk of victim blacking out or fainting.</td>
<td>Monitor ABC’s. Calm and reassure victim. Ask victim to breathe slowly and controlled.</td>
</tr>
<tr>
<td>Hypoglycaemia (diabetic shock)</td>
<td>Low sugar level in bloodstream. Signs and symptoms similar to shock. Victim may become aggressive.</td>
<td>Victim is often known as a diabetic and may request sugar. If consciousness is lost, assess situation and Check ABC’s.</td>
</tr>
<tr>
<td>Shock</td>
<td>Inadequate blood supply around the body often associated with trauma or a severe allergic reaction. Rapid yet shallow breathing, rapid weak pulse, victim may vomit, feels faint with clammy cold skin.</td>
<td>Lie victim down, legs elevated. Assess victim for the cause and treat. Monitor signs of life and vomiting may occur. If consciousness is lost assess situation and check signs of life. In case of an allergic reaction call emergency services immediately.</td>
</tr>
<tr>
<td>Stroke</td>
<td>Interrupted blood flow to the brain. Paralysis to one side of face and/or body. Loss of bladder and bowel control, difficulty speaking, one side of face goes limp, dizziness, headache and/or loss of consciousness.</td>
<td>Assist victim to a comfortable semi-prone position with head up. Call emergency services. If consciousness is lost assess situation and check signs of life.</td>
</tr>
<tr>
<td>Condition</td>
<td>Characteristics</td>
<td>Treatment</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Stroke</td>
<td>Face – when smiling, one side droops</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Arms – one arm drifts downward</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Speech – slurred</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tongue – hangs to one side.</td>
<td></td>
</tr>
<tr>
<td>Heat exhaustion</td>
<td>Too long spent in hot surroundings with insufficient care and liquid intake</td>
<td>Victim to lie down in cool place</td>
</tr>
<tr>
<td></td>
<td>Victim may have headache, exhausted but restless</td>
<td>Encourage sipping of liquid soft drink with little salt added.</td>
</tr>
<tr>
<td></td>
<td>Stomach cramps, with pale, cold, clammy skin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Breathing shallow and with rapid weak pulse.</td>
<td></td>
</tr>
<tr>
<td>Heat stroke</td>
<td>As per heat exhaustion</td>
<td>Victim to be placed in cool environment</td>
</tr>
<tr>
<td></td>
<td>Unconsciousness may occur and victim will have a high temperature</td>
<td>If unconscious check ABC’s</td>
</tr>
<tr>
<td></td>
<td>Pulse will be full and bounding and noisy breathing.</td>
<td>Douse body in cold water and/or cover with wet sheet or blanket.</td>
</tr>
</tbody>
</table>
10.13 Serious incident flowchart

Serious incident or death occurs

Lifeguard

- Rescue and first aid procedures undertaken
- Facility Supervisor notified
- Follow procedure for contacting emergency services

Facility Supervisor on duty

- Call Facility Manager and follow instructions
- Notify staff – allocate tasks, remind staff of policy regarding use of social media
- Close facility (obtain names and contact details of customers in case required by police)

Facility Manager

- Facility Manager to arrive as quickly as possible
- Liaise with police and emergency services
- Notify governing body management (e.g. council manager responsible)
- Notify NZRA Aquatics Project Manager
- Notify WorkSafe NZ

Post Event

- Arrange for blessing if appropriate
- Undertake review
- Ensure staff are supported through counselling

Ensure care of family if present, or if the arrive at the venue
- Liaise with media, following governing body policy

Notify governing body management (e.g. council manager responsible)
Notify NZRA Aquatics Project Manager
Notify WorkSafe NZ

Ensure staff are supported through counselling
Arrange for blessing if appropriate
Undertake review
Commissioned by: New Zealand Recreation Association with funding from Sport NZ and the ACC Drowning Prevention Fund, managed by Water Safety New Zealand.

Authors: Robyn Cockburn and Trish Amos, Lumin

February 2015


The Aquatic Facility Guidelines have been developed for use by aquatic managers. They provide detailed information covering the management and operation of an aquatic facility.

This document is a companion document to the Facility Management Manual which can be found on the Sport NZ website and the NZ Recreation Association website:


Acknowledgements

Alex Brunt, General Manager, Water Safety New Zealand; Alison Law, Aquatic Facilities Manager, Te Kāiwhakahaere Wāhi Roto i te Wai, Kāpiti Coast District Council; Bevan Smith, H&S Development Advisor, Parks, Sport and Recreation, Wellington City Council; Brian Milne, Director, Xyst; Craig Rouse, Centre Manager, Manurewa Pool and Leisure Centre, Auckland City; Caroline Ancell, Assistant Manager, Powerco Aquatic Centre, South Taranaki District Council; David Cameron, Contracts Manager, Filtration and Pumping Commercial Ltd; David Lee, Aquatic Services Manager, Powerco Aquatic Centre South Taranaki District Council; Esther Bukholt, Community, Recreation and Sport Project Manager, NZ Recreation Association; Esther Hone-Moore, AUSTSWIM Aotearoa; Fee Botcher, Customer Service Assistant, Gore Multisports Complex; Haydn Wilton, Wellington Regional Aquatics Centre Programmes Team Leader, Wellington City Council; Halina Dorne, Administration Officer, Aquatics, Coastlands Aquatic Centre; Jamie Delich, Facilities Consultant Community Sport, Sport NZ; Jenni Pethig, Learning & Development Advisor, Community Recreation & Arts, Skills Active; Joanne Saxton, Wellington Regional Aquatics Centre Operations Team Leader, Wellington City Council; Judy Tipping, Aquatic Consultant; Kathy Moore, Aquatic Facilities Manager, Selwyn Aquatic Centre; Lauren Hudson, Facility Manager, Naenae Pool, Hutt City Council; Linda Newman, Waterworld Educare Supervisor, Hamilton City Council; Nigel Newbery, Pool Operations Manager, AC Baths, Taupo District Council; Noel Gulliver, Service Manager, Rotorua Aquatics Centre; Patrick Blackman, Team Leader, Freyberg Pool, Wellington City Council; Peter Thompson, Aquatic Services Manager, Southland Aquatic Centre, Richard Lindsay, Facilities Consultant Community Sport, Sport NZ; Rowan Cordwell, Facility Manager Freyberg Pool, Wellington City Council; Royce Williams, Facility Manager Karori Pool, Wellington City Council; Sarah Cresswell, Senior Training Consultant, Opus International Consultants; Stephen Keatley, Community Facilities Manager, Hutt City Council; Tracey Prince, Aquatics Project Manager, NZ Recreation Association; Vaughan Hope, Facility Manager, ASB Aquatic and Fitness Centre, Richmond; Virginia Munro, Aquatics Consultant; Yvonne Hughey, Training Manager, Hanmer Springs Thermal Pools & Spa.
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1 Introduction

Providing customers with a positive, safe aquatic experience is the goal of every facility. Looking after customers ensures happy customers and repeat business. Customer care covers issues such as service and satisfaction, education and being aware of the needs of different customer groups.

There is a comprehensive resource on customer care and experience in the Facility Management Manual, including examples of Key Performance Indicators and satisfaction surveys.

1.1 Customer service

The role of a facility manager is to provide aquatic experiences for customers. In order to undertake this role effectively, quality customer service is key to attracting large numbers of customers to the facility. A customer focused facility:

- Goes the extra mile for customers
- Understands all their customers
- Treats all customers with respect and makes customers feel special
- Targets specific customers
- Offers and schedules programmes which are needed
- Uses effective communication between customers and management
- Has a committed team, trained in customer service
- Has staff trained in understanding ethnic sensitivities
- Meets the needs of customers.

Three major reasons why facilities should use a customer service focus are:

- It is the best way of attracting customers and keeping them (high return visits)
- It creates positive experiences for customers by consistently meeting or exceeding their expectations (satisfying needs)
- It forces management and staff to focus on what the customer wants.

Customer service puts the facility at the service of customers. It is a way of managing which aims to satisfy the needs, wants and preferences of customers, by offering quality programmes and services which are appropriately priced, scheduled and promoted. Customer service is not something done in addition to managing the facility; it is an approach, which affects all management decisions.
1.2 Customer satisfaction

The facility manager must determine which customers to serve, what products to provide and what outcomes need to be achieved. It is not possible to provide programmes and services for everybody but all services must be of a high quality and relate to customer needs.

Developing a customer service plan involves reviewing existing objectives of the facility and operating environment and identifying future objectives. These future objectives need to include target markets, marketing strategies, and mechanisms for measuring effectiveness such as customer evaluations.

Determining whether the facility is fulfilling its objectives will be key to customer satisfaction. Methods for determining customer satisfaction include:

- User surveys
- Membership surveys
- Information line
- Mail/phone questionnaires
- Focus groups
- Personal exit interviews
- Point of sale voluntary surveys
- Use of frequent buyer programmes to lock in customers
- Feedback forms.

The ‘NZRA Yardstick’ benchmarking project provides the industry with a customer service and satisfaction monitoring tool. Through Yardstick, Leisurecheck captures information specific to the pool and recreation industry, and allows the industry to compare results between centres in areas of customer service and satisfaction, and industry performance. Information is collected through annual intercept surveys that are carried out at facilities.

Further information

http://www.yardstickglobal.org

Templates:

- Feedback form
- Leisurecheck visitor questionnaire

1.3 Customer education

Education in the safe use of the facility is a worthwhile investment, improving the overall safety for both the customers and staff. It must be accepted that some customers will be unaware of potential risks or hazards associated with their visit or activity, especially if they are new to the facility.

Relationships with customers will be enhanced if staff recognise the importance of education as part of their role. Establishing acceptable levels of behaviour must be achieved through positive words and actions. Communicating possible hazards and appropriate behaviour to customers is generally enough to correct unacceptable behaviour. Appropriate signage is a positive way of improving customer awareness, warning of potential hazards or encouraging desirable behaviour. Signs should be chosen to reflect the facility rules, use of equipment and location of amenities. They do not need to be restricted to walls, but can also be included on the floor, on staff uniforms or as structures to reinforce parent/caregiver education.
1.4 Customer relations

Customer relations might best be described as developing better communications and understanding. Customer relations occur at all points of customer contact and are a key focus of the facility manager. The manager and staff influence the facility’s customer profile by appearance, correspondence, and by the way customers are spoken to (face to face or over the telephone). In the eyes of customers, staff are the facility.

Good customer relations is not just good manners, it must be supported by common sense and efficiency. Five basic rules for good customer relations are:

- Be courteous and friendly
- Be prompt and efficient
- Give accurate and up-to-date information and advice
- Show genuine interest in customer’s activity or interest
- Understand and support aims and policies of the facility.

Remember, the main aim is to encourage customers to have a favourable attitude towards the facility, not just towards staff personally. When dealing with customers, staff must support and explain the facility’s policies and procedures, and that staff are fully aware of them.

Creating the right image and atmosphere may involve a smile, friendly greeting, an explanation of facility policies or equipment use. Staff need to model appropriate behaviour, including:

- Smile and appear approachable
- Use eye contact when engaging with individual customers
- Be courteous but firm in any approach
- Be seen to care
- Be specific and give reasons for any warning or instruction.

1.5 Personnel relations

Before staff can establish good relationships with customers, they must first make an attempt to understand them and most importantly, accept people's individuality and treat customers as individuals.

Everyone has different backgrounds, abilities, interests and ambitions. To understand each individual, we must consider all these factors. As well as treating everyone as an individual, there are some basic skills staff should practice to achieve good personnel relations.

Being a good listener is a useful asset for gaining an insight into customer and staff behaviour and their understanding of the facility and its services. To be respected, staff must be honest and consistent in their work. This means they must first know the work, and second, treat others with consideration. Sincerity is the key to good personnel relations.
Make it easy for staff and customers to approach management by being accessible and friendly. Staff opinions’ and way of doing things are the result of many particular influences.

Being open minded and tolerant are useful assets. Be fair when making decisions that affect others. Staff should ensure that they are aware of the facts and do not jump to conclusions or let prejudice affect their judgement. Remaining impartial and being consistent when making decisions is essential.

Resolving conflict between staff, and staff and customers, requires objectivity and sensitivity. Listen to all points of view before judging responsibility. Often potentially troublesome conflicts can be resolved by allowing all parties to air their concerns. Clearly identify any policies, which affect issues raised and ensure that all parties are aware of the rationale behind a decision.

- Do not display anger or use inappropriate language
- Stay calm
- Do not intimidate customers
- Be culturally aware.

1.6 Promotion through staff

The purpose of promotion is to tell existing and potential customers about the facility, programmes and services available, and the benefits the facility offers.

It is essential that all staff are used in promotion by informing them of all the activities which are occurring in the facility. They are the facility’s key ambassadors.

Promotion does not drive marketing, it only communicates it! An effective promotion strategy will result in increased participation and increased revenue. Facility managers must coordinate or plan their promotion campaign rather than adopting an ad hoc approach.

Effective promotion strategies will:

- Increase knowledge of what is available
- Be more persuasive when linked to benefits
- Allow decisions to be made on an informed basis
- Remind customers of what is available, and the benefits from attending.

Promotion motivates potential customers into visiting the facility and joining programmes through the use of various communication methods. Managers can use a variety of promotional methods including:

- Personal selling involving face to face contact with customers. Customers can ask questions about services and programmes and receive answers immediately
- Advertising of activities and programmes at the facility
- Sales promotions designed to stimulate earlier and/or stronger target market response in the short term, and can include incentives, samples, coupons, refund offers, contests, demonstrations, etc.
- Publicity, such as editorial space, detailing the facility and programmes in all media available to customers. This is the most frequently used form of promotion for facilities and involves stories, features and articles in the press, radio and television.
2 Understanding Customers

2.1 Disability awareness

It is important that the pool facility is welcoming and accessible to all customers, including those with disabilities.

All staff need to be aware of customers with disabilities but the responsibility for the customer should remain with the caregiver. It is recommended that all staff receive training that provides a basic disability awareness and understanding of the techniques for assisting customers with disabilities. Assistance can be provided by staff, but needs to be limited to their area of training and with the permission of the customer.

The role of lifeguards will be to maintain an awareness of those with disabilities using the facility. Disabilities may not always be obvious and attention should not be focused solely on particular customers. Where individual supervision is provided, caregivers will need to be made aware of their role and responsibilities as compared to those of the facility staff.

The facility NOP should include recommendations for assisting customers with disabilities, and the use of specialist equipment e.g. hoists and flotation devices. It is important that staff practice the use of these devices and rescue techniques which can be adapted if needed.

2.2 Cultural awareness

Different cultural groups make up the customer base of any facility, whether they are tourists or locals in the area. Cultural awareness includes an understanding of the different values, actions and perceptions different cultures can have on a specific situation. What is appropriate behaviour or dress code for one culture will not be appropriate for another, and clearly establishing the expectations and rules of the facility will remove any potentially embarrassing or awkward situations.

Staff training should include cultural issues/needs specific to individual facilities.

Signage in other languages, especially relating to health and safety, customer codes etc. may also be appropriate if there are a high number of users from a specific language group.
3 Customer Safety Code

Important water safety rules need to be cued, promoted, reinforced and discussed where relevant and applicable to ensure additional preventative measures are taken on top of supervision.

A ‘Swimming Pool Customers’ Safety Code’ may assist in encouraging more responsible behaviour. Codes can be displayed as a sign or provided as a handout for customers. Some examples that may be applicable are:

Swimming is fun and enjoyable, but pools can be dangerous. Water presents a risk of drowning and injury can be sustained from the hard pool surfaces or the misuse of equipment. To ensure your safety, and the safety and enjoyment of other pool users, the [pool name] management have established the following code of behaviour for all pool users.

Always obey the pool’s safety rules and listen to the instructions of pool lifeguards. They are there to assist you to have a good and safe time.

Never swim alone. It’s more fun with family and friends.

Always check the depth of water before entering the pool as every pool is different.

Look for hazards such as diving boards, water slides, or steep slopes into deeper water.

No running, jumping, or diving into the pool.

Template: Customer safety code
4 Privacy

Protecting customers’ details is very important and the release of any information should not occur without the consent of the person involved. Care must also be taken of any potential custodial conditions of a child. This particularly relates to customers who may be part of a swim school or holiday programme.

4.1 Photography

Facilities should have clear policies on the use of photography both poolside and in the changing room. Photography should not be permitted in changing room areas.

Photography or motion recording devises used by professionals or newspaper reporters should only be allowed if approved by the facility manager, and the photographer should wear a clear name badge identifying themselves to customers.

Parents taking photos of their children poolside may be permitted, but staff may need to monitor that there is no inappropriate behaviour and be aware that other customers may become defensive if there is a risk of their child being photographed.

Facility booking Terms and Conditions should clearly state the policy of photography and recordings. An example of this could be:

“To ensure the privacy of all our customers, no cameras, motion recording capable devices or other recording equipment is to be used in the facility without the prior permission of management.”

Template: Photography policies
5 Security

To ensure the safety of customers and staff, there may be times when the facility manager is required to issue a trespass notice. This may occur if a member of public creates an unsafe environment to other customers or staff, through aggressive and threatening behaviour. Although not required, it is recommended that this is undertaken in writing.

If a written trespass notice is issued, complete three copies of the trespass notice and give a copy to:

- the person the trespass notice is served to
- the nearest police station or attending police officer, for entering into the police records database
- keep a copy on file.

A notice is considered served once it is handed to the person for whom it is intended. If they refuse to accept it and it drops on the ground, it is still considered served. Keep that copy and note down that the person refused to accept the notice.

Management is required to give a reasonable time for the trespasser to leave. If the person stays or takes an unreasonable time to comply, call 111 and ask for Police.

If someone comes back after they have been given a trespass notice they will have committed an offence. Call 111 and ask for Police.

Further information


Templates: Trespass notice

Security incident report
6 FAQs from the Public

Q: Why do I need to vacate the pool when there’s been a faecal accident?

A: We have procedures to follow to ensure we comply with the Water Safety Standard. It’s all about keeping you guy’s safe and we will re-open as soon as we can.

A: Faecal matter is a carrier for infectious diseases such as Cryptosporidium and Giardia. The pool is closed to allow staff to extract the offending object/s and allow the pool water to circulate through the filters to ensure the water is clear of any contaminants before allowing swimmers back in. This also allows us time to increase chlorine levels to kill any remaining bugs and germs. This process ensures that the risks of getting any illness associated with faecal matter are reduced if not eliminated.

Q: Why do I need to get into the pool with my kids?

A: Getting into the pool with your children is not only fun but also helps your children to learn water safety and confidence. We have an under 8 policy to safeguard your children as our team cannot possibly watch every single child at all times.

A: Because the active supervision rules are that under 5’s need a parent in the water actively supervising them. We don’t make the rules, we just enforce them.

A: We require an adult over 16 to hop in with under 5s. If you choose to not hop in then little Johnny will have to get out, and that would be a shame. We don’t want that to happen.

Q: Why can’t I take photos of people in the pool?

A: Within today’s society you need to be careful of taking photos in a public environment especially if there are children present. We do not allow photos, as we want every child to be safe and secure within our facility. This also removes the risk of you being accused of anything unsavoury.

A: People can be a bit self-conscious when they are in their togs, so we ask you only take pictures of your own friends and family.

A: You can take photos of people at our facility as long as they are with your group. Please delete any photos that have anyone else at all in them including staff. Thanks 😊

Q: What chemicals are in the pool and what will they do to my - skin, swim wear, eyes, hair?

A: We use as few chemicals as possible to maintain our pool water quality. Chlorine is the main chemical that is used within our pool and is used to kill bugs and germs. The amount of chlorine used in the pool is low as we have UV filtration systems to remove 99% of the bugs. The other main chemical used is sodium bicarbonate (which can be used in your baking at home), which helps us to control the alkalinity and pH within the pool. The chemicals within the pool should not have any adverse reactions to you unless you are sensitive to the chemicals.

A: We use Chlorine to make the water safe. It’s tested every three hours and I know the levels are good today.
Q: How come we have to leave the pool when there’s a power outage (gas/electricity)?

A: If the power outage occurs at night or the facility has limited natural lighting, lifeguards must evacuate the pool as there is not enough lighting for them to safely supervise the pool area.

If the outage occurs over an extended period of time, the pool sanitation system becomes affected. The length of time it takes for the quality of water to be affected depends on the size of the pool and the number of customers in the pool.

A: Lifeguards can’t see into the water properly and the circulation of the water through the filters keeps the water safe. Without the circulation, we can’t have people in the pool as we cannot guarantee it is safe.

Q: How come we have to leave the pool when there’s a cut in the water supply?

A: If the water is cut off to the pool for more than 10 – 15 minutes, customers will be asked to vacate the premises due to health and safety reasons as there will be no water supply to changing rooms for showers or toilets.

Q: How do we know that the water quality of this facility is up to standard?

A: We are continually testing the pool water throughout the day to maintain the NZ Pool Water Quality Standards, which is a legal requirement for all public pools.

A: Staff have been trained on how to maintain pool water quality so that the water is safe and enjoyable for all.

A: We are a PoolSafe pool and test our water every three hours and the spa every two hours. If anything isn’t up to the standard we close the pool.

Q: Which health conditions (scabies, school sores etc.) would stop someone swimming in the pool?

A: Any medical condition that is easily spread. If you have experienced diarrhoea or vomiting within the past 48 hours you should also avoid using the pools.

A: Anything contagious, we don’t want to share your bugs.
7 Templates and Worksheets

7.1 Feedback form
7.2 Leisurecheck visitor questionnaire
7.3 Customer safety code
7.4 Photography policies
7.5 Trespass notice
7.6 Security incident report
7.1 Feedback form

What do you think?

We are dedicated to making your time at this facility an enjoyable experience. If you have any comments, suggestions, compliments or complaints, please take a minute to fill in this feedback form. We appreciate your thoughts and take them seriously.

Thanks for your time.

Comments / feedback / ideas

<table>
<thead>
<tr>
<th>Facility Visited:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date:</td>
</tr>
</tbody>
</table>

If you would be happy for us to discuss your feedback further please provide your details below:

| Name: |
| Address |
| Phone: |
| Email: |

Please place in drop box provided or you can post to (provide address)
7.2 Leisurecheck visitor questionnaire

Hello, my name is _________ from ____________, how are you? Today we are conducting a brief survey of FACILITY users.

<table>
<thead>
<tr>
<th>General Questions</th>
<th>Importance (circle one)</th>
<th>Satisfaction (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. How often do you visit ___________?</td>
<td>1 2 3 4 5 N/A</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>Q2. How long did/are you stay(ing) in this facility today?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q3. What part of the facility did (are) you use(ing)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q4. What have you done in the POOLS today?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q5. What have you done in this FACILITY today?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(if only a pool facility don’t ask)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q6. How do you usually get to this facility?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When answering the next set of questions please think about your use of this facility.

<table>
<thead>
<tr>
<th>Facility (All)</th>
<th>Importance (circle one)</th>
<th>Satisfaction (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q7. Adequate car parking</td>
<td>1 2 3 4 5 N/A</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>Q8. Programmes (to meet your needs)</td>
<td>1 2 3 4 5 N/A</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>Q9. Security - personal safety in facility/car park</td>
<td>1 2 3 4 5 N/A</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>Q10. Good customer service (all staff) just satisfaction</td>
<td>1 2 3 4 5 N/A</td>
<td>1 2 3 4 5 N/A</td>
</tr>
</tbody>
</table>

Food and Beverage Service / Cafe (if present) (don’t ask if just vending machines)

<table>
<thead>
<tr>
<th></th>
<th>Importance (circle one)</th>
<th>Satisfaction (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q11. Customer service</td>
<td>1 2 3 4 5 N/A</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>Q12. Quality and selection of food</td>
<td>1 2 3 4 5 N/A</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>Q13. Cleanliness</td>
<td>1 2 3 4 5 N/A</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>Q14. Value for money</td>
<td>1 2 3 4 5 N/A</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>Swimming Pool Facility</td>
<td>Importance (circle one)</td>
<td>Satisfaction (circle one)</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Q15. Is environment safe - lifeguard numbers and visibility</td>
<td>1 2 3 4 5 N/A</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>Q16. Water temperature</td>
<td>1 2 3 4 5 N/A</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>Q17. Water quality - clear, clean and no smell</td>
<td>1 2 3 4 5 N/A</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>Q18. Shade adequate for your needs (only ask if outdoor areas exist)</td>
<td>1 2 3 4 5 N/A</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>Q19. Environment - air quality / temperature (not asked for outdoor pools)</td>
<td>1 2 3 4 5 N/A</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>Q20. Pool activities - slides, water play features etc.</td>
<td>1 2 3 4 5 N/A</td>
<td>1 2 3 4 5 N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dry Facility (non-aquatic)</th>
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<tbody>
<tr>
<td>Q21. Age and quality of equipment</td>
<td>1 2 3 4 5 N/A</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>Q22. Staff supervision and competence</td>
<td>1 2 3 4 5 N/A</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>Q23. Environment - air quality / temperature</td>
<td>1 2 3 4 5 N/A</td>
<td>1 2 3 4 5 N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Questions</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Q24.</td>
<td>1 2 3 4 5 N/A</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>Q25.</td>
<td>1 2 3 4 5 N/A</td>
<td>1 2 3 4 5 N/A</td>
</tr>
<tr>
<td>Q26. OVERALL, how satisfied are you with the cleanliness of this facility? (circle one)</td>
<td>1 2 3 4 5 N/A</td>
<td></td>
</tr>
<tr>
<td>Q27. OVERALL, how satisfied are you with the provision of toilets and showers at this facility? (circle one)</td>
<td>1 2 3 4 5 N/A</td>
<td></td>
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<tr>
<td>Q28. OVERALL, how satisfied are you with the whole facility? (circle one)</td>
<td>1 2 3 4 5 N/A</td>
<td></td>
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<tr>
<td>Q29. IN GENERAL, if there was one change you could make to this facility what would it be?</td>
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</table>

NZRA Aquatic Facility Guidelines 2015
Q30. **OVERALL**, have you ever reported a problem to staff at this facility? *(circle one)*

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
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Q31. If "yes to Q30" was it resolved to your satisfaction? *(circle one)*

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<tr>
<th></th>
<th>Yes</th>
<th>No</th>
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Q32. **OVERALL**, what do you enjoy most about this facility?

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Q33. If we want to inform you of events and activities at this facility which media would be best for you?

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Q34. Where are you from?

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Q35. Why did you select this facility over others you could have chosen?

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Q36. Are there any services/facilities you would like available in this facility?

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We’re almost at the end of the survey, I need some information about you...

Q37. Name:

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Q38. Gender *(circle one)*

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<tbody>
<tr>
<td></td>
<td>Male</td>
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<td></td>
<td>Female</td>
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Q39. Contact Information:

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Q40. What age group are you?

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Q41. Which ethnic group best describes you?

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Q42. For quality control purposes, my supervisor may phone to check some of my work, could you please provide us with your name and contact phone number? *(circle one)*

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<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
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That completes the survey, thank you for your time.

---

Researcher to Complete

Q43. Date / /

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Q44. Time of completion :

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Q45. Weather *(describe briefly)*

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7.3 Customer safety code

Swimming is fun and enjoyable, but pools can be dangerous. Water presents a risk of drowning and injury can be sustained from the hard pool surfaces or the misuse of equipment. To ensure your safety, and the safety and enjoyment of other pool users, the [pool name] management have established the following code of behaviour for all pool users.

• Always obey the pool’s safety rules and listen to the instructions of pool lifeguards. They are there to assist you to have a good and safe time.
• Always check the depth of water before entering the pool as every pool is different. Look for hazards such as diving boards, water slides, or steep slopes into deeper water.
• No running, jumping, or diving into the pool.
• Only enter the water when wearing appropriate swimming costume or swimming nappies.
• Never swim alone. It’s more fun with family and friends.
• Never swim while under the influence of alcohol or drugs.
• Never swim immediately after eating a meal.
• Take additional care if you have a medical condition such as epilepsy, asthma, diabetes or a heart condition.
• Avoid holding your breath and swimming long distances underwater.
• Return pool equipment to the storage area.
• Boogie boards, surf boards and kayaks are not to be used in this pool.
• Ensure the pool gate is securely closed when you leave.
• If you see someone in difficulty get help immediately.
• Only enter the water when parent or caregiver is present.
7.4 Photography policies

Filming and photographs at (pool name)

- At (pool name) we want everyone to enjoy their time here and find an abundance of photographic or filming opportunities. If people wish to take photos of public or staff within the facility please ensure they ask for permission from the people involved first as we do not wish to upset users and must also meet the requirement of the privacy act.
- No photo/video capable cell phones are to be used in the changing areas or on poolside.
- Customers are to be requested to use their cell phones in the reception area only.

Use of camera equipment by the general public

If a member of the public wishes to either take photos or video coverage, for their own personal record while visiting this facility, permission must be granted by the Team Leader, or most senior person present at the time. Permission can only be given if all people featuring in the coverage are aware and agreeable to being on film.

This means if a member of the staff sees someone using photograph equipment it is their duty to check permission has been obtained.

This policy has been established to protect our customers’ privacy, in the age of the internet it is crucial that the question is asked.

Use of camera equipment by facility staff

If a member of the staff wishes to take photographs or video coverage for promotional purposes, permission needs to be obtained from all the public and staff involved and people need to be notified where the material will be displayed e.g. newspaper, displays etc. If written confirmation is required an official permission form can be obtained from the Manager. This is for situations such as:

- When the filming or photography features close ups of children
- The photo or video coverage is going to be used for mass distribution e.g. television advertisement, brochure production.

Use of camera equipment by commercial operations

If a film crew or commercial photographer wishes to obtain coverage at this facility, permission must be granted by the Facility Manager, or in the event that they are not available one of the Team Leaders.
7.5 Trespass notice

NOTICE OF WARNING TO STAY OFF PREMISES IN COMPLIANCE WITH THE TRESPASS ACT 1980

This notice is issued to:__________________________________________

Of: __________________________________________________________

In accordance with the Trespass Act of 1980, Section 3 and 4, you are hereby warned to stay off the premises legally occupied by

________________________________________________________________

Which is located at: _____________________________________________

FOR A PERIOD OF TWO YEARS from the date of issue of this notice.

You are warned that should you for any reason enter onto the property located at:

________________________________________________________________ within this period, you commit an offence under the Act and are liable to arrest prosecution. Should you be convicted of the offence you are liable to a fine not exceeding one thousand dollars $1,000, or to imprisonment for a term not exceeding three months (3 months)

You are advised that under the Trespass Act 1980, Section 9, you are required to give your correct name and address to any person authorised under the Act to ask for it. The maximum penalty following conviction for not providing your correct name and address, or refusing to do so is a fine not exceeding five hundred dollars $500

You are advised that this notice was issued to you by a person entitled to do so being the lawful occupier in terms of the Trespass Act 1980, Section 2

Date of Issue: ________________________________________________

Issued By: __________________________________________________

Occupation: _________________________________________________

Signature: ___________________________________________________
### 7.6 Security incident report

<table>
<thead>
<tr>
<th>Name:</th>
<th>Unit:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report Date:</td>
<td>Reference No:</td>
</tr>
<tr>
<td>(from security provider)</td>
<td>Incident Type:</td>
</tr>
<tr>
<td>Initiator’s Details (position title, office location, contact details)</td>
<td>Incident Details</td>
</tr>
<tr>
<td>Date:</td>
<td>□ Theft / Dishonesty</td>
</tr>
<tr>
<td>Time/s:</td>
<td>□ Assault / Threats</td>
</tr>
<tr>
<td>Location:</td>
<td>□ Suspicious Behaviour</td>
</tr>
<tr>
<td>□ Inappropriate communication</td>
<td>□ Unauthorised Access / Insecure Premises</td>
</tr>
<tr>
<td>□ Parking / Driving / Vehicles</td>
<td>□ Damage / Graffiti</td>
</tr>
<tr>
<td>□ Other: ___________________</td>
<td>□ Other: ________________</td>
</tr>
</tbody>
</table>

**Risk Priority**
- □ High
- □ Medium
- □ Low

**Signature:**

**Description of Incident:**
## 2. Additional information

<table>
<thead>
<tr>
<th>Details of other witnesses:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Description of suspects/offenders:</th>
</tr>
</thead>
<tbody>
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<td></td>
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</table>

<table>
<thead>
<tr>
<th>Vehicle Details:</th>
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</table>

<table>
<thead>
<tr>
<th>Property details (damage or loss):</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

<table>
<thead>
<tr>
<th>Other Information (e.g. CCTV footage available, offender known etc.):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

## 3. ACTION REQUIRED

**Please outline what resolution you are seeking** (reported for awareness, seeking further security assistance, full investigation, on-going support etc.)

For information only:  □ Yes  □ No

Please send this report by email to the Security Manager at [insert contact details]

### Details of person provided a copy of this report

<table>
<thead>
<tr>
<th>□ Security Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Immediate Manager</td>
</tr>
<tr>
<td>□ Security Provider</td>
</tr>
<tr>
<td>□ Police <em>(Reference Number: ______________)</em></td>
</tr>
<tr>
<td>□ Risk and Assurance</td>
</tr>
</tbody>
</table>

### Attachments: *(detail any additional information attached to this report e.g. photos, copies of correspondence, phone records etc.)*
AQUATIC FACILITY GUIDELINES

4 Facility Operation
Commissioned by:  New Zealand Recreation Association with funding from Sport NZ and the ACC Drowning Prevention Fund, managed by Water Safety New Zealand.

Authors:  Robyn Cockburn and Trish Amos, Lumin

February 2015


The Aquatic Facility Guidelines have been developed for use by aquatic managers. They provide detailed information covering the management and operation of an aquatic facility.

This document is a companion document to the Facility Management Manual which can be found on the Sport NZ website and the NZ Recreation Association website:


Acknowledgements

Alex Brunt, General Manager, Water Safety New Zealand; Alison Law, Aquatic Facilities Manager, Te Kāiwhakahaere Wāhi Roto i te Wai, Kāpiti Coast District Council; Bevan Smith, H&S Development Advisor, Parks, Sport and Recreation, Wellington City Council; Brian Milne, Director, Xyst; Craig Rouse, Centre Manager, Manurewa Pool and Leisure Centre, Auckland City; Caroline Ancell, Assistant Manager, Powerco Aquatic Centre, South Taranaki District Council; David Cameron, Contracts Manager, Filtration and Pumping Commercial Ltd; David Lee, Aquatic Services Manager, Powerco Aquatic Centre South Taranaki District Council; Esther Bukholt, Community, Recreation and Sport Project Manager, NZ Recreation Association; Esther Hone-Moore, AUSTSWIM Aotearoa; Fee Botcher, Customer Service Assistant, Gore Multisports Complex; Haydn Wilton, Wellington Regional Aquatics Centre Programmes Team Leader, Wellington City Council; Halina Dorne, Administration Officer, Aquatics, Coastlands Aquatic Centre; Jamie Delich, Facilities Consultant Community Sport, Sport NZ; Jenni Pethig, Learning & Development Advisor, Community Recreation & Arts, Skills Active; Joanne Saxton, Wellington Regional Aquatics Centre Operations Team Leader, Wellington City Council; Judy Tipping, Aquatic Consultant; Kathy Moore, Aquatic Facilities Manager, Selwyn Aquatic Centre; Lauren Hudson, Facility Manager, Naenae Pool, Hutt City Council; Linda Newman, Waterworld Educare Supervisor, Hamilton City Council; Nigel Newbery, Pool Operations Manager, AC Baths, Taupo District Council; Noel Gulliver, Service Manager, Rotorua Aquatics Centre; Patrick Blackman, Team Leader, Freyberg Pool, Wellington City Council; Peter Thompson, Aquatic Services Manager, Southland Aquatic Centre, Richard Lindsay, Facilities Consultant Community Sport, Sport NZ; Rowan Cordwell, Facility Manager Freyberg Pool, Wellington City Council; Royce Williams, Facility Manager Karori Pool, Wellington City Council; Sarah Cresswell, Senior Training Consultant, Opus International Consultants; Stephen Keatley, Community Facilities Manager, Hutt City Council; Tracey Prince, Aquatics Project Manager, NZ Recreation Association; Vaughan Hope, Facility Manager, ASB Aquatic and Fitness Centre, Richmond; Virginia Munro, Aquatics Consultant; Yvonne Hughey, Training Manager, Hanmer Springs Thermal Pools & Spa.
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1 Introduction

Facility operation covers the everyday running of aquatic facilities, the effective operation of which depends on several factors:

- Developing Normal Operating Procedures that specify every aspect of the day to day running of the facility
- Having well developed supervision systems that are understood and effectively carried out by staff
- Developing effective communication between staff and between staff and customers.

This chapter provides operational guidelines for the supervision of special equipment and activities such as inflatables, water slides and water features.

Considerations of managing use generally and programmes and events specifically are outlined.

There are sections on aquatic education and fitness as well as fitness suites and childcare.

Unique requirements of school and community pools, hospitality and thermal pools are discussed.
2 Normal Operating Procedures

Normal Operating Procedures (NOPs) describes the way facilities will operate on a day-to-day basis. Developed specifically for each facility, it includes layout, opening hours, reporting policies, operational duties, equipment, inspection and maintenance of emergency equipment, hazard identification, customer relations, staff roles, emergency action plan and pool specific requirements.

The complexity of the NOP depends on the nature, design, size and location of the facility. NOPs require regular reviewing and updating to take account of changes in facility management and use. All staff need to be involved in the development of the procedures and fully understand how they impact on their roles and responsibilities.

Regular meetings for staff should be established to enable them to make contributions for implementing policies and procedures

2.1 Business continuation plan

A business continuation plan providing guidelines for communicating to customers and procedures for staff should be developed to cover the situation of an unexpected partial or full closure of the facility.

Templates:
- Normal operating procedure content guideline
- Sample NOPs
- Business continuation plan
Facility Supervision

All staff have a responsibility for ensuring customer safety through encouraging responsible behaviour. Key supervision staff include:

- Reception and frontline staff who can advise customers of facility policies
- Lifeguards in and around pools
- Aquatic programme personnel
- Other staff as appropriate.

Signage detailing appropriate behaviour is a simple, positive and easily understood means of communicating facility expectations.

Supervision of changing areas, including shower and toilet blocks, is important. These areas should be checked and inspected regularly to ensure high levels of facility presentation, customer safety, reduce the likelihood of assaults and thefts, and to monitor behaviour of customers.

Staff need to be aware that pool environments can attract child predators such as paedophiles. When supervising the facility, care needs to be taken to check dark areas or ‘blind spots’ and take notice of unsupervised children over eight years old.

Regular checks on the condition of equipment should be undertaken, and programmed into the daily, weekly, monthly checks of the facility.

Template: Poolside checklist

3.1 Pool Alone policy

A code of practice and policy on child safety, called the ‘The Pool Alone Policy’, was developed in 1997 and revised in 2002. The policy states that:

*Children under eight must be actively supervised by a caregiver 16 or over. Actively supervised means watching your child at all times. Able to provide immediate assistance.*

This code should be displayed at the reception area to alert all who are entering the facility of the accepted code. Children under eight years can be refused entry, or can be asked to leave the facility if they are found unsupervised. If a child is found unsupervised, attempt to contact a parent or caregiver to collect the child. If this is unsuccessful contact the local Police.

Tools for promoting this policy are available on the NZ Recreation Association (NZRA) website.

This Pool Alone Industry standard, endorsed by Water Safety New Zealand, can be legally binding if local authorities pass a bylaw on swimming pool use and management.

Further information

www.nzrecreation.org.nz
Case Study: Pool Alone Manurewa Aquatic Centre Ngā mahi a rehia

The Pool Alone Policy was implemented in 2006 and states that all children under eight years must always be ACTIVELY SUPERVISED by a caregiver 16+ years. The Council passed a bylaw that increased the child supervision age from eight years old to 10 years old.

Implementation

Manukau Leisure Services designed posters and flyers to advertise and communicate the under 10 supervision bylaw and engaged “Pool Ambassadors” who helped educate customers.

There were a range of common issues and trends that emerged with the new policy. Education of customers when the new policy was introduced was critical. Entry/exit barriers installed at reception allowed reception staff to screen children and ask questions on age before they entered the facility. Language barriers were an issue so Pool Alone posters and collateral, including the Pool Alone rule, are now produced in four different languages including English.

One of the biggest challenges staff face is when an 10 year old looks older. Staff need to be consistent in asking the appropriate questions to clarify the child’s correct age.

General feedback received

Feedback from staff and parents was that the increase to 10 years old was good. Staff think the increased age is better as 10 year olds are more aware of pool surroundings and rules and they can be supervised from a distance as opposed to being an arms length away.

The new signage was really visible and the pamphlets and flyers gave further information. Parents commended staff on how they explained the pool alone rules.

Staff said it was good to see parents coming to the pools to supervise their children as opposed to sending them with a minor and that parents were adhering to the rules and not treating the lifeguards as babysitters.

On-going challenges continue e.g. when a parent says “my child can swim” or “I’ll be back in half an hour” staff feel the parent is not being fair to the child as they have to uphold the rules and cannot allow the child access to the facility or into the pool to swim. It can also be very difficult, especially during busy periods, for staff to ensure all children come to the pool with a parent or caregiver 16 years or older and that the parent or caregiver stays with or near the child/children at all times.

Areas of improvement

Staff feel that the parent/caregivers age should be increased to 18 years old, and that in the interim further education of parents/caregivers be carried out so they understand their responsibilities.

Results

Pool Alone records show that incidents have reduced each year from 2006 when there were 17 recorded pool alone incidents to 10 in 2011. Rescues from this age group have also reduced from eight in 2006 to four in 2011.

Templates: Pool Alone posters
            Pool Alone procedure flowchart
            Pool Alone register
3.2 Pool supervision guidelines

Pool supervision involves the observation and management of customers participating in an activity. The New Zealand guideline for swimming pool supervision, endorsed by the NZRA and Water Safety New Zealand is:

**Minimum lifeguard qualifications:** All swimming pool lifeguards shall possess a current Pool Lifeguard Practicing Certificate (PLPC).

**Minimum swimming pool supervision levels**

- During any session when a pool is in use there shall be a minimum of one qualified lifeguard who will be designated to supervise the pool at all times. This supervision level shall apply to the lifeguard’s line of sight, as appropriate to the design, function and layout of the facility.
- Increased numbers of lifeguards shall be determined by: the number of customers; the number of pools within a facility and the environment of the facility; specialized equipment such as slides, diving boards, and wave pools; and specialist activities such as canoeing, aqua-fitness, water polo, etc.
- Each facility shall set explicit poolside supervision levels for each component of their operation, and these shall be incorporated into operational policy.

In addition to the supervision levels mentioned above, it is recommended that a minimum of two staff be on duty at all times the pool is open to the public. This is to ensure the safety of the pool staff and the public, in particular if an emergency arises.

The pool supervision guidelines do not support the use of unsupervised facilities. If these guidelines are not followed, alternative arrangements are recommended, and these must include:

- A policy established detailing right of access and hours of use which is provided to customers and clearly displayed at the pool.
- A clear notice to customers that the facility is unsupervised and has no lifeguarding service.
- A code of acceptable customer behaviour be established and clearly displayed at the pool.
- Poolside alarm or telephone to summon help in an emergency.
- Suitable and clearly identified rescue equipment (poles, rescue tubes) available by poolside.
- A clearly displayed notice, which shows customers how to summon help, and what actions are required in an emergency.
3.3 Effective pool supervision

To supervise a pool effectively, both as an individual or part of a team, requires continuous scanning of the pool. Different methods of pool supervision are outlined below. The use of each method, or a combination of these, will depend upon the layout of your facility and the number of customers.

Effective scanning requires lifeguards to:

- Be positioned with clear, unobstructed lines of sight
- Understand the signs of potential trouble and the characteristic behaviour of those in need of help
- Practice and develop supervision skills
- Minimise the effect of reflection or glare
- Be aware of weather changes for outdoor pools and their affect on visibility
- Be aware of customers using hot areas e.g. spa and saunas
- Be aware of the affect of steam and bubbles on visibility with thermal pools.

3.4 Methods of pool supervision

<table>
<thead>
<tr>
<th>Approach</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
</table>
| **Intensive zone** | Lifeguards rotate to the adjacent zone at regular intervals to help stay alert  
Some zones may be more demanding than others in terms of activity, physical characteristics, angle of the sun, and comfort. Zone rotation allows lifeguards to share less demanding and more demanding positions  
Lifeguards may be more experienced at some skills than others. It is possible to assign lifeguards to a zone where their experience matches the zone requirements (e.g. use of special equipment)  
Where a facility is large or has multiple activity areas, the intensive approach is the only practical solution providing adequate observation of the entire area. | Where zone margins are not well defined, lifeguards may not cover their entire zone. |
| **Extensive coverage** | Each lifeguard observes the entire area. Where two lifeguards are on duty customers are scanned by two pairs of eyes  
Lifeguards can adjust position more freely to suit the activities and locations of customers. | Lifeguards do not rotate positions and have little change of pace throughout the hours on duty  
The size of the zone supervised is often large, therefore, observation of customers is usually made from a greater distance. |
<table>
<thead>
<tr>
<th>Approach</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
</table>
| **Combined approach** | Overlapping of intensive zone and extensive coverage provides better supervision  
|                     | A lifeguard in the extensive supervision role has an overview of all activity and is best positioned to relay communication to the entire team  
|                     | From their overview position, lifeguards can identify trends and patterns in facility use  
|                     | A lifeguard in the extensive supervision role can provide quick contact with emergency services. | Because of the nature of the extensive role, the position usually requires height (as high chairs) or mobility. |
| **Patrolling**       | Patrolling on poolside allows a lifeguard to communicate with customers, and prevent accidents more easily  
|                     | Lifeguards can move continuously around the patrol area to gain the most advantageous observation view of all the pool and can move to deal with any minor problems which may arise  
|                     | Provide immediate support of others in the team while still maintaining a view of the area or zone for which they are responsible. | The principal disadvantages of poolside patrolling which can reduce efficiency include:  
|                     |                                                                            | A lifeguard is likely to get wet, particularly when the pool is very busy  
|                     |                                                                            | Lengthy periods of standing can lead to rapid fatigue  
|                     |                                                                            | A lifeguard needs to take regular breaks and a change of view. |
| **Lifeguard chair**  | A lifeguard chair usually elevated about 2 metres above poolside, allows a lifeguard to scan the pool from a sitting position  
|                     | Removes a lifeguard from immediate contact with customers  
|                     | Gives an excellent field of view  
|                     | Overcomes problems created by surface reflection. Allows a lifeguard to see the pool floor easily, even when the water is very deep  
|                     | Removes the lifeguard from noise, splashing from the water and other distractions  
|                     | Allows customers an easy and immediate view of the lifeguard. | Removes a lifeguard from immediate contact with customers  
|                     |                                                                            | Can reduce a lifeguard’s ability to concentrate  
|                     |                                                                            | Can lead to accidents as lifeguards leave the chair in order to perform a rescue. |

Further information

[www.skillsactive.org.nz](http://www.skillsactive.org.nz)
3.5 Lifeguarding duty periods

The length and nature of duty spells are dependent upon the facility environment. Duty periods and supervision methods should be organised to ensure adequate cover is provided for all users.

Times of high or low demand, complacency, fatigue or lack of concentration may result in compromised customer safety and needs to be factored into duty rosters and staff rotation schedules.

The maximum period a lifeguard can effectively supervise a particular area or activity will be dependent upon the environment in which it occurs. Ideally a lifeguard should change their position once every 15 minutes, and no longer than once every 30 minutes.

Regular breaks, besides those for morning/afternoon tea, lunch or dinner breaks, should be routine throughout their shift to ensure their attention span is retained.

3.6 Lifeguarding duty rotation

When a pool is very busy, rotation around poolside to a chair can allow some relief from fatigue associated with lengthy periods of standing. Combining both stationary and mobile patrolling depends on the facility design and the number of lifeguards.

Using both techniques allows a combination of supervision methods and allows for good rotation of staff and an interchange of information between staff. Including checks of changing facilities and rotation through reception station can help provide variety of supervision and help with attention span.

The NOP should include a rotation plan detailing the maximum period a lifeguard should be on continuous duty at poolside. Rotation plans should ensure a lifeguard located in a high stress area, such as a slide splashdown, is relieved first and given a break or moved to duties away from poolside.

Sample rotation
4 Supervising Specialist Equipment and Activities

The provision of special features and activities in a facility requires additional lifeguard supervision. The continued development of leisure pools requires a lifeguard to be fully aware of the operation and safe supervision of a wide range of equipment and activities. While water slides, wave machines, and inflatable and floating structures are becoming more common, so too are the range of activities and sports undertaken within aquatic facilities.

The NOP should identify which lifeguards are able to supervise specified activities and the method of supervision. Staff also need to understand the operation of these activities and the policies relating to their use. Customers should also be made aware of any policies covering the operation of special equipment and activities.

Accidents from specialist activities are often related to:

- Poor visibility at entry/exit points
- Misuse of equipment
- Poorly maintained equipment
- Weak or non swimmers in deep or moving water
- Customers failing to clear the area after using equipment
- Diving from the side of a board or platform or poolside
- Use of electricity or machinery.

4.1 Diving

The provision of diving boards which can be used by recreational swimmers requires additional supervision. Ensuring both users and other swimmers are safe when diving boards are in use needs to be taken into consideration when developing the NOP.

Diving into pools without using diving boards is generally discouraged during periods of high use. Managed appropriately and located in deep water, diving and jumping from poolside can widen the range of activities undertaken in a pool without requiring special equipment.
4.2 Bulkheads

Many facilities are able to change the configuration and size of the pool by using bulkheads. When pools are divided by bulkheads, lifeguards can use the bulkhead as a guarding station to enable easy observation of swimmers on both sides of the bulkhead.

NOPs covering the facility must include the positioning and repositioning of the bulkheads, supervision requirements under different configurations, as well as maintenance scheduling for the bulkhead and mechanisms.

4.3 Inflatable play equipment

Careful consideration should be given to the location of play equipment to optimise use and minimise risk. Risks of inflatables and other play structures include customers becoming entangled in mooring lines, swimmers getting trapped beneath the structure and customers diving from raised structures into shallow water.

Safe operating principles include:

- Equipment positioned so swimmers cannot fall from it and strike the poolside
- Positioning and tethering larger floating inflatable structures in deep water
- Lifeguard positions allow a clear view of all parts of the equipment and the surrounding water. In some cases a lifeguard may be stationed in the water if the pool is not too deep
- Lifeguards may need to restrict the use of certain equipment to those above or below a given size or age
- Lifeguards need to educate customers in the use of flotation aids and aquatic toys and be aware of their impact on pool supervision
- Position equipment away from other users such as lane swimmers
- Position air hoses, pumps, and electrical cords to avoid the risk of trips, falls or harm to customers, swimmers or facility staff.

4.4 Interactive play equipment

Interactive play equipment can be described as children's playground equipment in an aquatic environment. Purpose built equipment is available which assists in minimising the risks and hazards associated with this equipment.

Increased supervision may be required when this equipment is in use. NOPs should include the location of equipment (often in toddlers pools), permitted age ranges, maximum number of users and parental supervision requirements.

4.5 Underwater activities

Lifeguards need to be aware of the nature, risks and special equipment of underwater activities, and understand recommended safe practices. The demand for time in pools for underwater activities, such as scuba diving, snorkelling and underwater hockey has increased. Special skills are often required to supervise these activities as well as to effect a rescue. See Chapter 2 – Health and Safety for notes on shallow water blackout.
4.6 Canoes and goals

The use of pools for canoe training and canoe polo is increasingly common. Canoeing equipment, particularly the bow or stern of canoes, can damage the pool. To minimise this risk, staff should ensure that adequate protection is fitted to canoes.

The fitting of sports goals for canoe polo, water polo and underwater hockey must be to secure fittings poolside. Fittings should not protrude from poolside as they may be a risk to swimmers when not in use.

4.7 Water slides

Although water slides have a perceived high level of danger, it is actually low. Inappropriate management or misuse of water slides can however lead to accidents. Accidents can occur as a result of slips and falls on steps, falling out of open slides, collisions on slides or in the splashdown pool, and equipment failure.

Positioning of lifeguards at slides will depend on the design of the slide and use of cameras/monitors at either the entrance or splash down area or lights indicating when users can enter the slide. If cameras or lights are not used, lifeguards should be located at both the top of a slide and in, or immediately adjacent to, the splashdown area. Lifeguards at water slide splashdown areas and wave pools must be aware that constant water turbulence makes supervision difficult.

Communication methods between lifeguards supervising water slides may include two-way radios, telephones, loud hailers or hand signals, and should take into consideration the ease and effectiveness of each method given the layout and design of the water slide within a facility.

4.8 River rides

River rides are usually shallow channels designed to allow water to flow at varying speeds. A lifeguards’ position must allow for supervision of the entire ride. Depending upon the design of the ride, more than one lifeguard may be required to supervise the river ride.

Guidelines for customers safety on river rides include:

- Enter and exit ride at designated points only
- No jumping or diving
- Where tubes are used, swimmers should stay in tubes at all times and only one swimmer should be allowed per tube.
4.9 Wave pools

In closely controlled situations, wave pools are safe, however the use of wave pools requires more lifeguards to maintain constant supervision.

Lifeguard to swimmer ratio for wave pools will be defined by the layout, design and wave patterns/operation of the pool. Royal Life Saving Society of Australia recommends a minimum ratio of 1 lifeguard to 40 swimmers for wave pools.

Lifeguards should be aware of the following:

- Sudden influx of customers into the pool
- Customers kept away from wave chamber outlet
- Access to the pool when the waves are in operation should be limited to the beach area
- Waves can cause disorientation, particularly with weaker swimmers
- Smaller customers may be knocked over by the force of waves
- Diving and jumping from poolside into waves should be prohibited
- Turbulence from waves results in very poor visibility through the water
- Use of flotation devices should be closely monitored and permitted only during periods of low patronage.

Controls for the operation of the wave pool including sirens and emergency stop buttons should be located on the pool deck allowing lifeguards to operate while still being able to supervise the pool.
4.10 Steam rooms, spa and saunas

Supervising hot areas such as spas, pools and saunas can be challenging due to the nature of the environment (steam, bubbles and customer privacy) and their location in the facility. Safety messages can be delivered to customers through the use of good signage, and verbal instructions from lifeguards and reception staff. Regular checking of these areas must be included in the staff supervision plan, and for areas of private pools, staff should be located within hearing distance. Staff need to be proactive and interactive with customers in these areas.

Dizziness, fainting, de-hydration and heat exhaustion are common risks when people stay in the spa, sauna or steam room for too long. It is recommended customers:

- Do not enter these areas on their own but have a minimum of two people
- Do not exceed 15 minutes in saunas and 30 minutes in spas/hot pools
- Are fully hydrated
- Shower before entering the pool again.

Clear signage advising customers of safety information should be visible. These signs should clearly display the recommended time spent in the hot environment, and care to be taken by pregnant women and customers with medical conditions such as high/low blood pressure and heart conditions.

It is recommended that age restrictions be placed on the use of these facilities or that as a minimum, customers under the age of 16 years be accompanied by an adult.
5 Supervising Programmes and Events

5.1 Supervision of swim carnivals and meets

Operating policies, supervision levels and normal operating procedures for the facility should be applied consistently for all customers.

Arrangements agreed in advance with carnival organisers should be set out in writing and include all safety requirements and expectations for using the facility including:

- Information on numbers participating, the activity and skill level of the group
- Name of the hire representative who will be in charge and assume responsibility for the group
- Who will provide pool supervision staff to comply with the facility’s supervision standards i.e. the hirer or the facility manager
- Number and skills/qualifications of available lifeguards or staff
- The hiring party understands and accepts emergency procedures and the specific responsibilities of the facility manager and the hirer in the event of an emergency. The agreement should draw a distinction between an emergency arising from the actions of the group and those such as the failure of the facility e.g. power, structure or equipment
- Conditions and rules agreed upon for the behaviour and conduct of the group during use, and safety advice to be conveyed to participants prior to their use of the facility.

PoolSafe facilities must have a facility employed PLPC qualified lifeguard on duty for all bookings.

5.2 School and holiday programmes

Schools

Schools often use local pools for swimming and water safety teaching. Guidelines for facility use must be established to ensure the supervision standard is maintained at all times.

Each facility will have different requirements for school programmes. Principals, teachers and parents need to be aware of those requirements and the issues of health and safety related to the pool environment.

It is usually expected that the facility provides swim teachers to run the school water safety programme.

Holiday Programmes

Many facilities undertake planned programmes in addition to learn-to-swim, fitness and swimming programmes. These recreation and holiday programmes provide a service which includes, in most cases, total supervision of participants.
The facility manager therefore, accepts certain obligations when running these programmes and must ensure staff are aware of the legal implications which accompany this responsibility. It is wise to assume liability where it is clear a parent or guardian is relying on facility staff, or programme staff, or when programme information suggests the facility manager will take responsibility for children enrolled in the programme.

5.3 Social events, consumption of food and drink

There should be specific areas where food and drink may be consumed. During social events, extra careful supervision is necessary and it is essential that activities in the water take place before the consumption of food or drink.

When facilities are hired to external individuals or organisations outside public operating hours for events normal operating procedures including supervision levels must be maintained.
6 Communication

Effective communication between staff, especially lifeguards, and between staff and customers, is key to effective service. Without a means of communication staff only act as individuals. Good communication builds good teamwork and adds to the strength of a team.

Communication between customers and staff is vital for safety and good customer relations. Do not restrict communication to disciplinary and emergency actions. Engage in friendly interchange whenever possible. This approach will create the right environment for future cooperation, particularly should an emergency arise. An outward appearance which is friendly yet professional is most likely to get a positive response from customers.

There are a number of communication methods for a pool, most are determined by the conditions prevailing at any particular time.

6.1 Communication methods

<table>
<thead>
<tr>
<th>Type of communication</th>
<th>When to use</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Spoken word</strong></td>
<td>An essential part of staff communication, particularly when giving specific instructions or in the case of an emergency.</td>
</tr>
<tr>
<td><strong>Whistle</strong></td>
<td>Particularly for alerting other staff in the event of an emergency.</td>
</tr>
<tr>
<td><strong>Hand signals</strong></td>
<td>Useful if a prearranged system of hand signal is established. Hand signals can effectively convey a simple message after eye contact is established.</td>
</tr>
<tr>
<td><strong>Walkie talkies</strong></td>
<td>Used in large facilities or outdoor facilities where other methods of communication are limited. Where staff have access to walkie talkies, they should ensure that they are fully conversant with their use, operational procedures and limitations.</td>
</tr>
<tr>
<td><strong>PA systems</strong></td>
<td>Can be used for making announcements or to assist in crowd control during an emergency.</td>
</tr>
<tr>
<td><strong>Alarms</strong></td>
<td>Can convey a variety of messages to customers and staff. There is every likelihood, particularly in the larger leisure pools with a variety of features, there may be alarms for fire, poolside incident, or wave machine use. Where possible, support alarms with visual and/or verbal indicators e.g. a wave machine alarm may be supported by a customer address announcement. Staff must be fully conversant with the sound and meaning of all alarm systems and be prepared to explain them to customers.</td>
</tr>
</tbody>
</table>

Templates: Hand signals
7 Managing Use

Programming regular activities and one-off events ensures an aquatic facility is well-utilised and caters to as wide a customer group as possible.

Providing structured programming for activities creates a sense of certainty for all users. In most facilities, non-programmed time is set aside especially for the casual walk-in user. It is important that non-programmed and programmed time is booked into the daily/weekly schedule.

Scheduling the programmed activities at times to suit the various user groups will ensure best use of the facilities e.g. aquafit for ‘older’ adults can be scheduled for mid morning, while aqua fun aimed at children can be scheduled for weekend afternoons.

Communicating with users about programmes and events, and specifically the impact upon their use of the facility as early as possible, helps with customer service and user expectations. Signage, notices and using reception staff are all important methods to communicate to both regular and casual users about upcoming events.

Some aquatic facilities provide regular updates (email, newsletter, etc) to clubs and coaches who are regular users of their facility. Be as proactive as possible, especially with one-off events.

Case Study: Rotorua Aquatic Centre

Rotorua Aquatic Centre recently went from having one to two swim clubs as well as their own Learn to Swim Programme utilising the facility on a daily basis. This has contributed to capacity issues during peak times. The Facility Manager has proactively worked with the two swim clubs and their own LTS to ensure at all times there is lane space within each of the pools at all times for community users. They looked at their LTS lane space allocation to see if they could “clean up their own back yard” before approaching the swim clubs to do the same. Now if there is a large number of public swimmers, the swim clubs are happy to condense down to compensate the influx.

When it is quiet and ample space is available the clubs can extend their lane space without making a booking.

Having a good working relationship with customers that regularly hire lane space is vital both from a lifeguard perspective and a management perspective. Managers ensure they communicate with each swim club on a daily basis to keep the lines of communication open. This ensures good rapport with customers and also allows easy identification of possible pinch points.
7.1 Booking systems

There are many electronic booking systems available for aquatic facilities. Many of these systems are fully integrated financial, user, staff and resource monitoring systems. No matter what type of system is used, it is important all staff, not just reception staff or managers, are aware of what is happening within the facility.

Case Study: Selwyn Aquatic Centre

The Selwyn Aquatic Centre doesn’t currently charge lane hire. This way they are in control of how much space a group will use, and allocate the appropriate space for the number of swimmers. They are also very firm with their policy of ensuring there is public space available in the main pool at all times (apart from when there is a large swimming event – swim carnivals). Space is sometimes reduced to one or two lanes (during swim school time) but they are very mindful that they are a “community facility” and therefore need to ensure the requirements of the community are met as best as
8 Programmes and Events

Programmes and events are the engine house of a successful facility – they bring people and life into an aquatic facility. To ensure that success, programmes will need to align with both the facility strategic direction and the needs of the community.

There are four key steps to running a programme or event, however large or small.

Scoping
- Checking the organisation strategic fit in relation to programmes and events (misaligned programmes or events can lead to a downturn in customer use and demand)
- Identifying target communities and getting their input
- Developing programme concepts, goals and design.

Planning
- All operational aspects of planning
- Feasibility, timing, pricing, budgets
- Identifying barriers to participation
- Marketing
- Risk management.

Implementation
- Preparing the facility and staff to implement
- Delivering the planned programme.

Evaluation
- Evaluating against goals, participation, satisfaction, health and safety and budgets
- Acting on findings.
8.1 Programme feasibility

To determine the feasibility of a programme or event in the facility, consider the following:

- Target audience – who are they and can the facility provide what they want?
- Partners – are there groups the facility could partner with?
- Programme goals and objectives – do they match needs and the strategic direction of the facility as well as the needs of the target audience?
- Budget – what is the financial goal, income and expenditure, and what can people pay?
- Timing – what frequency, duration, time of day/week/year that will suit the facility and target audience?
- Resources – what will the facility need in staffing, venue, and equipment?
- Promotion – what is the best and most effective way to reach the audience?
- Safety – what is the health and safety plan?
- Cost/benefits – what are the extra costs of cleaning, non-programme staff, or conflict with other users/events?

Further information


Aquatic Education

Aquatic education covers two areas: dedicated learn to swim schools and programmes and water safety, taught to primary aged pupils through school programmes. Swim schools and learn to swim facilities are included within the framework of these guidelines generally, while specific areas of concern are detailed in this section.

Aquatic skills are a compulsory component of the education curriculum in primary schools. Teaching swimming through schools should be undertaken by suitably trained instructors. Traditional high student to teacher ratios in schools makes it more difficult to teach students specific water skills compared to smaller, dedicated learn to swim classes. Utilising external providers and facilities may be the best means of providing more than just exposure to water or skills maintenance.

9.1 Facilities

Pool depth
The desirable pool depth for teaching swimming is chest height to enable students to stand up for recovery. Age and height of students vary, therefore strategies for achieving this range from having a maximum pool depth of 0.90m, to providing platforms for use in deeper pools.

For more advanced swim teaching and water safety education, deeper water experiences are desirable but should be closely monitored and managed.

Water temperature
Water temperature in learn to swim pools is arguably more important than pool depth. Keeping the water warmer than 30 degrees ensures students and instructors do not get cold during lessons.

Instructors teaching for any length of time in the pool will be susceptible to cold. Providing instructors with wetsuits or vests will reduce the likelihood of staff become cold, tired and fatigued.

Leasing facilities
When leasing or using other aquatic facilities to provide swim lessons, it is the responsibility of the swim school operator to ensure the health and safety of staff, students and parents/caregivers.

It is the responsibility of the asset owner to ensure that the facility is compliant e.g. building WoF, emergency evacuation system is operable and to ensure the operator has health and safety plans in place.

Consider the following when undertaking a facility check before agreeing to use a facility:

- Access and car parking
- Pool depth and provision/storage of platforms
• Provision of in-water teaching bar
• Entry steps
• Pool surrounds
• Seating
• Water temperature in changing rooms/showers
• Working toilets with working door latches
• Safety signage
• Emergency exits are clearly marked.

9.2 Customers

Minimum age

The minimum age for formal water instruction lessons is 6 months. Children younger than 6 months should not be encouraged into a public aquatic environment as their immune system is not fully developed and may be susceptible to waterborne illnesses. Once 6 months old, a child also has better head and neck control.

Water confidence classes for babies focusing on exposing young children to the aquatic environment, developing their comfort and familiarisation of water, and educating the parents/caregivers rather than skill development.

Student ratios

Appropriate student:instructor ratios are dependent upon:
• Facility and pool environment (pool depth, water temperature and allocated working space)
• Age of students
• Ability level of class
• Nature of students being instructed (physical, intellectual and emotional ability, behaviour)
• Type of activity.

Ratios should be determined and evaluated at the beginning of each lesson by the instructor in charge of the group. In order to maintain levels of safety for swim school students, the following student:instructor ratios are recommended.

Student:instructor ratio

<table>
<thead>
<tr>
<th>Level</th>
<th>Student:Instructor ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginners</td>
<td>3:1</td>
</tr>
<tr>
<td>Pre-schoolers</td>
<td>4:1</td>
</tr>
<tr>
<td>School age</td>
<td>6:1</td>
</tr>
<tr>
<td>School groups</td>
<td>10:1*</td>
</tr>
<tr>
<td>Swimmers with disabilities</td>
<td>1:1</td>
</tr>
</tbody>
</table>

* School group ratio based on class teacher being in attendance but not in water.
Using two instructors per group not only increases the number of students per group, but can also enhance the skill teaching and learning achievable in each lesson period.

Teaching students with disabilities requires greater skill and experience on the part of the instructor to assess:

- Level of ability/disability (physical and intellectual)
- Student/instructor relationship
- Instructor/parent relationship
- Student comfort within an aquatic environment
- Lesson length
- Skill acquisition expectation.

9.3 Staff education and training

There is a range of swim teaching qualifications considered by those in the industry as suitable for New Zealand.

- New Zealand Swim Coaches and Teachers Association (NZSCTA) is responsible for the needs of professional swim teachers, coaches and providers across New Zealand.
- AUSTSWIM is Australia’s national organisation for teaching swimming and water safety and their qualifications are taught and recognised in New Zealand.

Staff must hold a current first aid certificate, and have the opportunity to train in risk management and customer service.

Further information

New Zealand Swim Coaches and Teachers Association [www.nzscat.org.nz](http://www.nzscat.org.nz)


9.4 In-water vs. poolside teaching

To achieve best results instructors should be in the water with students rather than teaching poolside, as long as the instructor can observe all students during class. This may change as students’ skills advance to a level where they are able to freely swim and a greater viewing and vantage point is required.

9.5 Supervision

Supervision by instructors is for the class being taught, not for all the users in the facility. It is vital that all staff are first aid trained, parents/caregivers remain in the facility during lessons, and student/instructor ratios are within the recommended levels.

Supervision of swim lessons within a public aquatic facility should also be covered by normal supervision practices by lifeguards but in a more general manner by instructors.
9.6 Water safety programmes

As well as teaching swimming skills, water safety is an important part of aquatic education. Teaching people how to act and react when in unexpected aquatic situations, can be the difference between survival and drowning.

Case Study: Dash Swim School, Porirua City

One week of every term is dedicated to water safety week at Dash Swim School. The aim is to teach children how to cope in real life situations such as being caught inrips or seaweed at the beach, or currents in rivers. The pool is turned into 'real life situations and rips and currents are simulated using high-pressure hoses. Students are educated on best practice for each situation.

Education also focuses on how to avoid getting into difficulty in and around the water and extends to how parents can to keep children safe around beaches.
10 Aquafitness

Participation in aquafitness is increasing. It is recognised as beneficial for maintaining fitness levels for recreational, amateur and professional sports people. Aquafitness caters to a wide range of participants wanting to improve fitness and strength to customers requiring rehabilitation. It uses water for resistance while providing a low impact environment and can be adapted to different levels of fitness and ability.

Classes must be run by trained instructors who understand the effects of training in water on the body. Workshops and training for staff can be provided by SkillsActive and AUSTSWIM Aotearoa.

Examples of aquafit programmes are:

**Aquajog Fit:** Customers experience a low impact, high-level cardio workout. Ideal for focused training needs, muscle toning, and rehabilitation.

**Aqua Fit:** This is a fun workout designed to improve or maintain fitness. The dynamic cardiovascular base is intensified through learning how to move and use the water.

**Aqua Low impact:** Designed to help increase cardiovascular fitness, improve flexibility and reduce pain for overall improved health. Ideal for those recovering from surgery, injury, pre/post natal and those involved in the Greens prescription 'Kick-Start' programme.

**50's Forward Aquajog Fit:** A low impact, gentle cardio workout. Ideal for muscle toning.

**50's Forward Aquafit:** A gentle cardio workout to music. It is a fun exercise session for anyone aiming to improve or maintain fitness. A low impact, medium intensity workout for all levels.

*Further information*

[www.skillsactive.co.nz](http://www.skillsactive.co.nz)

[www.austswim.co.nz](http://www.austswim.co.nz)
11 Other Aquatic Programmes

Depending on the size and layout of the facility and the needs of the community various aquatic programmes can be offered in addition to swim school and aquafitness. These can be run either through local sporting clubs or directly by the facility if there are appropriately trained staff. Some of those aquatic programmes are:

- Water safety
- Swim squad
- Water polo
- Flippaball
- Outrigger canoeing
- Kayaking
- Snorkelling
- Scuba diving
- Kiwi Surf
- Spring board diving.
12 Fitness Suites and Gyms

12.1 Introduction

Over the last decade the trend to include fitness areas and gyms within an aquatic facility has grown. Creating a fitness area or gym requires changes to operating a swimming pool – in terms of equipment and technical requirements, and staff skills and qualifications.

12.2 Customer requirements

Customer requirements for fitness areas and gyms differ from swimming customers. Many fitness area and gym users will never use the swimming pool. Isolating access to fitness areas and gyms may not be practical, but providing access to dry changing facilities is important.

Maintaining customer comfort, safety and security ranges from temperature, noise, and lighting to customer and staff interaction and crowding. Overcrowding can create both hazards and frustrations to users. Limiting class numbers, advising users of quiet times, and placing time limits on popular machines during peak times are strategies to avoid overcrowding and user frustration.

12.3 Location of fitness areas and gyms

The location and siting of fitness areas and gyms needs to be carefully considered during the design phase. Locating these areas above the swimming pools can create an uncomfortable atmosphere for pool users who do not wish to be watched while using the pool.

In determining the location of fitness areas and gyms, the ways to manage members’ use of either or both gym and pool amenities needs to be considered. Do separate membership and/or entrance fees require separate entrances and accesses?

Air temperature and humidity requirements for fitness areas and gyms differ from swimming pool requirements. Most pools aim to achieve an air temperature around 30°C+ while fitness areas and gyms are usually operate at a maximum of 18°C. Ventilation requirements for pools and fitness areas also differ as fitness areas need to provide suitable ventilation to minimise sweat and body odour.

The provision and location of fitness equipment that uses electricity is also an important issue. This equipment needs to be kept away from wet areas or areas where condensation may occur to avoid equipment corrosion and possible electrocution.

Group exercise and fitness areas using music and sound systems should be isolated from pool areas to avoid noise drift and conflict between gym and pool users. Similarly sound insulation from pool areas into a fitness area or gym should be considered during design or retrofit phase.

12.4 Equipment issues

The impact of humidity on fitness equipment, rust, electronics and mechanics need to be taken into consideration when designing and developing such areas.

Cleanliness of fitness equipment not only ensures the effective operation of equipment but also maintains a level of hygiene for customers.
Flooring type and protection in fitness areas and gyms should consider the impact of heavy equipment being dropped. Heavy duty rubber insulation should be installed in areas where free-weights are used to minimise damage and noise.

Some fitness equipment requires individual wiring and circuits which incurs considerable expense. A thorough investigation of electrical and maintenance requirements should be undertaken before any equipment is purchased or hired.

It is important that fitness equipment does not leave the dedicated fitness area and gym as it can create a hazard to other fitness and pool users and the facility. Some equipment, such as dumbbells and weights plates should not be taken anywhere near the pool deck or pool itself.

12.5 Fitness industry bodies

Like the recreation industry, the fitness industry is supported by a representative and standard setting organisation. Exercise Association of New Zealand is responsible for representing its members in the fitness industry.

REPS is the Register of Fitness Professionals and is the recognised industry standard-setting body. Fitness staff should be registered through REPS to ensure they meet minimum training and qualification standards, and for ongoing training and development requirements.

Further information

Exercise Association of New Zealand [www.exercisenz.co.nz](http://www.exercisenz.co.nz)

REPS [www.reps.org.nz](http://www.reps.org.nz)
13 Childcare

13.1 Licensed services

The Education Act 1989, defines an early childhood centre as “premises used (exclusively, mainly or regularly) for the education or care of three or more children (not being children of the persons providing the education or care) under 6 years (section 308 (1)”).

Therefore, any situation where a group of three or more children are regularly receiving care from someone other than their parent or caregiver is required to meet legislative requirements.

The Education Act 1989 requires all early childhood education services to be licensed by the Secretary of Education and it is illegal to operate any premises as an early childhood education service without a licence. Examples of these services are: kindergartens, playcentres, kohanga, preschools, casual services such as those in shopping malls.

Licensed services are staffed by qualified teachers who hold the New Zealand Teacher Registration Certificate and there are specific teacher/child ratios depending on the age of the children. Every licensed early childhood education provider must meet certain standards relating to their premises and facilities. These standards cover the range of activities offered, and the amount of space provided for play, toileting, food preparation, and sleep.

Children aged three to five are entitled to 20 hours of early childhood education (ECE) at no charge. This applies to all teacher-led ECE centres. To be eligible children must be enrolled in and going to an early childhood centre offering the subsidy.

13.2 Licence-exempt services

An exemption from the requirement to be licensed has been provided for groups that meet specified conditions.

Licence-exempt groups are required to have:

- More than half the parents of the children attending each session present
- The group meets for no more than one session of up to 3 hours on any one day (group rather than child’s hours of attendance)
- The group of parents assume responsibility for each child attending the group
- The group operates as an informal, non-profit making, community based group.

Examples of such groups are Pacific Language nests, church groups, playgroups. Childcare facilities offered at aquatic facilities would not meet these criteria.

13.3 Ministry of Education advisory services

Organisations interested in establishing or receiving information regarding any of these services should contact the Ministry of Education, for advice and guidance in regards to the funding and establishment of both licensed, and licence-exempt services.

Further information

www.lead.ece.govt.nz


www.minedu.govt.nz
14 School and Community Pools

School pools are an important part of the pool network in New Zealand. There are approximately 1300 school pools in New Zealand, compared with approximately 230 pools provided by councils. Under legislation school pools are required to meet the same standards of supervision and water quality as public pools.

School Board of Trustees are encouraged to follow best practice methods for the management of school swimming pools as set out by Water Safety New Zealand and they are to comply with all relevant legislation and NZ Standards that apply to water safety and pool use and management.

For many School Boards, the idea of training staff in pool management may not be an option. In such instances, it is recommended the Board of Trustees make contact with their local public swimming pool to determine whether these services can be managed externally.

School Board of Trustees are responsible for the health and safety of everyone using the pool with the Board’s permission, including after school use by the school and wider community.

Outside school hours, the Board could still be held responsible for harm to any unauthorised pool users, so Boards are advised to maintain and regularly check their security. When a pool is being leased by a third party (e.g. a swim school), the health and safety of the users must be clearly stated under the lease agreement.

Boards must develop rules surrounding the use of the pool, and provide clear signs displaying those rules. In addition to displaying the rules, the Board must have procedures covering:

- Regularly checking locks and gates
- Providing first aid equipment
- Storage of pool chemicals
- Storage of pool equipment
- Water quality compliance
- Prevention of unauthorised pool use.

Further information


15 Thermal Pools

Geothermal water can be found in natural outdoor pools, and in commercial pools such as public swimming pools or spas in hotels, motels, health centres and gyms.

15.1 Supervision

The New Zealand guideline for swimming pool supervision applies to thermal pools in general, however, it is recognised that some facilities or amenities within facilities may not be fully compliant due to their make-up and character.

To apply the guideline, the decision on supervision levels must be made by the facility manager after taking into consideration all aspects of risk management. If the New Zealand guideline for swimming pool supervision cannot be applied, then the following minimum levels are required:

- A senior staff member or owner would hold the lifeguard qualification (PLPC)
- All staff hold workplace first aid qualification
- At all times the complex is open, staff are readily available to customers should an accident happen
- An emergency response action plan is detailed and is clearly communicated with staff and displayed in an appropriate place for staff to act upon
- A minimum standard of first aid equipment is maintained on site
- Private pools (pools which are not in public view or supervised) have a minimum of two people per booking
- At place of payment and in changing rooms notices state that the pools are not lifeguarded.

In areas of private pools, lifeguards/staff should regularly circulate in the general area, be within hearing distance of the area and be available if the customer requires.

15.2 Customer risks

Common risk areas in thermal pools are the lack of hydration and length of time spent in the hot environment. Clear signage encouraging customers to drink plenty of water and having a recommended maximum time in the hot pools can reduce the risks of heat exhaustion.

Due to the higher water temperature of thermal pools, customers suffering medical conditions such as blood pressure and cardiac conditions, and pregnant women can be at increased risk. The best practice to mitigate any risks is to have clear and visible signs advising of the risks to customers in these higher risk categories.

The nature of the customers using these pools can also increase the risks of injury or accident.

Clear customer instructions on arrival, both verbal and written also help reduce the risk of accident or injury.

Amoebic meningitis is a risk in geothermal pools as the amoeba organisms can live in these pools. Customers need to be advised not to put their heads under water as the amoeba can enter through the nose when a person puts their head under water in a geothermal pool.
15.3 Signage

Good signage governing the rules for thermal pool users needs to be clearly displayed. Information should identify potential risks to customers including:

- Amoebic Meningitis
- Use by pregnant women
- Use by customers with medical conditions,
- Recommended length of time spent in the pool
- Risk of dehydration.

Providing customer information on water temperature of each pool is also recommended.

Templates: Thermal Mineral Pool rules
16 Hospitality Pools

Pools at hospitality establishments (hotels and motels) are subject to the same New Zealand Standards for water quality and safety as commercial and community pools.

It is strongly recommended that hospitality managers establish policies for the use of the pool. The policy should include the rules of the pool, use of equipment, location of amenities and incorporate a pool users code for the behaviour of all pool users:

- All children must be supervised
- Never swim alone
- Never swim while under the influence of alcohol or drugs
- Take additional care if you have a medical condition
- Dangerous behaviour is prohibited e.g. running, jumping.

Risk management identification and planning systems provide a framework for identifying and managing any hazards in the swimming pool area. An emergency action plan should be established and all staff made aware of the plan and its requirements.

16.1 Signage

Every pool should have clear safety signs. Good signage should detail what the rules are and what to do in the event of an emergency. Appropriate signage can be obtained from Water Safety New Zealand.

Further Information


16.2 Link to Qualmark

Hospitality pools, including those contained in an accommodation facility with a Qualmark rating have to meet a minimum standard. That standard is set by the legal and local government requirements in terms of signage and health and safety. Facilities are visited every 12 to 15 months and if a facility fails to meet the standard their rating will be removed until standards are improved.
17 Templates

17.1 Normal operating procedure content guideline
17.2 Sample NOPs
17.3 Business continuation plan
17.4 Poolside checklist
17.5 Pool Alone poster
17.6 Pool Alone procedure flowchart
17.7 Pool Alone register
17.8 Hand signals
17.9 Thermal mineral pool rules
17.1 Normal operating procedures content guidelines

| Facility facts and layout          | • Plans, diagrams, and map of facility including location of alarms, exits, emergency vehicle access ways, rescue equipment and first aid stations  
|                                  | • Customer access areas and maximum numbers  
|                                  | • Facility management and services  
| Opening hours                    | • Standard hours of opening  
|                                  | • Hours of operation for different services e.g. swim school, fitness centre, pool  
| Personnel                        | • Identification of person(s) in charge  
|                                  | • Job descriptions, staff duties and responsibilities  
|                                  | • Performance standards, expectations  
|                                  | • Staff schedules and roster  
|                                  | • Personnel qualifications and accreditation  
|                                  | • Employment contract details including breaks, timekeeping, hours of work  
|                                  | • Training schedule  
| Daily operational duties         | • Opening duties  
|                                  | • Hourly duties  
|                                  | • Daily duties  
|                                  | • Closing duties  
|                                  | • Cleaning procedures  
| Office operations                | • Pool entry, fee structure  
|                                  | • Enquiries, bookings and activities schedules  
|                                  | • Stock and merchandise sales and management  
|                                  | • Equipment loans and hireage  
|                                  | • Vending machine issues  
|                                  | • Banking and till processes  
|                                  | • Security of money and valuables  
|                                  | • Shift handovers  
| Customer relations               | • Child supervision policies, PoolAlone  
|                                  | • Customer behaviours  
|                                  | • Customer relations (customers and media)  
|                                  | • Swimmer etiquette and dress policy  
| Reporting policy                 | • Reporting procedure and authority  
|                                  | • Sample reporting forms and use |
### Health and Safety
- Procedures for contacting emergency services
- Lifeguard to swimmer ratios
- Supervision: scanning systems and methods, lifeguard rotations
- Communications (radio, telephone and customer address system), lifeguard signal systems
- Correct setup and use of equipment
- Equipment maintenance schedules
- First aid processes (serious incidents should be addressed within the Emergency Action Plan)
- Hazard identification and mitigation
- Faecal incident procedures
- Safe use of chemicals and cleaning materials

### Plant Operation
- Daily plant check requirements
- Maintenance schedules and requirements
- Troubleshooting checklists
- Manufacturer and supplier contact details
- Delivery and storage of chemicals
- Backup scenarios for equipment breakage and failure

### Water Testing Procedures
- Water testing
- Plant room procedures
- Microbiological testing

### 17.2 Sample NOPs
The following NOPs provide detailed examples of information that should be included. Every NOP needs to be adapted for the specific facility for which it is written.

*Normal Operating Procedure - Levin Aquatic Centre*

*Normal Operating Procedure - Manurewa Pool and Leisure Centre*

### 17.3 Business Continuation Plan
This business continuation plan provides a detailed example of information that should be contained in this working document and when they should be activated.

*Business continuation plan*
### 17.4 Poolside Checklist

<table>
<thead>
<tr>
<th>Check</th>
<th>Quantity</th>
<th>Faults</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk heads</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Starting blocks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lane ropes</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Lap pool flags</td>
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<tr>
<td>Pool tiles in/out</td>
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<tr>
<td>Lane speed signs</td>
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<tr>
<td>Lap pool ladder</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Pool cover rollers</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Pool cover motors</td>
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<td></td>
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<tr>
<td>Pool grates</td>
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<tr>
<td>Door handles</td>
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<tr>
<td>Windows and latches</td>
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<tr>
<td>Bins</td>
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<td></td>
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<tr>
<td>Fire extinguishers</td>
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<td></td>
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<tr>
<td>Hoses</td>
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<tr>
<td>Splash pool features</td>
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<tr>
<td>Splash &amp; spa jets covers</td>
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<tr>
<td>Cubby holes</td>
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<tr>
<td>Sauna</td>
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<tr>
<td>Seats</td>
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<tr>
<td>Heater elements</td>
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<td></td>
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<tr>
<td>Rocks</td>
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<tr>
<td>Lights</td>
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<tr>
<td>Doors</td>
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<tr>
<td>Emergency doors</td>
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<tr>
<td>Egress routes</td>
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</tbody>
</table>
17.5 Pool Alone poster

Attention parents and caregivers

Please help us keep your children safe at our facility by following these simple rules.

Children 10 years and under:
Must be actively supervised by a caregiver 17 years or over.

Actively supervised means:
• Watching your children at all times and able to provide immediate help.
• At a close distance where you can see, hear and be heard by your child and your child must be able to see you.

Children 4 years and under:
• In pools other than shallow toddler pools, children must be accompanied in the pool and within arms reach.

Maximum adult to child ratios.

One adult to two U5
One adult to four 5-10yrs’
One adult to one U5 and three 5-10yrs’

Find out more:
visit www.aucklandleisure.co.nz
Approach every child UNDER 10 YEARS OF AGE and ask the child who is looking after them

Is there a caregiver present at the pool?

- No: Hand signal 'lost child'
- Yes: Is the caregiver over the age of 16?

Is the caregiver over the age of 16?

- No: Ask caregiver how many children they are supervising.
  - No caregiver arrives: On next rotation
  - Caregiver arrives: Scan pool and surrounding areas. Give time for caregiver to arrive
- Yes: Is the caregiver safely supervising the child?

Is the caregiver safely supervising the child?

- No: Advise caregiver they must provide closer supervision for their child
  - No caregiver arrives: Hand the child / caregiver over to reception staff
- Yes: Make eye contact with the caregiver

Smile and give the thumbs up sign

Resume poolside duties
17.7 Pool Alone register

<table>
<thead>
<tr>
<th>Staff sign</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Comments</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Phone</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child's name</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
17.8 Hand signals

- Starting my scan
- Cover my area
- First Aid
- Lost Child
- Rotate
- Cover your area
- Situation out of control
- Situation under control
- Take a break
- Stroke
- Minor emergency
- Major emergency
- Heart attack
- Spinal injury
- Unconscious casualty
- Not breathing
- Epileptic
17.9 Thermal mineral pool rules

- No diving, splashing or playing around in these pools
- **Customers are asked not to put their head under the water in the thermal pools** due to the potential of Amoebic Meningitis being present in the water
- Pregnant women should consult their doctor prior to using the pools. We advise pregnant women **not to use** the pools hotter than their body temperature as their unborn child will not have sweat glands at this stage and could overheat their bodies
- Not recommended if you have heart disease or high/low blood pressure
- Not recommended to bath longer than 20 minutes without a break
- Thermal water may tarnish some jewellery.

---

**Signs:**

- Keep your head above the water in the thermal pools
- Expectant Mothers: WARNING
  - Hexagonal and Sulphur Pools are not recommended for you. Please use cooler Rock Pools.

Commissioned by: New Zealand Recreation Association with funding from Sport NZ and the ACC Drowning Prevention Fund, managed by Water Safety New Zealand.

Authors: Robyn Cockburn and Trish Amos, Lumin

February 2015


The Aquatic Facility Guidelines have been developed for use by aquatic managers. They provide detailed information covering the management and operation of an aquatic facility.

This document is a companion document to the Facility Management Manual which can be found on the Sport NZ website and the NZ Recreation Association website:


Acknowledgements

Alex Brunt, General Manager, Water Safety New Zealand; Alison Law, Aquatic Facilities Manager, Te Kāiwhakahaere Wāhi Roto i te Wai, Kāpiti Coast District Council; Bevan Smith, H&S Development Advisor, Parks, Sport and Recreation, Wellington City Council; Brian Milne, Director, Xyst; Craig Rouse, Centre Manager, Manurewa Pool and Leisure Centre, Auckland City; Caroline Ancell, Assistant Manager, Powerco Aquatic Centre, South Taranaki District Council; David Cameron, Contracts Manager, Filtration and Pumping Commercial Ltd; David Lee, Aquatic Services Manager, Powerco Aquatic Centre South Taranaki District Council; Esther Bukholt, Community, Recreation and Sport Project Manager, NZ Recreation Association; Esther Hone-Moore, AUSTSWIM Aotearoa; Fee Botcher, Customer Service Assistant, Gore Multisports Complex; Haydn Wilton, Wellington Regional Aquatics Centre Programmes Team Leader, Wellington City Council; Halina Dorne, Administration Officer, Aquatics, Coastlands Aquatic Centre; Jamie Delich, Facilities Consultant Community Sport, Sport NZ; Jenni Pethig, Learning & Development Advisor, Community Recreation & Arts, Skills Active; Joanne Saxton, Wellington Regional Aquatics Centre Operations Team Leader, Wellington City Council; Judy Tipping, Aquatic Consultant; Kathy Moore, Aquatic Facilities Manager, Selwyn Aquatic Centre; Lauren Hudson, Facility Manager, Naenae Pool, Hutt City Council; Linda Newman, Waterworld Educare Supervisor, Hamilton City Council; Nigel Newbery, Pool Operations Manager, AC Baths, Taupo District Council; Noel Gulliver, Service Manager, Rotorua Aquatics Centre; Patrick Blackman, Team Leader, Freyberg Pool, Wellington City Council; Peter Thompson, Aquatic Services Manager, Southland Aquatic Centre; Richard Lindsay, Facilities Consultant Community Sport, Sport NZ; Rowan Cordwell, Facility Manager Freyberg Pool, Wellington City Council; Royce Williams, Facility Manager Karori Pool, Wellington City Council; Sarah Cresswell, Senior Training Consultant, Opus International Consultants; Stephen Keatley, Community Facilities Manager, Hutt City Council; Tracey Prince, Aquatics Project Manager, NZ Recreation Association; Vaughan Hope, Facility Manager, ASB Aquatic and Fitness Centre, Richmond; Virginia Munro, Aquatics Consultant; Yvonne Hughey, Training Manager, Hanmer Springs Thermal Pools & Spa.
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1 Introduction

Aquatic facilities require efficient and well-maintained mechanical plant operations to ensure that facilities are safe and operate in accordance with relevant standards and legislative requirements. This includes the operation of pool water circulation, filtration systems, heating and ventilation systems. Regular monitoring and maintenance is required to ensure operating plant and equipment does not malfunction and optimum levels and efficiencies are maintained.

To ensure good water quality is achieved and maintained, the operation of pool plant equipment must be carried out by trained and qualified water treatment operators.
2 Water Quality

The New Zealand Standard that governs water quality in swimming pools is NZS 5826:2010 – Pool Water Quality. It provides guidance for pool owners and managers to check water quality measurements and maintain water quality to safeguard the health of pool users.

Central to this Standard is risk assessment which provides an opportunity to improve the effective management of pool water quality for all pool operators and users. Pool risk management plans can also be used to operate the pools' water quality outside the requirements of NZS 5826:2010.

NZS 5826:2010 covers methods of water treatment and safe handling of swimming pool chemicals for fresh water and seawater swimming, spa pools and geothermal pools. It also requires all public pools to have ‘risk management plans’ in place to ensure that swimming pools are operated as safely as possible. Compliance with NZS 5826:2010 is a PoolSafe requirement and it is cited in the Public Health Bill 2007.

The objective of this Standard is to ensure the water in swimming pools is maintained to safe chemical and microbiological levels to:

- Protect swimmers from unsafe organisms that cause disease
- Safeguard swimmers against the discomfort of chemical burns to skin and mucous membranes
- Minimise damage to the pool and associated equipment
- Have a pool which appears clean and sparkling.

2.1 Water contamination

Swimming pool water can quickly become contaminated by swimmers who bring dirt, sweat, body fats, faecal matter, oral and nasal discharges into the water, as well as hair and lint from swimming togs. Windblown debris and material from the pool surrounds can also enter the pool and add to the pollution.

2.2 Measures to keep water clean

In order to ensure the water remains chemically and microbiologically safe, regular testing is required and the frequency of these tests is specified in NZS 5826:2010. Each facility needs:

- An efficient mechanical filter system and chemical treatment of the water to maintain pool water in a safe and hygienic condition for swimmers
- To be aware of instantaneous bather load, or the maximum number of people using the pool at any one time. On a hot day, loss of disinfecting chlorine through high ultra violet levels and overuse by swimmers can lead to poor performance of the filters and chemical treatment. The resulting degradation of the water can lead to a high health risk for swimmers.
2.3 Key information in the NZ Standard

The following information is described in detail in the Pool Water Quality Standard:

**Pool water quality characteristics:** the desired values for correct pH, alkalinity, calcium hardness, Free Available Chlorine, total chlorine levels and other features which make up the required pool water quality characteristics which include the chemical requirements, desired values or operating ranges and frequency of testing.

**Microbiological monitoring:** A requirement of the Standard is for monthly microbiological monitoring to guard against harmful organisms in the water. This testing cannot be carried out by facility staff and requires pool water samples to be sent away to laboratories specialising in water treatment. The local public health office can provide the location of the nearest testing laboratory. Refer to the Introduction chapter for contact details.

**Incident procedures:** Advice is provided in the Standard appendix on the procedures to be followed in the event of a faecal discharge or a diarrhoea incident, which has the potential to introduce *Giardia* or *Cryptosporidium* to pool water.

**Chemical handling:** Guidance is also provided on the safe handling and storage of potentially unstable and explosive pool chemicals.

Another implication of the Standard is that school pools are classified as ‘public pools’. For public pools the operation of the water treatment system is the responsibility of people holding NZQA unit standards in swimming pool water quality. The management of pool water quality is required to be under continuous technical supervision with the qualified people readily accessible when the pool is operating”.

2.4 Pool risk management plan

A Pool Risk Management Plan is a systematic assessment of every aspect of providing safe and aesthetically acceptable pool water. It identifies the events that can cause the water quality to deteriorate and provides appropriate management practices to reduce the likelihood of adverse events and mitigate their effects if they do occur. It covers aspects of pool water quality treatment, contamination and event management.

Key areas covered by the pool risk management plan are:

- **General monitoring**
  Covers the risks with the collection of samples of pool water and their analysis

- **Staff training**
  The ability of staff to make correct decisions regarding the production and maintenance of good pool water

- **Media filtration without flocculation**
  Events that may alter the effectiveness of media filtration and their impact

- **Media filtration with flocculation**
  Events that may alter the effectiveness of media filtration using chemical enhancements (flocculation) and their impact

- **Pre-coat filtration**
  Events that may occur during the pre-coat filtration process that could affect the effectiveness of the process and their impact

- **Chlorine disinfection**
  Assesses events that may result in the chlorine disinfection process failing, and the impact of the failure

- **Chlorine dioxide disinfection**
  Assesses events that may result in the chlorine dioxide disinfection process failing, and the impact of the failure
Ozone disinfection  
Assesses events that may result in the ozone disinfection process failing, and the impact of the failure.

Disinfection by ultraviolet irradiation  
Assesses events that may result in the ultraviolet irradiation process failing, and the impact of the failure.

pH adjustment  
Events that may occur during the pH adjustment process and their impact.

Pump operation  
Assess the risks from recirculation and chemical dose pumps not working properly.

Alternative treatment solutions  
Identifies the risks involved with using alternative treatment, not identified elsewhere in the Standard.

### 2.5 Microbiological and chemical water tests

Four different tests are carried out monthly to test for microorganisms.

**Standard plate count (HPC)**  
Also known as heterotrophic plate count or HPC. This is a measure of the live bacteria in a pool water sample and may indicate the possible presence of other microorganisms. It gives a general idea of how well the chlorination system is working. High counts of bacteria may be indicative of a problem.

**Faecal Coliform count**  
This is an indicator test, which looks at the presence of bacteria of faecal origin. If faecal coliforms are present, it indicates that there is a possibility that other bacteria associated with the gut such as *Salmonella* or *Campylobacter* may also be present. These bacteria can cause sickness.

**Staphylococcus aureus count**  
This bacterium can cause skin irritations especially in wounds, cuts or abrasions and can cause sickness if ingested or swallowed. It can be found in infected wounds or in the nasal cavity when someone has a cold.

**Pseudomonas aeruginosa count**  
This bacteria can be associated with eye, ear and skin infections and is often associated with spa pools.

*Staphylococcus aureus* and *Pseudomonas aeruginosa* can be relatively resistant to chlorine, and they therefore account for a large percentage of swimming pool and spa associated illness.
3 Water Treatment Procedures

The recommended water treatment procedures for compliance with NZS 5826:2010 are outlined below.

3.1 Water testing

The pool water in each body of water should be tested regularly through the day for chlorine levels, FAC, CAC and pH, with details recorded for each test. An independent laboratory may also test for these and bacteria levels on a regular basis.

Facilities are required to keep good water records including information on water quality test results, corrective actions, and chemical adjustments or additions. Records should also be kept of bather loads and user incidents that may affect water quality such as faecal accidents.

Seasonal pools
• Water testing should be undertaken thoroughly before the pool is opened for use and while the pool is being used
• It is not expected that a water-testing regime will be continued when seasonal pools are closed or while the facility is not in use.

Public pools
Each body of water:
• Should be tested prior to opening every day, including spas
• Every 3 hours for main pools during opening hours
• Every 2 hours for spa pools during opening hours
• For low usage facilities, testing should be undertaken on a regular basis during opening hours to maintain compliance with the standard.

Microbiological testing should be undertaken:
• At the beginning of the season
• Monthly thereafter
• When the pool does not comply with chemical parameters over a period of half a day
• More frequently if there is a problem.

If you are using an online auto-dosing system, you can reduce the water testing frequency to no fewer than two samples a day for FAC and pH testing.
### 3.2 Frequency of chemical testing procedures for swimming pools

As per NZS 5826:2010 Table 2

<table>
<thead>
<tr>
<th>Test</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>Prior to daily use then every three hours</td>
</tr>
<tr>
<td>Alkalinity</td>
<td>Weekly</td>
</tr>
<tr>
<td>Calcium hardness</td>
<td>Monthly</td>
</tr>
<tr>
<td>Free available chlorine (FAC)</td>
<td>Prior to daily use then every three hours</td>
</tr>
<tr>
<td>Total available chlorine</td>
<td>Daily</td>
</tr>
<tr>
<td>Cyanuric acid</td>
<td>At the beginning of season, then fortnightly</td>
</tr>
<tr>
<td>Cyanuric acid if chlorinated cyanurates used</td>
<td>At the beginning of season, then fortnightly</td>
</tr>
<tr>
<td>Chlorine if saline pool water is electrolysed</td>
<td>At the beginning of season, then weekly</td>
</tr>
<tr>
<td>Total dissolved solids</td>
<td>At the beginning of season, then weekly</td>
</tr>
</tbody>
</table>

### 3.3 Frequency of chemical testing procedures for spa pools

As per NZS 5826:2010 Table 3

<table>
<thead>
<tr>
<th>Test</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>Prior to daily use then every two hours</td>
</tr>
<tr>
<td>Alkalinity</td>
<td>After filling, then weekly</td>
</tr>
<tr>
<td>Calcium hardness</td>
<td>After filling, then weekly</td>
</tr>
<tr>
<td>Free available chlorine (FAC)</td>
<td>Prior to daily use then every two hours</td>
</tr>
<tr>
<td>Total chlorine (Bromine)</td>
<td>Daily</td>
</tr>
<tr>
<td>Total dissolved solids (TDS)</td>
<td>Daily</td>
</tr>
</tbody>
</table>
### 3.4 Microbiological water quality criteria

As per NZS 5826:2010 Table 4

<table>
<thead>
<tr>
<th>Test</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard plate count</strong></td>
<td>Less than 200 per mL</td>
</tr>
<tr>
<td><strong>Faecal coliforms or Escherichia coli (E.Coli)</strong></td>
<td>Less than 1 per 100mL</td>
</tr>
<tr>
<td><strong>Staphylococcus aureus</strong></td>
<td>Less than 100 per 100mL</td>
</tr>
<tr>
<td><strong>Pseudomonas aeruginosa</strong></td>
<td>Less than 10 per 100mL</td>
</tr>
</tbody>
</table>
### 3.5 Chemical water quality criteria for swimming pools and spas

As per NZS 5826:2010 Table 1

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>pH</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lowest</td>
<td>Highest</td>
</tr>
<tr>
<td></td>
<td>7.2</td>
<td>8.0</td>
</tr>
<tr>
<td><strong>Alkalinity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Gas chlorinated pools and pools using trichloroisocyanuric acid</td>
<td>100.0 mg/L</td>
<td>200.0 mg/L</td>
</tr>
<tr>
<td>(b) Pools with other forms of chlorine</td>
<td>50.0 mg/L</td>
<td>200.0 mg/L</td>
</tr>
<tr>
<td><strong>Calcium hardness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>40.0 mg/L</td>
<td>300.0 mg/L</td>
</tr>
<tr>
<td><strong>Free available chlorine (FAC)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Swimming pool Chlorine alone</td>
<td>1.5 mg/L</td>
<td>7.0 mg/L</td>
</tr>
<tr>
<td>Chlorine + other</td>
<td>0.5 mg/L</td>
<td>5.0 mg/L</td>
</tr>
<tr>
<td>(b) Spa pools and hot tubs Chlorine alone</td>
<td>2.0 mg/L</td>
<td>7.0 mg/L</td>
</tr>
<tr>
<td>Chlorine + other</td>
<td>1.5 mg/L</td>
<td>7.0 mg/L</td>
</tr>
</tbody>
</table>

**Comments**
- **Too low**: Rapid dissipation of disinfectant, plaster and concrete etching, eye discomfort, corrosion of metals, vinyl liner damage
- **Too high**: Low chlorine efficacy, scale formation, cloudy water, eye discomfort. Under proven management systems, pH levels may be above the highest values given.
- For both (a) and (b) **Too low**: pH bounce, corrosion tendency
- **Too high**: Cloudy water, increased scaling potential, pH tends to be too high.
- **Too low**: Etching and corrosion
- **Too high**: Scaling and cloudy water
- For both swimming pools and spa pools, a heavy pool bathing load may require operation at or near maximum levels
- See the risk management plan for FAC management
- Chlorine + Other means Chlorine plus Ozone, UV or ClO₂
<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Combined available chlorine (CAC)</strong></td>
<td>Not detectable</td>
<td>Less than 1.5 mg/L. High combined chlorine results in reduced chemical efficiency. Take remedial action to establish break point chlorination. High combined chlorine residuals give rise to a sharp chlorinous odour and eye irritations.</td>
</tr>
<tr>
<td>Total bromine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swimming pools</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total bromine</strong></td>
<td>4.0 mg/L</td>
<td>10.0 mg/L 4.0 – 6.0 mg/L. If using chlorine test kit multiply the reading by 2.2 for total bromine.</td>
</tr>
<tr>
<td>Spas</td>
<td>4.0 mg/L</td>
<td>10.0 mg/L 5.0 – 7.0 mg/L.</td>
</tr>
<tr>
<td>Cyanuric acid</td>
<td>25.0 mg/L</td>
<td>100.0 mg/L 30.0 – 60.0 mg/L. <strong>Too low:</strong> Chlorine residual rapidly destroyed by sunlight. <strong>Too high:</strong> reduces the chlorine’s efficacy.</td>
</tr>
<tr>
<td>Total dissolved solids (TDS)</td>
<td></td>
<td>Less than 2000.0 mg/L above make-up water just for spa pools. Less than 1000.0 mg/L above make-up water just for swimming pools. TDS indicates a build-up of impurities which should be controlled by partial drain/refill with fresh water, typically at a rate of 30 L/person/day. These TDS limits do not apply to salt chlorinated pools. Follow the manufacturer’s instructions.</td>
</tr>
</tbody>
</table>
3.6 Technical advisors on water quality and plant operations

<table>
<thead>
<tr>
<th>Environmental Laboratory Services – Eurofins</th>
<th>Environmental Laboratory Services – Eurofins</th>
<th>Opus International Consultants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eurofins Christchurch</td>
<td>Eurofins Wellington</td>
<td>Sarah Cresswell</td>
</tr>
<tr>
<td>Unit 1/8 Dakota Crescent Wigram 8042</td>
<td>85 Port Road, Seaview</td>
<td>PO Box 30 845,</td>
</tr>
<tr>
<td>Christchurch</td>
<td>Lower Hutt</td>
<td>Lower Hutt 5040</td>
</tr>
<tr>
<td>Tel: 03 343 5227</td>
<td>Tel: (04) 576-5016</td>
<td>Phone: 04 587 0666</td>
</tr>
<tr>
<td>Fax: 03 343 5226</td>
<td>0800 576 5016</td>
<td>Mobile 027 273 6623</td>
</tr>
<tr>
<td><a href="mailto:info@eurofins.co.nz">info@eurofins.co.nz</a></td>
<td>Fax: (04) 576 5017</td>
<td><a href="mailto:sarah.cresswell@opus.co.nz">sarah.cresswell@opus.co.nz</a></td>
</tr>
<tr>
<td><a href="http://www.eurofins.co.nz">www.eurofins.co.nz</a></td>
<td><a href="mailto:info@eurofins.co.nz">info@eurofins.co.nz</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td><a href="http://www.eurofins.co.nz">www.eurofins.co.nz</a></td>
<td></td>
</tr>
</tbody>
</table>

Templates:  
- Water testing procedures  
- Water testing instructions  
- Water test range and solutions
4 Managing Filtration and Circulation Systems

4.1 Operations

There is a range of filtration systems used by aquatic facilities and it is important that routine checking and specialised maintenance are carried out to ensure reliable system operation, economic performance and maximum component performance.

The general requirements for plant management are:

- Operational checking
- Preventative maintenance
- Call outs for faults
- Plant room and equipment presentation.

The periods between programmed preventative maintenance should be set based on the equipment operating under average conditions. Where components are not duplicated to allow for maintenance work to be undertaken, the maintenance programme will need to be planned to coincide with the facility maintenance programme and facility closure.

Operational checking of a non-specialised nature and some operational recording can be undertaken by pool staff. These checks can be valuable aids in detecting abnormal operations leading to more significant fault conditions. These checks can be carried out on a weekly and monthly programme.

All routine operational checking, maintenance and replacement or major overhaul of plant components should be recorded. Callouts should also be recorded and reviewed as they can assist in establishing where additional routine maintenance may be required or where a different type of component is necessary.

When equipment maintenance is being carried out, normal safety procedures must be followed. It is essential that all plant and equipment is rendered inoperative and kept safe while being worked on. All electrically operated equipment must be isolated so it cannot be operated from a remote switch.

Service personnel need to be instructed on the facility’s health and safety policies and need to have access to equipment manuals and records. Appropriate service personnel should only work on equipment that they are qualified to work on.
4.2 Handling chemicals

Pool chemicals should be considered hazardous. Prior to chemical use and storage, staff should refer to the relevant material safety data sheets (MSDS) and use systems that comply with the Hazardous Substances and New Organisms (HSNO) Act. Three chemicals used at pool facilities (Chlorine, Diatomaceous Earth and Calcium Hypochlorite) are regulated under HSNO and require facilities to have an approved handler. An approved handler must undertake training and hold an Approved Handler Test Certificate. Approved handler certification qualifies people to handle very hazardous substances safely and to provide guidance and assistance to other people handling the substances.

Failure to follow correct chemical handling procedures could result in serious injury or death. Occupational Safety and Health (OSH) requirements and manufacturer’s chemical handling and storage requirements should be followed. Safety data sheets are available for all chemicals and should be obtained from the supplier or manufacturer of the product.

In general terms, chemical storage areas should be cool, dry, well ventilated and secure, and there should be provision for separation of chemicals.

Chlorine-based compounds are the most volatile compounds used for swimming pool treatment and special care should be taken with them. They should not be mixed with organic compounds or any other products and, in particular, cyanuric acid-based products should not be stored with chlorine-based products.

Instructions on emergency procedures, safe storage and handling procedures should be prominently displayed in the area where chemicals are handled and mixed. Full personal protective equipment (PPE) must be provided and worn when handling chemicals. It is important that all staff who use this equipment are fully aware of the correct way of wearing the PPE, and it must correctly fit all staff. One size does not fit all!

Follow manufacturer’s or supplier’s instructions when disposing of chemicals.

Further information

http://www.osh.dol.govt.nz

4.3 Managing filters

There is a range of machinery, equipment and systems used in the aquatic industry, which are unique to each facility. The plant room should have detailed procedures and instructions for the operation of equipment in the facility and these should be referred to at all times.

Having clean filters is essential to the effectiveness and operation of the water filtration system and pumping equipment. The performance of filters can be monitored through pressure or vacuum gauge readings or by visual observations of media. Staff need to monitor the levels of water quality and pressure gauge readings regularly and refer to their NOP for guidance on when replacement of filtration media used is necessary.

Depending on the system used, some facilities may decide to include regular filtration cleaning/backwashing as part of their weekly routine for smaller pools such as spa and toddler pools.

Cleaning filters will generally involve either backwashing or use of chemicals that will require disposal.

4.4 Waste disposal

All pools generate waste that needs disposal, whether it is waste water from pools or chemicals used in filtration systems. It is important to be aware of the local bylaws surrounding waste disposal.

When dumping pool water into the local waste water system, it is good practice to reduce the chemical levels in the water prior to discharge, ensure a slow release of water at times when the waste water system is not in high use, so the system does not become overloaded.

Under no circumstance should pool waste water be discharged into a storm water system.
5 Heating and Ventilation

The essential requirements for heating and ventilating a covered pool are:

- Elimination of odours from pool chemicals and humans
- Prevention of condensation
- Maintaining the air temperature to be acceptable to the average swimmer.

For a covered pool, the prevention of condensation created by evaporation from the pool surface is vital. Evaporation is at its minimum when the hall air temperature is close to the pool temperature. Equally important is the ability of the ventilation plant to replace the air at a sufficient rate to prevent moisture and odours. Air replacement and heating is a significant use of energy and therefore the ventilation system needs to be maintained to ensure optimum efficiency. Heating and ventilation plant installations that include systems to recover heat from exhausted air are recommended.

Effective mechanical ventilation of the boiler plant room area is also essential to prevent contamination of electrical equipment and erosion of boiler tubes by chlorine-laden air from the pool hall.

5.1 Use of electrical equipment

Care when using electrical equipment is always important, but even more so in an aquatic facility due to the presence of water. All portable electrical equipment, including leads, should be tested and tagged annually by a registered service technician or electrician. Whenever used, portable equipment should always be plugged into a residual-current device (RCD) electrical outlet or a portable RCD should be used.

Common electrical equipment at an aquatic facility include; inflatable blowers, pool vacuum cleaners, poolside scrubbers, water blasters and wet vacuums. When using cords poolside, staff need to be aware of hazards in terms of cords being close to water, especially puddles on the ground, and cords need to be positioned so as not to cause a hazard for customers and staff walking past.

All contractors working on the site should have all their electrical equipment tested and tagged, and they must be shown which electrical outlets have RCD on them as part of their health and safety induction to the facility.
6 Cleaning

Clean and tidy public areas give positive messages to customers and can encourage them to help keep the facility tidy. Cleaning all public and staff areas is also essential for health and hygiene. During the day changing rooms and toilets should be regularly checked and cleaned where required, in addition to the daily cleaning as specified in the NOP. Staff need to be careful of customers while cleaning during the day. The area should be closed while cleaning, and safety signs displayed where appropriate. Use of noisy cleaning equipment in changing rooms when being used by customers should be avoided as this detracts from an enjoyable customer experience.

Poolside should be cleaned daily. Attention should be paid to cleaning the tiles surrounding the pool, and the scum-lines in the pool.

It is also important that plant rooms are kept tidy and cleaned regularly. The effective use of a pool facility is dependant on reliable plant operation. Clean, uncluttered, freshly painted plant-rooms will normally reflect the attention paid to regular preventative maintenance and effective plant operation. A cluttered and messy plant room can also become a hazardous environment for those who work in them.

Templates:
- Cleaning public facilities procedures
- Public changing rooms checklist
- Staff changing room checklist
7 Templates and Worksheets

7.1 Water testing procedures
7.2 Water testing instructions
7.3 Water test range and solutions
7.4 Water test sheets – main pool
7.5 Water test sheets – spa pool
7.6 Daily plant check
7.7 Plant room checklist
7.8 Weekly operational check schedule – boiler plant
7.9 Monthly operational check schedule – boiler plant
7.10 Planning chart for preventative maintenance
7.11 Fault call out report
7.12 Emergency spill procedure flowchart
7.13 Cleaning public facilities procedures
7.14 Public changing rooms checklist
7.15 Staff changing rooms checklist
### 7.1 Water testing procedures

#### Minimum frequency of chemical testing procedures for swimming pools

As per NZS 5826:2010 Table 2

<table>
<thead>
<tr>
<th>Test</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>Prior to daily use then every three hours</td>
</tr>
<tr>
<td>Alkalinity</td>
<td>Weekly</td>
</tr>
<tr>
<td>Calcium hardness</td>
<td>Monthly</td>
</tr>
<tr>
<td>Free available chlorine</td>
<td>Prior to daily use then every three hours</td>
</tr>
<tr>
<td>Total available chlorine</td>
<td>Daily</td>
</tr>
<tr>
<td>Cyanuric acid</td>
<td>At the beginning of season, then fortnightly</td>
</tr>
<tr>
<td>Cyanuric acid if chlorinated cyanurates used</td>
<td>At the beginning of season, then fortnightly</td>
</tr>
<tr>
<td>Chlorine if saline pool water is electrolysed</td>
<td>At the beginning of season, then weekly</td>
</tr>
<tr>
<td>Total dissolved solids</td>
<td>At the beginning of season, then weekly</td>
</tr>
</tbody>
</table>

#### Minimum frequency of chemical testing procedures for spa pools

As per NZS 5826:2010 Table 3

<table>
<thead>
<tr>
<th>Test</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>Prior to daily use then every two hours</td>
</tr>
<tr>
<td>Alkalinity</td>
<td>After filling, then weekly</td>
</tr>
<tr>
<td>Calcium hardness</td>
<td>After filling, then weekly</td>
</tr>
<tr>
<td>Free available chlorine (FAC)</td>
<td>Prior to daily use then every two hours</td>
</tr>
<tr>
<td>Total chlorine (Bromine)</td>
<td>Daily</td>
</tr>
<tr>
<td>Total dissolved solids (TDS)</td>
<td>Daily</td>
</tr>
</tbody>
</table>
Microbiological water quality criteria

As per NZS 5826:2010 Table 4

<table>
<thead>
<tr>
<th>Test</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Standard plate count</em></td>
<td>Less than 200 per mL</td>
</tr>
<tr>
<td><em>Faecal coliforms or Escherichia coli (E.Coli)</em></td>
<td>Less than 1 per 100mL</td>
</tr>
<tr>
<td><em>Staphylococcus aureus</em></td>
<td>Less than 100 per 100mL</td>
</tr>
<tr>
<td><em>Pseudomonas aeruginosa</em></td>
<td>Less than 10 per 100mL</td>
</tr>
</tbody>
</table>
## Chemical water quality criteria for swimming pools and spas

As per NZS 5826:2010 Table 1

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>pH</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
|                                | Lowest | Highest | Desirable          | Too low: Rapid dissipation of disinfectant, plaster and concrete etching, eye discomfort, corrosion of metals, vinyl liner damage.  
                                |        |          |                   | Too high: Low chlorine efficacy, scale formation, cloudy water, eye discomfort. Under proven management systems, pH levels may be above the highest values given. |
|                                | 7.2    | 8.0      | 7.4 – 7.6          |                                                                          |
| **Alkalinity**                  |        |          |                   |                                                                          |
| (a) Gas chlorinated pools and pools using trichloroisocyanuric acid | 100.0 mg/L | 200.0 mg/L | 120.0 – 150.0 mg/L | For both (a) and (b)  
                                |        |          |                   | Too low: pH bounce, corrosion tendency  
                                |        |          |                   | Too high: Cloudy water, increased scaling potential, pH tends to be too high. |
| (b) Pools with other forms of chlorine | 50.0 mg/L | 200.0 mg/L | 60.0 – 120.0 mg/L |                                                                          |
| **Calcium hardness**            |        |          |                   |                                                                          |
|                                | 40.0 mg/L | 300.0 mg/L | Refer to SI (Saturation Index) | Too low: Etching and corrosion  
                                |        |          |                   | Too high: Scaling and cloudy water |
| **Free available chlorine (FAC)** |        |          |                   |                                                                          |
| (a) Swimming pool Chlorine alone | 1.5 mg/L | 7.0 mg/L  | 2.5 – 5.0 mg/L | For both swimming pools and spa pools, a heavy pool bathing load may require operation at or near maximum levels  
                                | 0.5 mg/L | 5.0 mg/L  | 1.0 – 2.5 mg/L | See the risk management plan for  
                                |        |          |                   | FAC management  
<pre><code>                            |        |          |                   | Chlorine + Other means Chlorine plus Ozone, UV or ClO₂ |
</code></pre>
<p>| Chlorine + other                |        |          |                   |                                                                          |
| (b) Spa pools and hot tubs Chlorine alone | 2.0 mg/L | 7.0 mg/L  | 3.0 – 5.0 mg/L |                                                                          |
| Chlorine + other                | 1.5 mg/L | 7.0 mg/L  | 3.0 – 5.0 mg/L |                                                                          |
| <strong>Combined available</strong>          | Not    | 1.5 mg/L | Less than | High combined chlorine results in                                          |</p>
<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
<th>Comments</th>
</tr>
</thead>
</table>
| **chlorine (CAC)**                  | detectable  | 0.5 mg/L reduced chemical efficiency. Take remedial action to establish break point chlorination  
High combined chlorine residuals give rise to a sharp chlorinous odour and eye irritations. |
| **Total bromine**                   |             |                                                                                                                                                                                                           |
| Swimming pools                      | 4.0 mg/L    | 10.0 mg/L 4.0 – 6.0 mg/L If using chlorine test kit multiply the reading by 2.2 for total bromine                                                                                                    |
| Spas                                | 4.0 mg/L    | 10.0 mg/L 5.0 – 7.0 mg/L                                                                                                                                                                                  |
| **Cyanuric acid**                   | 25.0 mg/L   | 100.0 mg/L 30.0 – 60.0 mg/L                                                                                                               Too low: Chlorine residual rapidly destroyed by sunlight  
**Too high:** reduces the chlorine's efficacy |
| **Total dissolved solids (TDS)**    | Less than 2000.0 mg/L above make-up water just for spa pools.  
Less than 1000.0 mg/L above make-up water just for swimming pools | TDS indicates a build-up of impurities which should be controlled by partial drain/refill with fresh water, typically at a rate of 30 L/ person/day  
These TDS limits do not apply to salt chlorinated pools. Follow the manufacturer’s instructions. |
7.2 Water testing instructions

7.5 Water testing procedure

To calibrate the photometer.

- Switch the unit on using the ON/OFF switch.
- Select Cl (chlorine test) using the MODE key.
- Fill a clean vial with the water sample up to the 10ml mark, replace the cap and dry the outside of the vial using a paper towel. Place the vial into the sample chamber with the triangle on the vial aligned with the triangle on the sample chamber.
- Press the ZERO/TEST key.
- The display will show 0.00, this means that the photometer has calibrated itself.

(a) To test for F.A.C (free available chlorine)

- Remove the vial from the sample chamber.
- Without handling the tablet, add one DPD No.1 tablet to the vial. Using a clean stirring rod, crush the tablet and stir to dissolve. Replace the cap and dry the outside of the vial using a paper towel. Place the vial into the sample chamber with the triangle on the vial aligned with the triangle on the sample chamber.
- Press the ZERO/TEST key.
- The result is shown on the display in mg/l free chlorine.

(b) To test for T.A.C (total available chlorine)

- Remove the vial from the sample chamber.
- Without handling the tablet, add one DPD No.3 tablet to the vial. Using a clean stirring rod, crush the tablet and stir to dissolve. Replace the cap and dry the outside of the vial using a paper towel.
- Wait for a colour reaction time of two minutes.
- Place the vial into the sample chamber with the triangle on the vial aligned with the triangle on the sample chamber.
- Press the ZERO/TEST key.
- The result is shown on the display in mg/l total chlorine.

(c) To test for C.A.C (combined available chlorine)

- Combined available chlorine = Total available chlorine – Free available chlorine.
7.3 Water test range and solutions

### FAC

Main Pool: 2.0ppm minimum
Main pool is below 2.0ppm but above 1.5ppm leave to recover but re test in 30mins. If the result is under 1ppm ring the operations team leader and check the hypo tank.

Main Pool: 5ppm maximum
A reading above 5ppm is a warning sign of other issues inform the operations team leader.

Spa Pool: 2ppm minimum
If the pool is below 2ppm then manually dose 500mls (15%) and re test in a further 20mins, inform the operations team leader if this problem continues as the spa pool may need to be closed.

Spa Pool: 8ppm maximum
If the spa pool reaches 8ppm plus then closes the spa to public, turn off the chlorine pump and turn on the bubbles until the level goes down to 7ppm then re open.

Toddlers Pool: 2ppm minimum
Toddler’s pool is below 2.0ppm leave to recover but re test in 30mins. If the result is under 1ppm or doesn’t recover close the pool to public and ring the operations team leader. Manually refill from Main pool re check in 20mins.

Toddlers Pool: 5ppm maximum
The Toddlers pool can not go higher and will need to be shut to public, dump water. Inform the operations team leader.

Learners Pool: 2ppm minimum
If the learners pool is below 2.0ppm but above 1.5ppm manually dose with 1 litre (15%) re check in 30mins. If the result is under 1ppm or doesn’t recover close the pool to public and ring the operations team leader.

Learners Pool: 5ppm maximum
The learners pool can to a maximum of 8ppm before it needs to be shut to public, but once the learners pool goes over 6ppm turn off the chlorine pump, dump water. Inform Operations team leader.

CAC’s

If any of the pools reach a CAC reading of 2ppm you need to inform the Operations Team Leader and follow the guide below.

Main Pool – dump water for 5mins
Learners Pool – dump water 10mins inform Operations Team Leader, we may need to close
Toddlers Pool – dump totally and refill
Spa Pool – Backwash, Totally dump if it gets to 2.5ppm

### Alkalinity

Below level 60; add bi carbonate to increase – 5kg for every 15 increase
7.4 Water test sheets – main pool

<table>
<thead>
<tr>
<th>Day</th>
<th>7am</th>
<th>8am</th>
<th>9am</th>
<th>10am</th>
<th>11am</th>
<th>12pm</th>
<th>1pm</th>
<th>2pm</th>
<th>3pm</th>
<th>4pm</th>
<th>5pm</th>
<th>6pm</th>
<th>7pm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td></td>
<td></td>
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<tr>
<td>Tuesday</td>
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<tr>
<td>Wednesday</td>
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<tr>
<td>Thursday</td>
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<td>Friday</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TDS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chlorine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitrate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitrite</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitrogen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxygen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The table above is a placeholder for actual data. The columns represent different parameters measured at specific times throughout the week.
### 7.5 Water test sheets – spa pool

<table>
<thead>
<tr>
<th>Day</th>
<th>Lamp 1</th>
<th>Lamp 2</th>
<th>Lamp 3</th>
<th>Lamp 4</th>
<th>Lamp 5</th>
<th>Lamp 6</th>
<th>Lamp 7</th>
<th>Lamp 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday</td>
<td>12:00</td>
<td>12:30</td>
<td>1:00</td>
<td>1:30</td>
<td>2:00</td>
<td>2:30</td>
<td>3:00</td>
<td>3:30</td>
</tr>
<tr>
<td>Wednesday</td>
<td>12:00</td>
<td>12:30</td>
<td>1:00</td>
<td>1:30</td>
<td>2:00</td>
<td>2:30</td>
<td>3:00</td>
<td>3:30</td>
</tr>
<tr>
<td>Thursday</td>
<td>12:00</td>
<td>12:30</td>
<td>1:00</td>
<td>1:30</td>
<td>2:00</td>
<td>2:30</td>
<td>3:00</td>
<td>3:30</td>
</tr>
<tr>
<td>Friday</td>
<td>12:00</td>
<td>12:30</td>
<td>1:00</td>
<td>1:30</td>
<td>2:00</td>
<td>2:30</td>
<td>3:00</td>
<td>3:30</td>
</tr>
<tr>
<td>Saturday</td>
<td>12:00</td>
<td>12:30</td>
<td>1:00</td>
<td>1:30</td>
<td>2:00</td>
<td>2:30</td>
<td>3:00</td>
<td>3:30</td>
</tr>
</tbody>
</table>

**Note:**
- Lamp 1 to Lamp 8 represent different lamp settings or times.
- The table is designed to track water test results over a week.
### 7.6 Daily plant checks

Record details of abnormal readings in comments field and inform Team Leader / Manager.

<table>
<thead>
<tr>
<th>Name: ________________________</th>
<th>Date: ________________</th>
<th>Time: ____________</th>
</tr>
</thead>
</table>

#### Upstairs plant room
- All red lights on
- Any fault lights on heat pump board
- Private Spa Plant Room
  - Circulation pump going
  - Heater on and going (record temp)
  - Any leaks
  - Tabs total in chlorinator? (max. 1 tab)

#### Poolside spa plant room
- Circulation pump going
- Heater on and going
- Any leaks
- Is heat pump downstairs going (record temp)
- Chlorine computer on

#### Main plant room
- Chlorine computer on
- Check CO² bottles. (pH control) – any empty?
- Is salt level above red line – clean out scum from top of salt tank, tidy up rubbish, 10 bags?
- Circulation pump going
- Is UV system going (record reading)
- Pressure gauges normal – below backwash mark
- Boiler No.1 going
  - No.2 going
    - Any fault lights on
    - Boiler ventilation going
    - Any leaks
- Compressor between 45 – 85psi (record)
## Learner’s plant room (tunnel)

<table>
<thead>
<tr>
<th>Description</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Slurry tank above half full, hose up DE spills</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cathodic protection light on?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is UV system going (record reading)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any red lights on control panel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water level reading</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water level in the filter tank at the correct level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main pool temperature</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learners pool temperature</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Comments

*Any comments or unusual sounds or readings please record below.*

<table>
<thead>
<tr>
<th>Time of Day</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Morning checks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Afternoon checks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evening checks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Plant room checklist

<table>
<thead>
<tr>
<th>Check</th>
<th>Quantity</th>
<th>Faults</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic controller dosing lines</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-coat mixing tank</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium bicarbonate tank &amp; pumps</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium bisulphate tanks &amp; pump</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiler room e.g. fault lights</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chlorine dosing lines e.g. splits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO₂ dosing lines upper &amp; lower levels</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heat exchangers e.g. fault lights</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blowers – splash</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blowers – spa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pool filters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pool pumps and motors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lint pots</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control panel (downstairs)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Balance tanks (leaks and faults)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check</td>
<td>Quantity</td>
<td>Faults</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------</td>
<td>--------</td>
<td>-------------</td>
</tr>
<tr>
<td>Gloves - light duty</td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>- heavy duty</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Jackets</td>
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<tr>
<td>Pants</td>
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<tr>
<td>Respirators</td>
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<tr>
<td>Breathing apparatus</td>
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<tr>
<td>Gumboots</td>
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<td>Hard hats</td>
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<tr>
<td>Hearing protection</td>
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7.8 Weekly operational check schedule - boiler plant

<table>
<thead>
<tr>
<th>Check</th>
<th>Normal</th>
<th>Actual</th>
<th>Abnormal conditions</th>
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<tbody>
<tr>
<td>Check boiler flow temperature</td>
<td>78 – 90°C</td>
<td>wk 1</td>
<td>wk 2</td>
</tr>
<tr>
<td>Gauge P.</td>
<td></td>
<td>wk 3</td>
<td>wk 4</td>
</tr>
<tr>
<td>Check primary circuit water pressure</td>
<td>At red</td>
<td>wk 1</td>
<td>wk 2</td>
</tr>
<tr>
<td>Gauge Q.</td>
<td>Marker</td>
<td>wk 3</td>
<td>wk 4</td>
</tr>
<tr>
<td>Check admin circuit return Temp</td>
<td>78 – 90°C</td>
<td>wk 1</td>
<td>wk 2</td>
</tr>
<tr>
<td>Gauge K.</td>
<td></td>
<td>wk 3</td>
<td>wk 4</td>
</tr>
<tr>
<td>Leakage or abnormal noise from boilers</td>
<td></td>
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<td></td>
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<tr>
<td>Both circulating pumps running?</td>
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### Monthly operational check schedule - boiler plant

<table>
<thead>
<tr>
<th>Date:</th>
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<table>
<thead>
<tr>
<th>Reading</th>
<th>Abnormal Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

- Isolate burner at control switch and reinstate. Witness normal start up.
- Previous gas meter reading
- Current gas meter reading
- No of days since previous reading
- Total gas used since last reading (m³)
- Average gas used per day since last reading (m³)
- Clean up around boiler plant room. Check metal work for corrosion.
### 7.10 Planning chart for preventative maintenance

#### Key

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>P</td>
<td>Selected Pool Staff</td>
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<tr>
<td>S</td>
<td>Supplier’s representative</td>
</tr>
<tr>
<td>T</td>
<td>Specialised Trades</td>
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#### Preventative maintenance checklist (specialised)

<table>
<thead>
<tr>
<th>Equipment Item</th>
<th>No. Units</th>
<th>D</th>
<th>W</th>
<th>M</th>
<th>3M</th>
<th>6M</th>
<th>Y</th>
<th>2Y</th>
<th>3Y</th>
<th>5Y</th>
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<tbody>
<tr>
<td>Gas train &amp; burners</td>
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<tr>
<td>Unit heaters (change rooms)</td>
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<td>Powered roof ventilators</td>
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<td>Base plate circulating pumps</td>
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#### Hours if run continuously (24hr/day)

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<th>168</th>
<th>720</th>
<th>2,016</th>
<th>4,032</th>
<th>8,760</th>
<th>17,520</th>
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<th>43,800</th>
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### Operational checking (non specialised) by pool management staff

<table>
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<th>Equipment Item</th>
<th>No. Units</th>
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<th>W</th>
<th>M</th>
<th>3M</th>
<th>6M</th>
<th>Y</th>
<th>2Y</th>
<th>3Y</th>
<th>5Y</th>
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<tbody>
<tr>
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<td>Pool heat exchanger</td>
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<td>Changing room ventilation plant</td>
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</tr>
<tr>
<td>Control panels M1, M2</td>
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### 7.11 Fault callout report

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<thead>
<tr>
<th>Report sheet number:</th>
<th>Time of call out:</th>
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<tr>
<td>Fault notified by:</td>
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<tr>
<td>Date:</td>
<td>Time:</td>
</tr>
<tr>
<td>Fault symptoms: (give details)</td>
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</tr>
<tr>
<td>Urgent / Non urgent</td>
<td>Serviceman's specialisation:</td>
</tr>
<tr>
<td>Serviceman's name:</td>
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<tr>
<td>Time of arrival:</td>
<td>Time of departure:</td>
</tr>
<tr>
<td>Description of fault found: (by serviceman)</td>
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<tr>
<td>Action taken:</td>
<td></td>
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<tr>
<td>Special comments:</td>
<td></td>
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<tr>
<td>Serviceman's signature:</td>
<td></td>
</tr>
<tr>
<td>Acknowledgement of report by owners' representative:</td>
<td></td>
</tr>
<tr>
<td>Signed:</td>
<td>Date: / /</td>
</tr>
</tbody>
</table>


7.12 Emergency spill procedure flowchart

- **Chemical spill occurs**
  - **Serious spill occurs**
    - Move away
    - Seek help from a senior staff member
    - Isolate area
    - Look for injuries
    - Identify any new hazards
    - Check for any spread of chemical
    - Can we handle the spread/spill?
  
  - **Yes**
    - Isolate/eliminate the spread
    - Follow procedure for chemical spill
    - Source proper equipment & materials
    - Stop the source
    - Clean up
    - After the spill ensure sorbents used are properly packaged/bagged/cleaned
    - Investigate the incident & put appropriate controls in place
  
  - **No**
    - Evacuate area
    - Follow procedure for chemical spill
    - Contact emergency services (fire brigade)

- **Minor spill occurs** (Less than 20L)
  - Water down
  - Clean up with mop & bucket
7.13 Cleaning public facilities procedures

**Poolside**

**Equipment needed**
- Disinfectant, scrubbing brush, gloves

**What and how to clean**
- Hose down to wet the floor
- Scrub the floor using disinfectant
- Hose down all disinfectant and rubbish into the drain
- Remove all excess rubbish that cannot be hosed down the drain
- Do not lift the drain covers to hose rubbish in. This will only block the drain
- Lock-up shifts should only need a hose down and pick up of any rubbish.

**Men’s / women’s toilets**

**Equipment**
- Scrubbing brush, toilet brush, disinfectant, squeegee, cloth, gloves

**What to clean**
- Toilet bowls, floors, showers, walls, seats, sinks, drains, mirrors, urinals

**How to clean the toilets**
- **Toilet bowl**: scrub the bowl out with disinfectant and brush then wipe the seat with disinfectant and cloth
- **Floors**: pick up all the rubbish and hose the floor. Disinfect the floor and scrub with scrubbing brush. Squeegee to nearest drain
- **Showers**: scrub the floors and the walls with disinfectant and scrubbing brush and hose to drains
- **Walls**: check the walls for tagging and any marks that shouldn’t be there, and remove
- **Seats**: check for tagging and remove with graffiti remover and a cloth
- **Sinks**: wipe down with disinfectant and cloth
- **Mirrors**: wipe down with glass cleaner and paper towels
- **Ceilings**: remove all toilet paper from ceilings
- **Drains**: clear rubbish and hair from drains
- **Urinals**: (men’s only): scrub down with disinfectant and hose down.
Family changing rooms

Equipment

- Scrubbing brush, disinfectant, squeegee, cloth, and gloves

What to clean

- Floors, showers, walls, seats, sinks, drains, mirrors, urinals

How to clean

- Floors: pick up all the rubbish and hose the floor. Disinfect the floor and scrub with scrubbing brush. Squeegee to nearest drain
- Showers: scrub the floors and the walls with disinfectant and scrubbing brush and hose to drains
- Walls: check the walls for tagging and any marks that shouldn’t be there and remove
- Seats: check for tagging and remove with graffiti remover and a cloth
- Sinks: wipe down with disinfectant and cloth
- Ceilings: remove all toilet paper from ceilings and walls (if any)
- Drains: Clear rubbish and hair from drains.

Sauna

Equipment

- Scrubbing brush, Clean All, stainless steel cleaner, scrubbing pad, gloves, chlorine, face mask

What to clean

- Shower walls and floor and cubby hole floors, drinking fountain, sauna floor, and sauna seats.
- Pick up rubbish.

How to clean

- Using scrubbing pad and stainless steel cleaner, clean around drinking fountain removing all body fat and/or dirt
- Using scrubbing brush and Clean All, scrub down all shower walls and floors removing scum and dirt from walls and floors. This includes cubby hole floors. Hose into drains and pick up excess rubbish
- Pick up rubbish under sauna seats and around the back of sauna machine. Scrape off gum
- Remove seats and scrub with disinfectant and hot water. This is to remove the body fat
- Wearing protective gear, spray chlorine where black mould is present, under seating, on the walls and behind sauna machine
- Let chlorine set for 5 minutes then wash off making sure to give it a good hose
- With the framework you would need more hot water. Pour hot water over the frame work to remove the fat and scrub down frame work with scrubbing brush
- Last thing to do is the floors. Scrub with disinfectant.
Windows

Equipment

- Spray bottle of window cleaner, squeegee and dry cloth.

What and how to clean

- Clean all windows inside and out
- Spray window and wipe off with squeegee
- Use dry cloth to wipe residue.

Chrome surfaces

Equipment

- Stainless steel powder, damp cloth, dry cloth and gloves.

What and how to clean

- Clean all chrome surfaces, fences, handrails, poles etc.
- Using the damp cloth, apply stainless steel powder to the chrome surface and wipe clean
- Once clean, wipe residue with a dry cloth.

Kitchen

Equipment

- Disinfectant, dish liquid, mop, bucket, cloth, broom, scrubbing pad, rubbish bags.

What to clean

- Oven (inside and out), floors, tables, microwave, dishes, bench, sink, fridge (inside and out), rubbish bins.

How to clean

- **Oven:** (inside and out): get some warm water with dish washing liquid in it and a scrubbing pad and scrub top of oven and the inside
- **Tables:** wipe table with a cloth and warm water with dishwashing liquid
- **Dishes:** fill the sink with warm or hot water and dish liquid. Wash all dirty dishes and wipe down the bench
- **Sink:** when you have done the dishes clean the sink and the drains
- **Microwave:** take the glass plate out and wash it. Clean the microwave out with a warm, damp cloth. Return glass plate in once microwave is clean
- **Refrigerator:** take out old food and wipe down fridge with warm damp cloth both inside and out
- **Floors:** Sweep up all rubbish and place in bin. Mop down floors with disinfectant and hot water
- **Rubbish bins:** Change bin if needed.
## 7.14 Public changing rooms checklist

### Men’s public changing room

<table>
<thead>
<tr>
<th>Check</th>
<th>Quantity</th>
<th>Faults</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Door hinges</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Door locks</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Seats</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Lights</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Showers</td>
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<tr>
<td>Hand basins</td>
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</tr>
<tr>
<td>Rubbish bins</td>
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</table>

### Women’s public changing room

<table>
<thead>
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<th>Check</th>
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<th>Faults</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Door hinges</td>
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<tr>
<td>Lights</td>
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<tr>
<td>Showers</td>
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<td>Hand basins</td>
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<tr>
<td>Sanitary bins</td>
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<td>Rubbish bins</td>
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<td>Check</td>
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<td>Showers</td>
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<tr>
<td>Rubbish bins</td>
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</table>
### 7.15 Staff changing rooms checklist

#### Men's staff changing room

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#### Women's staff changing room

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<tr>
<td>Rubbish bins</td>
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<td>Seats</td>
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<td>Lights</td>
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<td>Showers</td>
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<td>Hand basins</td>
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<td>Sanitary bins</td>
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<tr>
<td>Rubbish bins</td>
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</table>
Commissioned by: New Zealand Recreation Association with funding from Sport NZ and the ACC Drowning Prevention Fund, managed by Water Safety New Zealand.

Authors: Robyn Cockburn and Trish Amos, Lumin

February 2015


The Aquatic Facility Guidelines have been developed for use by aquatic managers. They provide detailed information covering the management and operation of an aquatic facility.

This document is a companion document to the Facility Management Manual which can be found on the Sport NZ website and the NZ Recreation Association website:


Acknowledgements

Alex Brunt, General Manager, Water Safety New Zealand; Alison Law, Aquatic Facilities Manager, Te Kāiwhakahaere Whāi Roto i te Wai, Kapiti Coast District Council; Bevan Smith, H&S Development Advisor, Parks, Sport and Recreation, Wellington City Council; Brian Milne, Director, Xyst; Craig Rouse, Centre Manager, Manurewa Pool and Leisure Centre, Auckland City; Caroline Ancell, Assistant Manager, Powerco Aquatic Centre, South Taranaki District Council; David Cameron, Contracts Manager, Filtration and Pumping Commercial Ltd; David Lee, Aquatic Services Manager, Powerco Aquatic Centre South Taranaki District Council; Esther Bukholt, Community, Recreation and Sport Project Manager, NZ Recreation Association; Esther Hone-Moore, AUSTSWIM Aotearoa; Fee Botcher, Customer Service Assistant, Gore Multisports Complex; Haydn Wilton, Wellington Regional Aquatics Centre Programmes Team Leader, Wellington City Council; Halina Dorne, Administration Officer, Aquatics, Coastlands Aquatic Centre; Jamie Delich, Facilities Consultant Community Sport, Sport NZ; Jenni Pathig, Learning & Development Advisor, Community Recreation & Arts, Skills Active; Joanne Saxton, Wellington Regional Aquatics Centre Operations Team Leader, Wellington City Council; Judy Tipping, Aquatic Consultant; Kathy Moore, Aquatic Facilities Manager, Selwyn Aquatic Centre; Lauren Hudson, Facility Manager, Naenae Pool, Hutt City Council; Linda Newman, Waterworld Educare Supervisor, Hamilton City Council; Nigel Newbery, Pool Operations Manager, AC Baths, Taupo District Council; Noel Gulliver, Service Manager, Rotorua Aquatics Centre; Patrick Blackman, Team Leader, Freyberg Pool, Wellington City Council; Peter Thompson, Aquatic Services Manager, Southland Aquatic Centre, Richard Lindsay, Facilities Consultant Community Sport, Sport NZ; Rowan Cordwell, Facility Manager Freyberg Pool, Wellington City Council; Royce Williams, Facility Manager Karori Pool, Wellington City Council; Sarah Cresswell, Senior Training Consultant, Opus International Consultants; Stephen Keatley, Community Facilities Manager, Hutt City Council; Tracey Prince, Aquatics Project Manager, NZ Recreation Association; Vaughan Hope, Facility Manager, ASB Aquatic and Fitness Centre, Richmond; Virginia Munro, Aquatics Consultant; Yvonne Hughey, Training Manager, Hanmer Springs Thermal Pools & Spa.
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1 Introduction

Well developed asset management practices of aquatic facilities is as important as staff management, operational planning and financial planning processes, but has often been overlooked by facility operators who have little or no experience in maintaining swimming pool assets.

The aquatic facility is a significant investment in infrastructure and to ensure the longevity of the investment good management practices in terms of the asset are essential.

This chapter provides guidance in key areas of asset management planning, maintenance of the assets, monitoring performance and building compliance. It also provides exemplars and templates that can be used by asset managers. More information can be obtained from the Facility Management Manual, located on the NZ Recreation Association website.

Further information

2 Asset Management Plan

An asset management plan provides a framework to manage a facility or asset in the most efficient way possible. The goal of asset management is to meet the right level of service in the most effective way through the creation, acquisition, maintenance, operation, rehabilitation and disposal of assets to provide for present and future customers. Most asset management plans identify maintenance and improvement work needed to be undertaken in the next 10 years, although some organisations require plans to look ahead over the entire life of the asset (20 to 50 years).

Planning involves balancing the desired levels of service and asset standards against costs and risk. The plan outlines how to:

- Anticipate, plan and prioritise spending on the asset
- Manage assets to achieve desired outcomes
- Optimise the life of the asset in the most economical way
- Ensure a smooth operation and continued sustainability of the asset
- Provide a basis for monitoring the performance of the asset
- Identify and minimise risks and liability from operating the asset.

In general, local authority owned facilities will be covered by the overall Council asset management plans, depreciation and insurance policies. The manager will not necessarily be expected to prepare these documents, although they may be required to provide information for them.

As part of the annual monitoring and planning process, an evaluation of the asset management plan should be undertaken.

Template: Asset management plan evaluation
3 Asset Register

Establish a register containing information about the asset including:

- Overview and description of facility and amenities
- Asset details such as legal address, valuation reference, certificate of title, year of construction.

Also include information on all asset’s components and elements (regardless of size or value), especially those that will require regular renewal (upgrading, refurbishing or replacing), as this will assist with the annual budgeting process. There are standard depreciation values and terms for items such as vehicles, computers, office furniture etc.

Template: Asset register
4 Asset Maintenance

While daily maintenance issues are generally covered within the operational plan, larger equipment and facility maintenance should be scheduled as part of the asset management plan. Condition surveys identify the life of individual assets and components and this will assist in predicting the wear and tear of the asset or component. It will enable planning for annual and major scheduled maintenance closures, and the duration of the closures.

The plan should outline all aspects of maintenance, replacement and capital improvements to be undertaken, and if possible the budget requirements for each. Plant and equipment maintenance needs to be addressed more regularly than other maintenance so a strategy for dealing with these, and emergency maintenance, needs to be included in the plan.

Through scheduled and proactive maintenance the risk of component failure can be minimised. However, it is prudent to develop strategies to deal with emergency maintenance and renewal issues within the asset management plan. Regular maintenance should reduce the likelihood of plant and equipment failure, which can have a big impact on the facility’s ability to remain operational and service the customers’ needs.

As part of the plan it is worth considering improvements, changes or additions to the facility and the impact this will have on the planning, budgeting and timing of other maintenance. Often it is cost effective to defer some maintenance and include it in the renovation or retrofit of a facility at a later date. The type of equipment and maintenance being deferred will determine whether this is appropriate or not. For example, deferring replacing a broken heat pump is not ideal, but deferring the replacement of external play equipment for a period may be suitable. Including an assessment of changing demands and possible future needs can assist with asset development. Changes in the population, public transport, zone changes, and school closures may all have an influence on the facility in the future.

### 4.1 Scheduled maintenance closures

A planned maintenance shutdown should be scheduled every 2 – 5 years depending on the facility. A partial shutdown can occur every 2 years, and a complete shutdown every 5 years to allow for major renewal of the plant room and facility. This allows for complete maintenance work, asset replacement and repair work to be undertaken. Activities to be undertaken during this time include:

- Pumps stripped, rings replaced, equipment cleaned
- Painting
- Tiles repaired and resealed
- Changing rooms renovated
- Windows repaired.
5 Building Compliance

A building Warrant of Fitness (BWoF) must be undertaken by an Independent Qualified Person (IQP) and includes the following checks:

**Monthly checks**
- Automatic sprinkler systems
- Emergency lighting
- Backflow preventers
- Fire alarms and smoke detection
- Firefighting equipment
- Means of escape
- Evacuation systems and signs
- Lifts and escalators
- Signs required for the building code (section 120 of the Building Act).

**Six monthly checks**
- Boiler room and air conditioning
- Evacuation/emergency exits
- Automated doors
- Aquatics backflow prevention from pool to mains water supply
- Electrical equipment such as RCDs.

A building owner must supply a BWoF to the territorial authority on each anniversary of issuing the compliance schedule, using Form 12 of the Building (Forms) Regulations 2004. It must include generic information as well as the following:
- The location of the particular building
- Current lawfully established use, including number of occupants
- The owner of the building
- Original date the building was constructed
- The highest fire risk category for building use
- Certificates relating to inspections, maintenance and reporting.

The Building Act 2004 requires that:
- The BWoF must state that the inspection, maintenance and reporting procedures of the compliance schedule have been fully complied with for the previous 12 months
- A copy of each certificate issued by the IQP for each of the specified systems, along with any recommendations for amending the compliance schedule, must be attached to the BWoF provided to the territorial authority
- The owner must use the prescribed BWoF form in the Building (Forms) Regulations 2004, providing all the information and attachments required in that form.
An Independent Qualified Person (IQP) can provide building owners with a Certificate of Compliance verifying the inspection; maintenance and reporting procedures for each specified system have been fully complied with. IQPs will issue the certificates on Form 12A of the Building (Forms) Amendment Regulations 2005.

Further information

6 Monitoring of Performance

Monitoring the performance of the facility should be an ongoing activity and needs to include energy utilisation, staff performance and turnover, and the occupancy of the facility. There are many tools using current technology that can assist with this and increase efficiencies in this area.

Additional information can also be found in the Facility Management Manual, Chapter 9 – Monitoring and Evaluation.

6.1 Energy efficiency

Energy costs are a large component of an aquatic facility’s overheads. These costs can be substantially reduced and carefully managed by undertaking energy efficient measures such as the use of motion sensor lights, blankets on pools overnight, and changing lighting systems.

Case study: Karori Pool

Karori Pool undertook energy saving plans to reduce their energy bill. As a result of the changes undertaken, their energy costs for the facility substantially reduced. Energy saving actions included:

- Installing motion sensor lights for low use rooms such as plant rooms and staffing areas
- Installing lux sensor lights that turn lights on and off depending on the amount of natural light in the pool hall (this can be manually overridden if necessary)
- Changing to energy saving lightbulbs
- Placing blankets on the pools at night to reduce heat loss from the water
- Installing a heat recovery system
- Installing solar showers with solar panels on the roof. Excess heat is returned to the boiler. The return gained on the cost of the solar panels is equivalent to the life of the solar panels.
- Gravity feed for the pumps
- Speed controls on the pumps – slowing the speed down at night when pool use is low, and then speeding them up during the day when pool load increases.
Further information


Templates: Facility energy checklist
7 Templates and Worksheets

7.1 Asset management plan evaluation
7.2 Asset register
7.3 Condition assessment – Starting blocks
7.4 Condition assessment – Water treatment equipment
7.5 Facility energy checklist
### 7.1 Asset management plan evaluation

<table>
<thead>
<tr>
<th>Topic</th>
<th>Considerations</th>
<th>Assessment Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Achievements</strong></td>
<td>What was achieved?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Were expected service levels met?</td>
<td></td>
</tr>
<tr>
<td><strong>Budget</strong></td>
<td>How much did it cost?</td>
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<tr>
<td></td>
<td>How accurate were estimates of maintenance and renewal?</td>
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<tr>
<td></td>
<td>What needs to be adjusted?</td>
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<tr>
<td><strong>Maintenance</strong></td>
<td>What maintenance was scheduled?</td>
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<tr>
<td></td>
<td>What maintenance was reactive?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>How was maintenance managed?</td>
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<tr>
<td></td>
<td>How can reactive maintenance be avoided?</td>
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<tr>
<td><strong>Risks</strong></td>
<td>Health and safety?</td>
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<td>Financial?</td>
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<tr>
<td></td>
<td>Customer perception?</td>
<td></td>
</tr>
<tr>
<td><strong>Stakeholders</strong></td>
<td>Who are the stakeholders?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>What do they expect from the facility?</td>
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<tr>
<td><strong>Customers</strong></td>
<td>Who are the customers?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>How do they view the facility?</td>
<td></td>
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<tr>
<td></td>
<td>What are their expectations?</td>
<td></td>
</tr>
<tr>
<td><strong>Benchmarking</strong></td>
<td>How does the facility benchmark against similar facilities?</td>
<td></td>
</tr>
<tr>
<td><strong>Forward planning</strong></td>
<td>What adjustments and improvements can be made to the asset management plan?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>What are the future demands on the facility?</td>
<td></td>
</tr>
</tbody>
</table>
### 7.2 Facility asset register

<table>
<thead>
<tr>
<th>Asset</th>
<th>Location</th>
<th>Serial no</th>
<th>Asset no</th>
<th>Item warranty</th>
<th>Demand</th>
<th>Capacity</th>
<th>Maintenance requirement</th>
<th>Critical Asset Scale</th>
<th>Notes</th>
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<tbody>
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<td></td>
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<td>A - Critical to operation</td>
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<td>B - Critical to specific area</td>
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<td>C - Meets need in specific area</td>
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<td></td>
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<td></td>
<td>D - Desirable to specific area</td>
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<td></td>
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<td></td>
<td>E - Non critical</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Warranty</th>
<th>Value estimated/actual</th>
<th>Expected lifetime (years)</th>
<th>Replacement value</th>
<th>Expected replace date</th>
<th>How critical is asset</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Location</th>
<th>Date commissioned/inspection</th>
<th>Capacity</th>
<th>Demand</th>
<th>Maintenance requirement</th>
<th>Critical Asset Scale</th>
<th>Notes</th>
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<td>B - Critical to specific area</td>
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<td>C - Meets need in specific area</td>
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<td>E - Non critical</td>
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<th>Location</th>
<th>Serial no</th>
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<th>Item warranty</th>
<th>Demand</th>
<th>Capacity</th>
<th>Maintenance requirement</th>
<th>Critical Asset Scale</th>
<th>Notes</th>
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<td>A - Critical to operation</td>
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<td></td>
<td></td>
<td></td>
<td>B - Critical to specific area</td>
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<td>D - Desirable to specific area</td>
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<td></td>
<td></td>
<td></td>
<td>E - Non critical</td>
<td></td>
</tr>
</tbody>
</table>
### 7.3 Condition assessment – Starting blocks

<table>
<thead>
<tr>
<th>Grade</th>
<th>Condition</th>
<th>General meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Non-existent</td>
<td>Blocks absent or no longer exists</td>
</tr>
<tr>
<td>1</td>
<td>Excellent</td>
<td>Sound blocks, constructed to current standards and well maintained with no defects. No work required</td>
</tr>
<tr>
<td>2</td>
<td>Good</td>
<td>As grade one but not constructed to current standards or showing minor wear, tear and deterioration e.g. hairline cracks in blocks, weathering of timber, discolouration of coating, but no corrosion of fastenings. Needs to be reinspected in two – three years. Deterioration has no significant impact on the safety and appearance of the blocks. Only minor work required</td>
</tr>
<tr>
<td>3</td>
<td>Average</td>
<td>Blocks functionally sound, but appearance affected by minor defects e.g. cracks in blocks, splitting of timber, minor corrosion of fastenings, damage to protective coatings. Some deterioration beginning to be reflected in the safety and appearance of the blocks. Some work required</td>
</tr>
<tr>
<td>4</td>
<td>Poor</td>
<td>Blocks functioning but with problems due to significant defects e.g. loss of surfacing and protective coating, cracks in blocks, decay of timber, corrosion of fastenings, likely to cause a marked deterioration in strength, safety and appearance in one – two years. Some replacement or rehabilitation needed within one-two years</td>
</tr>
<tr>
<td>5</td>
<td>Very poor</td>
<td>Block has serious problems and has failed or is about to fail in the near future, causing unacceptable strength, safety and appearance. Urgent replacement/rehabilitation required</td>
</tr>
</tbody>
</table>
7.4 Condition assessment – Water treatment

<table>
<thead>
<tr>
<th>Grade</th>
<th>Condition</th>
<th>General meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Non-existent</td>
<td>System absent or no longer exists.</td>
</tr>
<tr>
<td>1</td>
<td>Excellent</td>
<td>System designed and installed to current standards, all operable and well maintained.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>No work required</strong></td>
</tr>
<tr>
<td>2</td>
<td>Good</td>
<td>As grade one but not designed or installed to current standards, showing wear, tear and deterioration e.g. minor control system failures but no mechanical failures. Deterioration has no significant impact on the safety efficiency or operation of the system.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Only minor work required</strong></td>
</tr>
<tr>
<td>3</td>
<td>Average</td>
<td>System(s) functionally sound, but showing some wear, tear and deterioration e.g. wear of mechanical components, control system failures, staining of metal components, wear of seals and valves. Deterioration beginning to affect the safety, efficiency and operation of the system.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Some work required</strong></td>
</tr>
<tr>
<td>4</td>
<td>Poor</td>
<td>System functioning but with problems due to significant defects e.g. minor corrosion of metal parts, leaking seals, cracks in pipelines, faulty valves likely to cause marked deterioration in safety, efficiency and operation of the system within one year</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Some replacement or rehabilitation needed within one year</strong></td>
</tr>
<tr>
<td>5</td>
<td>Very poor</td>
<td>Systems effective life exceeded and excessive maintenance required. A high risk of breakdown with a serious impact on the system’s safety, efficiency and operation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Urgent replacement/rehabilitation required</strong></td>
</tr>
</tbody>
</table>
### 7.5 Facility energy checklist

**Building name:**  
**Date:**

<table>
<thead>
<tr>
<th>Pool areas</th>
<th>Checked</th>
<th>Further action required</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check pool covers are used at the end of the day, including spa pools</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check the pool hall air temperature is 1°C above the water temperature</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check that sauna and steam rooms are off at the end of the day</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check that hoses used to rinse poolside areas are fully turned off when not in use</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Energy saving measures:**
- Wash down hoses have auto shut off so water stops when not in use
- Showers on pool deck have temperature controls
- Power supplies switched off when not in use
- Lighting switched off when not in use

<table>
<thead>
<tr>
<th>Changing rooms</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Check hot water temperatures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turn off fans and lights at the end of the day</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turn off unused taps or showers at regular intervals</td>
<td></td>
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</tr>
</tbody>
</table>

**Energy saving measures:**
- Ensure taps don’t drip
- Showers temperature turned down in summer
## Building name:

<table>
<thead>
<tr>
<th>Fitness rooms</th>
<th>Checked</th>
<th>Further action required</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure air conditioning and/or heating is switched off at the end of the day</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turn on air conditioning or heating as late as possible to meet comfort conditions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turn off all equipment overnight or when not in use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Energy saving measures:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Windows are closed when air conditioning is operating</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Power supplies switched off when not in use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Lighting switched off when not in use</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## External areas

| Check external lighting is off during the day                                  |         |                         |          |
| **Energy saving measures:**                                                    |         |                         |          |
| • Use floodlights only when there are customers using the external facilities |         |                         |          |
AQUATIC FACILITY GUIDELINES

7 Personnel
The Aquatic Facility Guidelines have been developed for use by aquatic managers. They provide detailed information covering the management and operation of an aquatic facility.

This document is a companion document to the Facility Management Manual which can be found on the Sport NZ website and the NZ Recreation Association website:


Acknowledgements

Alex Brunt, General Manager, Water Safety New Zealand; Alison Law, Aquatic Facilities Manager, Te Kaiwhakahaere Wāhi Roto i te Wai, Kapiti Coast District Council; Bevan Smith, H&S Development Advisor, Parks, Sport and Recreation, Wellington City Council; Brian Milne, Director, Xyst; Craig Rouse, Centre Manager, Manurewa Pool and Leisure Centre, Auckland City; Caroline Ancell, Assistant Manager, Powerco Aquatic Centre, South Taranaki District Council; David Cameron, Contracts Manager, Filtration and Pumping Commercial Ltd; David Lee, Aquatic Services Manager, Powerco Aquatic Centre South Taranaki District Council; Esther Bukholt, Community, Recreation and Sport Project Manager, NZ Recreation Association; Esther Hone-Moore, AUSTSWIM Aotearoa; Fee Botcher, Customer Service Assistant, Gore Multisports Complex; Haydn Wilton, Wellington Regional Aquatics Centre Programmes Team Leader, Wellington City Council; Halina Dorne, Administration Officer, Aquatics, Coastlands Aquatic Centre; Jamie Delich, Facilities Consultant Community Sport, Sport NZ; Jenni Pethig, Learning & Development Advisor, Community Recreation & Arts, Skills Active; Joanne Saxton, Wellington Regional Aquatics Centre Operations Team Leader, Wellington City Council; Judy Tipping, Aquatic Consultant; Kathy Moore, Aquatic Facilities Manager, Selwyn Aquatic Centre; Lauren Hudson, Facility Manager, Naenae Pool, Hutt City Council; Linda Newman, Waterworld Educare Supervisor, Hamilton City Council; Nigel Newbery, Pool Operations Manager, AC Baths, Taupo District Council; Noel Gulliver, Service Manager, Rotorua Aquatics Centre; Patrick Blackman, Team Leader, Freyberg Pool, Wellington City Council; Peter Thompson, Aquatic Services Manager, Southland Aquatic Centre, Richard Lindsay, Facilities Consultant Community Sport, Sport NZ; Rowan Cordwell, Facility Manager Freyberg Pool, Wellington City Council; Royce Williams, Facility Manager Karori Pool, Wellington City Council; Sarah Cresswell, Senior Training Consultant, Opus International Consultants; Stephen Keatley, Community Facilities Manager, Hutt City Council; Tracey Prince, Aquatics Project Manager, NZ Recreation Association; Vaughan Hope, Facility Manager, ASB Aquatic and Fitness Centre, Richmond; Virginia Munro, Aquatics Consultant; Yvonne Hughey, Training Manager, Hanmer Springs Thermal Pools & Spa.
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1 Introduction

The success of any swimming facility relies upon good staff. Staff are the primary interface with customers and their ability to perform their tasks and the relationship they build with customers will have a major impact on the customers impression of the facility.

Having the correct recruitment and selection process, managing staff effectively, identifying and providing relevant training, having an effective organisational structure and protecting and looking after staff presentation are all part of ensuring the facility has effective, dynamic and engaged staff.

1.1 Legislation

Facility managers have a responsibility to meet the legal obligations relating to conditions of employment. The most significant Acts managers need to be aware of are the Employment Relations Act 2000 and the Holidays Act 2003. A list of employment related Acts can be found in Chapter 9 – Legislation and New Zealand Standards. If there are any concerns relating to legal requirements surrounding employment, employers should seek advice from employment specialists.
Chapter 7 – Personnel

2 Recruitment and Selection

Selecting the right staff for the right position is a constant challenge for managers. Having a good recruitment and selection process will go a long way to ensuring the correct person is appointed to a particular position.

Sources for recruiting staff vary according to the type of job and level of position. Proven sources for recruitment are:

- Junior lifeguards – local swim schools, secondary schools, and community newspapers
- Senior lifeguards/Team Leaders – NZ Recreation Association (NZRA) vacancy service.

2.1 Person specification and job description

A person specification should detail qualifications and/or experience considered necessary or desirable to do the job and might also cover experience, knowledge and background, physical requirements (e.g. ability to swim and good eyesight for a lifeguard), personality factors (e.g. able to be a team member), and any special skills for the position.

Certain legal requirements must be observed as you are not permitted to discriminate against applicants on grounds of gender, marital status, sexual orientation, family status, religious belief, and ethnicity. If the applicant does not hold citizenship status or residency they must produce a work permit for you to sight.

A job description is necessary in all cases, and should be formalised in writing. A prospective employee has the right to know in advance exactly what is expected of them, and the expected standards. A job description should include:

- **Job title**
  - A realistic title

- **Primary objectives**
  - Why the job is required

- **Accountability**
  - To whom they are responsible

- **Authority**
  - What they are authorised to do

- **Person specifications**
  - Work experience, minimum qualification and education levels expected

- **Duties**
  - Listing what must be done, the emphasis on key tasks, and the performance standard required for each task.

A job description is the factual basis for further appraisal.

The minimum qualifications to be employed as a lifeguard are Pool Lifeguard Practising Certificate and Comprehensive First Aid.

2.2 Shortlisting applicants

When selecting staff it is important that due consideration is given to the selection process. Identifying what the job requires and the person specifications is essential before commencing any selection process.

If a large number of applications are received, shortlisting applicants is recommended. This can be done by rating the applicants against the critical factors identified in the person specifications. The recommended number of shortlisted applicants is five.
If shortlisting results in too many applicants consider:

- Reviewing the short list criteria e.g. focus on essentials only
- Conducting a short preliminary interview. This can be carried out by the appointing manager, usually over the telephone. It is an opportunity to get more detail about the candidate’s interest in the job, clarify their experience and, if appropriate, get an indication of their salary expectations
- Advising candidates that drug and alcohol tests will be undertaken
- Conducting work tests e.g. exercises that are relevant to the job
- Using work samples e.g. a copy of work relevant to the job.

It is important to appoint a person with the appropriate skills and experiences to ensure the work is performed to the expected level.

Once a shortlisted has been created:

- Write to all unsuccessful applicants advising them of their non-selection. It is easier to do this immediately rather than waiting until the process is completed, especially for those applicants who do not have the necessary skills or qualifications to be considered for the position
- Arrange the formal interview. This can be carried out by phone and followed up with an email or letter confirming the time, date and location.

### 2.3 Interviews

Interviews are best conducted by at least two people. This can provide a check and verification of the decision if required.

During the interview:

- Ask all candidates the same core questions
- Ask questions which find out what the candidate has done, not what they know or would do
- Use questions which determine:
  - What was the situation, or
  - What action did they take?
  - What was the result?
- Assess the answers against a series of indicators – what the desired answer would be or expected illustration of a skill or competency
- Use follow-up questions and gently probe when there is insufficient information or hesitation
- Document responses.

Do not ask questions which:

- Require only a “yes” or “no” response
- Are unrelated to the core requirements of the position
- Are discriminatory (i.e. ones that focus on the gender, ethnicity, or disability of the applicant) unless these are relevant to the position.
2.4 Work tests

Consider using work tests when evidence of a level of competency in a particular skill is required, e.g. deep-water recovery or computing skills. Some tips for setting up work tests include:

- Identify what is to be tested
- Establish how the test will be evaluated, e.g. time, accuracy, model answers
- Design the work test
- Prepare clear instructions
- Prepare all equipment required
- Test with a couple of people first
- Administer in a consistent way
- Provide feedback to applicants on results.

2.5 Qualifications

The minimum qualification for lifeguards is the Pool Lifeguard Practising Certificate. This certificate is valid for two years before renewal is required. It is important to check that qualifications are valid at the time of interview. Qualifications are an indication of competency at the time the qualification was awarded and it is the potential employer’s responsibility to ensure the qualification is still valid. Checking with the Register of Recreation Professionals and sighting evidence of current qualifications is essential.

Further information

http://www.nzrrp.co.nz

2.6 Reference and police checks

The purpose of reference checking is to confirm information gathered about the applicant. After the A minimum of two verbal references should be obtained, preferably including one from the applicant’s last place of work, before an offer is made.

- Prepare the questions in advance
- Ensure that the person has 15 minutes available to talk
- Confirm information from the interview – particularly where it relates to an essential competency, skill or knowledge
- Document the comments received.

If applicable, sight work visas, or permanent residency permits before any offers are made.

To protect customers, it is important that all staff working with the public, especially children, undertake a police vetting process. Only organisations approved and registered with the Police Vetting Service can request a police check. Vetting can only be carried out with the signed consent of the person to be vetted, using the request and consent form which is available on the police website.

Further information

2.7 Making an offer

Contact the preferred candidate and make the offer verbally, then confirm the offer in writing. Information sent with the formal offer should include a position description including salary details, annual leave, general employment terms and conditions, hours of work and start date. Copies of organisational and/or union collective agreements should also be provided.

2.8 Employment contract

Every employee must have a written employment agreement, which can be either an individual or collective agreement. The agreement or contract must contain mandatory clauses such as position title, duties, hours, pay etc. For a full list of mandatory and optional clauses refer to the Department of Labour website (see link below).

The contract must also specify the type of contract. Contracts can be full-time, part-time, fixed-term or casual contracts. The employment rights for full-time and part-time workers are the same, however the entitlements to the quantity of annual leave, sick leave etc. will be prorated according to the hours worked. Full-time work is usually considered to be 35 – 40 hours per week. Anything less than this is considered part-time.

There is no legal definition to casual work, but in general it refers to working as and when required depending on demand. If a contract is for casual work, this must be made clear to the employee and work entitlements agreed to.

Fixed term contracts are used when the employment is to be undertaken for a specific period of time. This can be to provide cover for a staff member on extended leave, or the work is a one-off project or seasonal. As with casual work, it must be clearly understood that the term of employment is for an agreed fixed period of time.

Further information

www.dol.govt.nz/er/starting/relationships/agreements

2.9 Advising unsuccessful candidates

Notify the unsuccessful candidates once the employment offer has been accepted. This should initially be done by phone followed by written confirmation, and should occur within a reasonable timeframe after the interview. If there are delays in getting an acceptance, the other candidates will need to be advised that an offer is under consideration.

When advising unsuccessful candidates, it is considered good practice to provide feedback on the interview generally and their skills and experience specifically.

Templates:

- Job description pool lifeguard
- Shortlist matrix
- Interview questions – Lifeguard
- Interview questions – Aquatic receptionist
2.10 Key roles and responsibilities

**Key roles of a lifeguard**

The role of a lifeguard should not be confused with that of a lifesaver. A lifeguard is a member of a team trained in accident prevention, aquatic rescue and first aid, education, risk management and customer relations. A lifesaver, however, is someone who responds to an emergency situation after it has happened.

A lifeguard is primarily concerned with the concentrated observation of the pool water and its immediate surroundings. In addition, the role facilitates safe practices and customer behaviours that promote leisure and aquatic sport in a safe, enjoyable environment.

The ability to anticipate and prevent accidents, rather than undertake a rescue, is important. Serious accidents have a lasting physical and psychological effect on both the victim and the rescuer.

A lifeguard must be familiar with the details of services offered by the facility. An understanding of where to find information, if not known, is essential. A lifeguard must help promote all aspects of the facility, and its services to the customers.

Continuous interaction with customers of all ages and abilities is part of a lifeguard’s job, so they need to be good communicators. They are the experts who influence customers’ perceptions of the facility, especially its standards of professionalism and safety.

Administratively, a lifeguard will have responsibility for daily functions associated with the facility operation, such as the allocation of water space for different groups or activities. A lifeguard may also be required to fulfil other tasks such as customer service, cleaning and maintenance activities. Training and development in these areas should be provided to staff as early as possible and expectations clearly articulated.
3 Training and Development

Ongoing staff training and development and ensuring staff qualifications are valid is an essential aspect of staff management. Building training sessions and refresher courses into standard workplace practice is important.

3.1 Induction

First impressions are critical. In the first two or three weeks a new member of staff has to become part of a team, and they must be given:

- A clearly defined job which they regard as their own
- A full briefing on health and safety and a copy of key documents such as EAPs and NOPs
- Facility familiarisation
- A feeling of belonging to a group or team
- Clear and regular information on relevant matters
- Clear lines of communication
- An opportunity to do their best
- An understanding of the goals and philosophy of the organisation and their role.

Six key steps to induction include:

- Ensure preparation for their arrival is made. Introduce them to other staff and arrange a full tour of the workplace
- Establish friendly contact to make them feel at ease. Explain the functions of the facility and their particular area of operation. Outline their duties and responsibilities, and if possible, assign a “buddy” for induction and training
- Explain important rules and regulations such as attendance rules and records, safety practices, and special rules or legal requirements about the work of the facility
- Explain personal conditions and procedures, remuneration (rate, how, where, and when they will be paid), deductions and overtime, and holiday, sickness entitlements, etc.
- Ensure they know what to do, what standards must be maintained, and the importance of the work performed
- Check back frequently and evaluate whether they are being properly trained, fully occupied and committed, and fully accepted as a staff member.

Case study: Rotorua Aquatic Centre Induction

Rotorua Aquatic Centre has worked in conjunction with Skills Active to create a thorough induction, which incorporates all the required information needed for the job. This process is not just a one-day overview; it encompasses all the duties that are undertaken for the role and takes up to a month to complete. During this time the staff member is allocated a mentor to assist them through the process. At the end of the induction the team member also receives credits for completing the induction.
Skills Active has developed a core skills qualification (National Certificate in Recreation and Sport Level 2) that covers the requirements of an induction programme.

### 3.2 Training plans

Good training will have clearly defined targets and be relevant to those involved. It will be geared to individual abilities and be assessed regularly to ensure it is accomplishing what is required.

Knowledge and skills training will depend on each pool facility. For example, for a lifeguard the following are important:

- Configuration, size, and depth of each pool and specific training that reflects the activities
- Whether there are features or additional equipment requiring supervision
- Ancillary functions or duties for lifeguards.

All staff need a thorough knowledge of the facility’s Normal Operating Procedures and Emergency Action Plans and training plans should include regular opportunities for staff to refresh their knowledge of these.

### Case study: Rotorua Aquatic Centre Training

*Rotorua Aquatic Centre provides a dynamic and thorough training and development strategy, which enables the centre to have a strong succession plan. Using visual management they know what training each staff member has received and further development that is required.*

A full day’s training is provided for the pool lifeguards and front of house staff at least every 9 weeks. (This is a contractual requirement). The team has developed a simple training plan for the year with this in mind. This is the minimum training necessary for the team to be able to provide a safe, dynamic and knowledgeable service. To supplement this training, at the end of an early shift the Team Leaders have 30 minutes to up-skill and inform their teams. This training is dependent on what the teams want to know and learn and is planned by the Team Leaders in conjunction with the Operations Coordinator.

All training provided is put into personal “Training Passports” to ensure the staff know what they have done and for audit purposes (PoolSafe).

### Templates:

- Lifeguard training plan
- Training activity sample
- Staff training records
- Staff qualification register
Case study: Splash Garden Training Programme

Prior to starting work, new seasonal employees complete a training programme that qualifies them to be lifeguards and gives them skills in first aid, health and safety, and customer service. This training also contributes towards National Certificate in Aquatics (Level 3).

The 10 days of training takes place over a three-week period. The length, structure and content of the programme was developed after analysis of a drowning at the pool showed a need for extended training in customer service and prevention. Nearly every trainee completes the training programme and achieves the lifeguard qualification.

Learning culture ‘Each one, teach one’
A key factor in the success of the training programme is the use of trainers who are staff and have been in the same situation as the current trainees, have similar backgrounds and therefore relate well to the students.

There is also a buddy system operating during the three on-site days where trainees can ask questions of more experienced workers and experienced workers can practise and refine what they do and demonstrate any interest in further training themselves.

Part of the learning culture is also about more effective ways to get the job done. Trainers focus on team-building and communication skills with trainees so they learn to think for themselves and problem solve together. Trainers actively seek and act on feedback from participants.

The nature of the work at Splash Garden means lifeguards must work positively and co-operatively which the training emphasises.

A community workforce
As a community-focused workplace, locals are employed who have first-hand experience of the customers’ issues and a sense of loyalty and sensitivity to their community. Staff identify with the community and relish the opportunity to play an important role in it. As one new trainee put it, “It’s a really important task to keep the community safe.”

Teaching strategy and approach
The overall training programme is set out in a workbook given to all new trainees. Sessions are group-based and alternate between theory (learning principles, using workbooks, holding discussions) and practice (working in the pool). All trainees are able to see session outlines, expected learning outcomes, and details of scheduled practical and written tests in advance. Their workbook contains an evaluation form on each presenter and session enabling trainees to give anonymous feedback to training staff at the end of the programme.

The instructors’ backgrounds enabled them to understand the trainees’ experience of previous training, creating a culture of respect for the trainees and pacing instructions to the abilities of the participants. These practices motivate the trainees to learn. Instruction is reinforced with practice, particularly in groups, enabling instruction through participation.
4 Managing Staff

4.1 Managing performance and development

Systems for managing performance and development supports the retention of staff by providing a framework that sets out performance expectations, identifies development and training opportunities, and provides an opportunity for staff to receive feedback on their performance.

Establishing a team adds value to the process and systems of facility management. Effective teamwork is reflected in the quality of strategic and operational decisions, the ability to turn decisions into actions and, ultimately, in the quality of the facility’s performance.

Teamwork is imperative in a pool environment to ensure the safety and security of users while providing a welcoming environment. Teamwork applies to all facility staff from frontline reception to pool staff to management. Teamwork is effective when a group has the ability to work together, train together and adapt to new demands and situations.

The Facility Manager’s effectiveness is determined largely by the effectiveness of staff. Staff must be capable and their training planned so that their potential is developed.

Providing constructive feedback to staff outside of the performance management system is essential in developing good working relationships. Feedback should always be motivating and encouraging, and can be used to reinforce positive actions and behaviours as well as addressing areas requiring improvement.

Annual performance reviews are often aligned to a salary review. Do not rely on annual processes to either praise or identify issues with performance. Best practice is to address these immediately rather than wait until the annual review. This helps both the staff member and organisation to maintain a good working relationship and a safe environment.

Undertaking exit interviews with departing staff can provide facility managers with additional information concerning the organisational structure, culture and environment. Good interviews can help improve all aspects of the organisation and are an opportunity to transfer knowledge and experience to other members of the team.

4.2 Organisational structure

The organisational structure of a workplace describes the relationships within an organisation in terms reporting and management, the relationship of individuals and teams, and areas of responsibility. The structure depends on the size and complexity of the facility, and the roles required to be undertaken by staff e.g. plant management, supervision, front of house. An aquatic facility’s structure can be complex as staff work in shifts and need to cover all areas of responsibility in terms on plant management, lifeguarding and general management. Staff may be split into operational teams, or they may all operate as one team.

4.3 Team structure

Staff may consist of full-time, part-time and casual staff working in teams to cover full operational hours of the facility. Each team will need personnel to cover specific functions such as reception, lifeguarding duties and plant room and rotate to cover the early/late shift. Consider mixing the teams up every six to twelve months to give opportunities for succession planning of staff.
When putting teams together and creating rosters, key considerations are:

- The minimum number of staff required
- Areas of cover required
- Events, programmes, facilities that will impact on staffing levels
- Staff relationships with each other – who works well together.

**Template:** Staff roster

**Case study: Wellington Regional Aquatic Centre**

Have three teams, made up of six full time staff members. Part time staff are rostered on depending on operations at the facility, and casual staff are called on to fill in when/if required.

Each team is managed by a Duty Manager and an Assistant Duty Manager. Teams rotate to cover the early shift, late shift, training and time off. Rosters cover a three week period and are forward rotating. Each team has staff to cover all operational areas e.g. reception and lifeguard.
4.4 Managing performance issues

Where staff are not performing to the agreed expectations of management, it is important to act quickly before any issues escalate. Any action taken must be according to employment legislation and it is recommended that advice is sought from employment relation specialists or HR Advisors before any action is taken, to ensure correct procedures are followed.

Key steps required when dealing with performance management concerns are:

- Reminders of expectations and discussion of expectations
- Support through counselling and up-skilling
- Verbal warnings
- Written warnings
- Termination.

All practicable steps to turn unsatisfactory performance around should be undertaken.

4.5 Employee assistance programmes

Employee assistance programmes can help staff manage personal issues that may impact on their work performance, health and well-being. They are generally short term counselling and referral services.

Counselling should also be made available to any staff involved in a serious harm incident.

4.6 Drug testing

In the interests of both customer and staff safety it is essential that staff are not under the influence of drugs or alcohol while on duty. A drug and alcohol policy should be established as part of employment conditions and made clear to all staff at the time of their employment.

Any staff member that displays behaviours indicating they may be under the influence of drugs and/or alcohol may be subject to drug and alcohol testing. The member concerned must be given an opportunity to explain their behaviour first. It is important that the testing is confidential and follows correct procedure.

Examples of behaviours or actions that may indicate someone is under the influence can include (but are not limited to):

- Strong smell of alcohol or cannabis on the person
- Repetitive, unexplained absence or lateness
• Repeated concerns about, or unexplained poor performance
• Continual minor accidents
• Fighting or arguments in the workplace
• Going to locker, lunchroom, bathroom more than necessary or normal
• Dilated pupils, blurred vision, droopy eye-lids, bloodshot eyes, slow and slurred speech, slow gait, high energy levels, disorientation
• Changes in alertness, attention span, short term memory
• Changes in personality or behaviour
• Feigning sickness or emergencies to get out of work early
• Increased health issues or complaints about health
• Unusual or out of character on-site behaviour.
5 Staff Presentation and Protection

5.1 Lifeguard’s image

It is important to be aware of the image that staff create. Appearance and behaviour are critical factors. The attitude customers have towards staff will be enhanced by their own conduct and appearance and by the facility’s presentation. The simple action of picking up rubbish or tidying equipment conveys to customers that staff are proud of their facility. It also indirectly encourages desirable behaviour from customers.

5.2 Uniform

Lifeguards must be clearly identified and wear distinctive clothing which makes them easily recognisable in the event of an emergency. The international lifeguard colours of red and yellow are recommended as they are instantly recognisable and offer high visibility.

Clothing provided should be functional and not restrict a lifeguard’s ability to perform routine work or rescues in any way, especially if entry into the water is required. Suitable footwear, such as sports shoes, should be worn. Jandals and open shoes are not considered appropriate, especially in emergency response situations or when handling chemicals.

UV resistant uniforms are available for lifeguards in outdoor pools; similarly cold/wet weather uniforms should also be considered for outdoor facilities.

5.3 Protection

Staff in outdoor pools should be provided with suitable sun protection, including sunglasses, sun hat and a broad spectrum sunscreen. In addition to improving personal safety and reducing tiredness, this shows a responsible attitude and example to customers. In a stationary lifeguarding position, such as a lifeguard chair, the addition of an umbrella will assist in the reduction of ultraviolet radiation.

Staff can be exposed to infectious material or body fluids when dealing with an incident or emergency. Protective equipment should always be on-site and used when necessary including:

- Disposable aprons
- Gumboots (of various sizes)
- Gloves (of various sizes).
Personal protective equipment (PPE) also needs to be provided for staff handling chemicals in the plant-room. It is important that the PPE is correctly fitted and worn, and is regularly checked and replaced if faulty or degrading.

Other personal protective gear should be allocated to staff and carried with them at all times (see section 5.4).

It is recommended that prior to starting duty, all staff ensure that any cuts or open wounds are covered up to reduce possible cross contamination.

There are five key rules for personal safety:

• Always wear gloves (double glove when practicable)
• Cover all cuts
• Use barriers when carrying out CPR
• Do not share personal items
• Wash hands thoroughly after each incident or event.

5.4 Equipment

Lifeguards should carry items for essential first aid and emergency supplies at all times. These basic first aid supplies will provide protection from cross infection when performing resuscitation or elementary first aid. The most convenient way for staff to carry their first aid and emergency supplies is by use of a bumbag. Lifeguards should always ensure they replace items after use and check the contents before commencing every shift. Personal equipment includes:

• A whistle
• Plasters
• Antiseptic wipes
• Resuscitation pocket mask
• Pair of disposable gloves
• Pen and notebook.
6 Problem Solving

Problems can be an everyday occurrence, especially in areas where there are significant customer interactions. The ability of management and staff to identify and solve problems will affect the impact problems have on the organisation.

Open and clear communication between staff, and with customers makes the ability to identify, analyse, and solve problems easier. It is also important, once a solution has been agreed and implemented, to undertake a review. This ensures all the correct and appropriate actions have been implemented and reduces the chances of the problem occurring again.

Clearly identify the following:

- Current situation and what caused it
- Desired outcome (if things are going well what would be happening)
- Any criteria that need to be met (timing, cost)
- Options
- Preferred and selected solution.

Case study: Rotorua Aquatic Centre – Staff

Staff turnover is very high within the aquatics industry, so to combat this we have worked on maximising staffing engagement in a number of ways. Creating a staff “Wailing Wall” (Frustrations and Positives) enabled the team to identify why staff were not engaged fully and what could we continue to do to create an enjoyable and positive environment.

Creating a New Idea programme has been instrumental in keeping staff engaged and motivated. Not only do the staff get to improve their workplace and the customer experience, they get rewarded for their new ideas. Each month we pick the best idea for the month and reward the person who made the suggestion. This has helped with staff engagement and improved the facility and customer experience.

Case study: Rotorua Aquatic Centre – Customer

Using Lean tools and methodology we proactively solve customer frustrations. Using an Ishikawa Diagram (Fish Bone) we easily see our customer frustrations and idea suggestions. We then use the ‘5 whys’ to get to the root cause of the frustration and assist in implementing the new idea.
7 Qualifications

Industry training is designed to develop skills and qualifications of staff. It is seen as an investment in both the organisation and providing competent, confident and committed staff.

7.1 Skills Active

Skills Active is the industry-training organisation covering sport, fitness, outdoor recreation, community recreation and Ngā Mahi a Te Rēhia.

Skills Active oversees the establishment of national qualifications, monitors workplace assessment, provides accreditation and moderation processes, and works with workplaces and employers to maintain industry education and training.

Skills Active manages and maintains the Register of Recreation Professionals (NZRRP), which is a register of qualified people working in the recreation, sport and fitness industry. This register is updated regularly and is based on confirmation of achievement from trained assessors. The register enables managers to check and confirm the currency of employee Pool Lifeguard Practicing Certificate status.

ActiveCV is another service offered by Skills Active and can be used by individual staff members. It helps staff to manage sport and recreation qualifications in one place, receive notifications about qualifications that are due to expire, view industry vacancies, keep an online logbook etc. It also provides staff with an e-portfolio with qualifications, work history, goals and personal statements.

Further information
Skills Active www.skillsactive.co.nz
Register of Recreation Professionals www.nzrrp.co.nz

7.2 Workplace training and assessment

Staff employed at an aquatic facility can be assessed on the job by registered facility based assessors or roving assessors. Assessors are trained by Skills Active to undertake workplace-based assessment.

Further information
Skills Active www.skillsactive.org.nz
NZ Qualifications Authority www.nzqa.govt.nz
7.3 Pool lifeguard qualifications

The minimum age of a pool lifeguard is 16 years. Training to become a lifeguard is undertaken in two stages involving lifeguard training and assessments followed by on-job validation. Lifeguards who hold the Pool Lifeguard Practising Certificate should consider working towards the National Certificate in Recreation and Sport – Aquatics Level 3.

Further information

Skills Active [www.skillsactive.org.nz](http://www.skillsactive.org.nz)
Career pathways

Skills Active Qualifications Pathway

The following qualifications are available through Skills Active.

Your Learning Support Advisor can help you choose which qualification is appropriate for you. For more information on any of these qualifications please visit our website: www.skillsactive.org.nz

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<th>Aquatics</th>
<th>Recreation &amp; Sport</th>
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<tr>
<td>Recreations</td>
<td>Recreation and Sport (Core Skills)</td>
<td>Recreation Foundations L2</td>
</tr>
<tr>
<td>Aquatics L3,</td>
<td>Recreation &amp; Sport L3</td>
<td></td>
</tr>
<tr>
<td>- Pool Lifeguard</td>
<td>- Recreation Coordinator</td>
<td></td>
</tr>
<tr>
<td>- Swim Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Pool Operations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coaching &amp; Instruction L3</td>
<td></td>
<td></td>
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<tr>
<td>Group Fitness L3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sport Officiating L3</td>
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<tr>
<td>Park Ranger L3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Training L4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Administration and Computing L3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales L3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recreation &amp; Sport L4 - Programme &amp; Events</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business (First-Line Management) L3/4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult Education and Training L4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROPOSED</td>
<td>Facility Operations L4</td>
<td>Facility Management L6</td>
</tr>
</tbody>
</table>
7.5 Training providers

The following organisations can provide training and assessment for staff in the areas of first aid, lifesaving, water treatment and swim teaching:

- Skills Active
- NZRA
- Water treatment; Opus Environmental Training Centre
- First Aid; St John, Red Cross
- AUSTSWIM Aotearoa
- Swimming NZ

Further information

www.skillsactive.co.nz
www.nzrecreation.org.nz
www.opus.co.nz/services/environmental/environmental-training
www.stjohn.org.nz
www.redcross.org.nz
www.austswim.co.nz
www.swimming.org.nz
8 Templates and Worksheets

8.1 Pool Lifeguard role description
8.2 Shortlist matrix
8.3 Interview questions – Lifeguard
8.4 Interview questions – Aquatic receptionist
8.5 Staff induction manual – Selwyn Aquatic Centre
8.6 Lifeguard training plan
8.7 Training activity spinal scenario
8.8 Staff training records
8.9 Staff qualification register
8.10 Staff roster
## 8.1 Pool lifeguard role description

<table>
<thead>
<tr>
<th>Key responsibilities</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Customer service</strong></td>
<td>• Provide clear and accurate information to customers about the facility services and programmes</td>
</tr>
<tr>
<td></td>
<td>• Provide effective customer care and consideration ensuring a positive, welcoming, helpful and courteous manner at all times to all customers</td>
</tr>
<tr>
<td></td>
<td>• Proactively develop and maintain positive relationships with facility customers and user groups</td>
</tr>
<tr>
<td></td>
<td>• Encourage and respond positively to customer feedback, seeking assistance from team leaders when required.</td>
</tr>
<tr>
<td><strong>Facility identity</strong></td>
<td>• Actively commit to working as part of the “facility team” to ensure a cooperative and friendly work environment</td>
</tr>
<tr>
<td></td>
<td>• Attend and participate in team meetings and contribute constructively to discussion which promotes a good work environment</td>
</tr>
<tr>
<td></td>
<td>• Show respect for all facility team members.</td>
</tr>
<tr>
<td><strong>Equipment management and facility presentation</strong></td>
<td>• Proactively maintain a clean, hygienic, well-presented facility taking personal responsibility for, and pride in, the work done to achieve this</td>
</tr>
<tr>
<td></td>
<td>• Carry out all cleaning and maintenance duties according to procedure and to meet specified standards</td>
</tr>
<tr>
<td></td>
<td>• Assist in the delivery of programmes and events by providing effective set up and set down of equipment used in programme provision.</td>
</tr>
<tr>
<td><strong>Pool lifeguarding</strong></td>
<td>• Carry out pool lifeguarding according to organisational protocols and standards.</td>
</tr>
<tr>
<td><strong>Health and safety</strong></td>
<td>• Take all reasonable and practical steps to ensure the safety of customers and other team members</td>
</tr>
<tr>
<td></td>
<td>• Report all hazards according to organisational protocols and standards</td>
</tr>
<tr>
<td></td>
<td>• Cooperate fully in meeting the health and safety requirements of the facility</td>
</tr>
<tr>
<td></td>
<td>• Through effective supervision and education, ensure customers use facility equipment, services and activities safely</td>
</tr>
<tr>
<td></td>
<td>• Identify and respond to emergencies according to Emergency Action Plans</td>
</tr>
<tr>
<td></td>
<td>• Carry out water testing and record test results</td>
</tr>
<tr>
<td></td>
<td>• Carry out plant monitoring and assist with adjustments and maintenance as required</td>
</tr>
<tr>
<td></td>
<td>• Use protective equipment when required by pool standards.</td>
</tr>
<tr>
<td><strong>Training</strong></td>
<td>• Maintain personal levels of competence sufficient to carry out unassisted first aid and water based rescue techniques in any area of the pool</td>
</tr>
<tr>
<td></td>
<td>• Attend all scheduled in-house training on request.</td>
</tr>
<tr>
<td>Key responsibilities</td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>---</td>
</tr>
<tr>
<td><strong>Administration</strong></td>
<td></td>
</tr>
<tr>
<td>• Carry out administration duties according to procedure to meet specified standards and those requested by the team leader and necessary in the effective management of the facility</td>
<td></td>
</tr>
<tr>
<td>• Accurately record water test and plant check results</td>
<td></td>
</tr>
<tr>
<td>• Provide efficient and accurate reception service, including fee collection, retail sales, stock control, dissemination of information, reconciliation and preparation for banking of all money received.</td>
<td></td>
</tr>
</tbody>
</table>
### 8.2 Shortlisting matrix

<table>
<thead>
<tr>
<th>Name</th>
<th>Skill 1 0 - 3</th>
<th>Skill 2 0 - 3</th>
<th>Skill 3 0 - 3</th>
<th>Qualifications 0 - 3</th>
<th>Experience 0 - 3</th>
<th>Total</th>
<th>Comments</th>
<th>Rank</th>
</tr>
</thead>
</table>


8.3 Interview questions: Aquatics Receptionist

Panel Chair:

• Thank you for coming to the interview. Invite panel members to introduce themselves
• Outline timeframe for interview
• The interview is a behavioural interview that involves questions about your past performance so we can learn about your abilities and skills needed for the job
• We will be taking notes during the interview and taking turns asking questions
• Do you have any questions about the process before we start?

Scoring Scale

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Did not meet expectations – inadequate response</td>
</tr>
<tr>
<td>1</td>
<td>Requires development - response was not detailed enough, superficial (could do the role but will require development)</td>
</tr>
<tr>
<td>2</td>
<td>Met expectations - response answered the question and covered off most of the positive indicators (can do the role and will benefit from development)</td>
</tr>
<tr>
<td>3</td>
<td>Exceeded expectations - response covered a lot of relevant detail and answered the question fully (can do the role)</td>
</tr>
<tr>
<td>4</td>
<td>Outstanding: response was detailed and covered a broader aspect of the competency than required (can do role and more).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Panel Member</th>
<th>Question</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Understanding and fit for the role</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>To ensure we are not talking past each other, would you take a few minutes to tell us what you understand the role to be?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Given this, what interests you in the role – why did you apply? (Digging deeper: What do you believe you would bring to this role?)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Can you tell us about your experience and skills for the job?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>If you were to get the role, what training needs would there be for you? (Digging deeper: check for self-awareness, thinking about the role and him/herself in the role).</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Team work</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>From your experience, what do you think makes a good team?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>What do you contribute?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When others in your team have disagreed with you, how do you manage this?</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Customer focus</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tell us about a time you went out of your way to ensure a customer received the best possible service from you. What was their reaction?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Describe a situation where you have needed to engage with a customer who has not been happy about an issue. How did you handle this?</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Time management</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tell me about a time when you were able to complete several tasks successfully without supervision or support?</td>
<td></td>
</tr>
</tbody>
</table>
### Other questions:
- Availability
- Rosters
- Working/covering at other pool locations
- Technical

### TWO compulsory questions to add before the interview concludes
- Is there anything we haven’t asked you that you think we should have asked you?
- Do you have any relationship or association either private or professional that may potentially pose a conflict of interest for you as an employee of this organisation?

### Wrap up questions
- Confirm salary expectations are consistent with proposed remuneration.
- If you were successful when could you start?
- We are interviewing [no.] people. We hope to complete the process within two weeks.
- The applicant that we select for appointment will be required to undergo a police check and a drug and alcohol test. Do you have any objections to either of these tests? (Ensure paperwork for police checking is completed).
- Administration check: Application form is completed in FULL, signed. Referee details are current and correct.

### Do you have any questions for us?

### Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Name 1</th>
<th>Name 2</th>
<th>Name 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding and fit for the role</td>
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<tr>
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<td></td>
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</tr>
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<td></td>
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<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8.4 Interview questions: Lifeguard

Panel Chair:

- Thank you for coming to the interview. Invite panel members to introduce themselves
- Outline timeframe for interview
- The interview is a behavioural interview that involves questions about your past performance so we can learn about your abilities and skills needed for the job
- We will be taking notes during the interview and taking turns asking questions
- Do you have any questions about the process before we start?

**Scoring Scale**

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6  Requires development - response was not detailed enough, superficial (could do the role but will require development)
7  Met expectations - response answered the question and covered off most of the positive indicators (can do the role and will benefit from development)
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<td></td>
<td>If you were to get the role, what training needs would there be for you?</td>
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<tr>
<td></td>
<td>(Digging deeper: check for self-awareness, thinking about the role and him/herself in the role).</td>
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</tr>
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<td></td>
<td><strong>Team work</strong></td>
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<td><strong>Time management</strong></td>
<td></td>
</tr>
<tr>
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<td>Tell me about a time when you were able to complete several tasks successfully without supervision or support?</td>
<td></td>
</tr>
</tbody>
</table>
### Panel Member

<table>
<thead>
<tr>
<th>Question</th>
<th>Score</th>
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<tbody>
<tr>
<td><strong>Other questions:</strong></td>
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</tr>
<tr>
<td>Availability</td>
<td></td>
</tr>
<tr>
<td>Rosters</td>
<td></td>
</tr>
<tr>
<td>Working/covering at other pool locations</td>
<td></td>
</tr>
<tr>
<td>Technical</td>
<td></td>
</tr>
<tr>
<td><strong>TWO compulsory questions to add before the interview concludes</strong></td>
<td></td>
</tr>
<tr>
<td>Is there anything we haven’t asked you that you think we should have asked you?</td>
<td></td>
</tr>
<tr>
<td>Do you have any relationship or association either private or professional that may potentially pose a conflict of interest for you as an employee of this organisation?</td>
<td></td>
</tr>
<tr>
<td><strong>Wrap up questions</strong></td>
<td></td>
</tr>
<tr>
<td>Confirm salary expectations are consistent with our proposed remuneration.</td>
<td></td>
</tr>
<tr>
<td>If you were successful when could you start?</td>
<td></td>
</tr>
<tr>
<td>We are interviewing [no.] people. We hope to complete the process within two weeks.</td>
<td></td>
</tr>
<tr>
<td>The applicant that we select for appointment will be required to undergo a police check and a drug and alcohol test. Do you have any objections to either of these tests? (Ensure paperwork for police checking is completed).</td>
<td></td>
</tr>
<tr>
<td>Admin check: Application Form is completed in FULL, signed. Referee details are current and correct.</td>
<td></td>
</tr>
<tr>
<td><strong>Do you have any questions for us?</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Name 1</th>
<th>Name 2</th>
<th>Name 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding and fit for the role</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team work</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer focus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8.5 Staff induction manual

This document is an exemplar of key topics to be covered with new staff as part of their induction process.
## 8.6 Lifeguard training plan

### Term 1

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday, 4 Feb</td>
<td>9.30am - 12.30pm</td>
<td>Spinal scenarios</td>
</tr>
<tr>
<td>Tuesday, 11 Feb</td>
<td>9.30am - 12.30pm</td>
<td>Spinal scenarios</td>
</tr>
<tr>
<td>Tuesday, 18 Feb</td>
<td>9.30am - 12.30pm</td>
<td>Spinal scenarios</td>
</tr>
<tr>
<td>Tuesday, 25 Feb</td>
<td>8.30am - 12.30pm</td>
<td>Resuscitation Level 3</td>
</tr>
<tr>
<td>Tuesday, 4 Mar</td>
<td>8.30am - 12.30pm</td>
<td>Resuscitation Level 3</td>
</tr>
<tr>
<td>Tuesday, 11 Mar</td>
<td>8.30am - 12.30pm</td>
<td>Resuscitation Level 3</td>
</tr>
<tr>
<td>Sunday, 16 March</td>
<td>1.00pm - 4.00pm</td>
<td>Casual/PT lifeguard training</td>
</tr>
<tr>
<td>Tuesday, 18 Mar</td>
<td>9.30am - 12.30pm</td>
<td>Rescues and tows</td>
</tr>
<tr>
<td>Tuesday, 25 Mar</td>
<td>9.30am - 12.30pm</td>
<td>Rescues and tows</td>
</tr>
<tr>
<td>Tuesday, 1 Apr</td>
<td>9.30am - 12.30pm</td>
<td>Fire warden and extinguisher</td>
</tr>
<tr>
<td>Tuesday, 8 Apr</td>
<td>9.00am - 11.00am</td>
<td>Fire warden and extinguisher</td>
</tr>
<tr>
<td>Friday, 11 Apr</td>
<td>5.30pm - 8.30pm</td>
<td>Casual/PT lifeguard training</td>
</tr>
<tr>
<td>Tuesday, 15 Apr</td>
<td>9.00am - 12.00pm</td>
<td>Casual/PT lifeguard training</td>
</tr>
<tr>
<td>Tuesday, 15 Apr</td>
<td>9.00am - 11.00am</td>
<td>Fire warden and extinguisher</td>
</tr>
</tbody>
</table>

### Term 2

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday, 6 May</td>
<td>9.30am - 12.30pm</td>
<td>First aid scenarios</td>
</tr>
<tr>
<td>Tuesday, 13 May</td>
<td>9.00am - 5.00pm</td>
<td>Non-violent crisis intervention</td>
</tr>
<tr>
<td>Tuesday, 20 May</td>
<td>9.30am - 12.30pm</td>
<td>First aid scenarios</td>
</tr>
<tr>
<td>Tuesday, 27 May</td>
<td>9.30am - 12.30pm</td>
<td>Chemical handling</td>
</tr>
<tr>
<td>Tuesday, 3 June</td>
<td>9.30am - 12.30pm</td>
<td>First aid scenarios</td>
</tr>
<tr>
<td>Sunday, 8 June</td>
<td>1.00pm - 4.00pm</td>
<td>Casual/PT lifeguard training</td>
</tr>
<tr>
<td>Tuesday, 10 June</td>
<td>8.30am - 4.30pm</td>
<td>Water quality - 20046</td>
</tr>
<tr>
<td>Tuesday, 17 June</td>
<td>9.00am - 5.00pm</td>
<td>Non-violent crisis Intervention</td>
</tr>
<tr>
<td>Tuesday, 24 June</td>
<td>9.00am - 12.00pm</td>
<td>Casual/PT lifeguard training</td>
</tr>
<tr>
<td>Sunday 29 June</td>
<td>5.30pm - 8.30pm</td>
<td>Lifeguard games</td>
</tr>
<tr>
<td>Tuesday, 1 July</td>
<td>9.00am - 5.00pm</td>
<td>Non-violent crisis intervention</td>
</tr>
</tbody>
</table>
8.7 Training activity: spinal scenarios

Staff training plan

<table>
<thead>
<tr>
<th>Location:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration:</td>
<td>Trainer:</td>
</tr>
<tr>
<td>9.00am – 12.00pm</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00am – 11:00am</td>
<td>Circuit &lt;br&gt; Beach/sand run X 20 &lt;br&gt; 40 x burpees &lt;br&gt; 40 x body weight squats &lt;br&gt; Swim proficiency test &lt;br&gt; 200m freestyle in less than four minutes &lt;br&gt; swim 66m breaststroke &lt;br&gt; swim 66m sidestroke &lt;br&gt; swim 66m survivor backstroke &lt;br&gt; 33m conscious tow &lt;br&gt; 33m unconscious tow &lt;br&gt; tread water for five minutes &lt;br&gt; retrieve a weighted dummy from bottom of deepest part of pool</td>
</tr>
<tr>
<td></td>
<td>Suspected spinal injuries practices &lt;br&gt; Conscious spinal injury : scenario - shallow dive (shallow end) &lt;br&gt; Unconscious spinal injury: scenario - shallow dive (shallow end), not breathing &lt;br&gt; Conscious spinal injury: scenario - slip on dive block (deep end) &lt;br&gt; Unconscious spinal injury: scenario - slip on dive block (deep end), not breathing</td>
</tr>
<tr>
<td>11:00am – 12:00pm</td>
<td>Debrief</td>
</tr>
</tbody>
</table>
### 8.8 Staff training records

**Staff training record**

<table>
<thead>
<tr>
<th>Date</th>
<th>Staff A</th>
<th>Staff B</th>
<th>Staff C</th>
<th>Staff D</th>
<th>First aid</th>
<th>Spinals</th>
<th>Tows</th>
<th>Swim Prof</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.01.14</td>
<td>x</td>
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8.10 Staff roster
AQUATIC FACILITY GUIDELINES

8 Facility Development
Commissioned by: New Zealand Recreation Association with funding from Sport NZ and the ACC Drowning Prevention Fund, managed by Water Safety New Zealand.

Authors: Robyn Cockburn and Trish Amos, Lumin

February 2015


The Aquatic Facility Guidelines have been developed for use by aquatic managers. They provide detailed information covering the management and operation of an aquatic facility.

This document is a companion document to the Facility Management Manual which can be found on the Sport NZ website and the NZ Recreation Association website:


Acknowledgements

Alex Brunt, General Manager, Water Safety New Zealand; Alison Law, Aquatic Facilities Manager, Te Kāiwhakahere Wāhi Roto i te Wai, Kāpiti Coast District Council; Bevan Smith, H&S Development Advisor, Parks, Sport and Recreation, Wellington City Council; Brian Milne, Director, Xyst; Craig Rouse, Centre Manager, Manurewa Pool and Leisure Centre, Auckland City; Caroline Ancell, Assistant Manager, Powerco Aquatic Centre, South Taranaki District Council; David Cameron, Contracts Manager, Filtration and Pumping Commercial Ltd; David Lee, Aquatic Services Manager, Powerco Aquatic Centre South Taranaki District Council; Esther Bukholt, Community, Recreation and Sport Project Manager, NZ Recreation Association; Esther Hone-Moore, AUSTSWIM Aotearoa; Fee Botcher, Customer Service Assistant, Gore Multisports Complex; Haydn Wilton, Wellington Regional Aquatics Centre Programmes Team Leader, Wellington City Council; Halina Dorne, Administration Officer, Aquatics, Coastlands Aquatic Centre; Jamie Delich, Facilities Consultant Community Sport, Sport NZ; Jenni Pethig, Learning & Development Advisor, Community Recreation & Arts, Skills Active; Joanne Saxton, Wellington Regional Aquatics Centre Operations Team Leader, Wellington City Council; Judy Tipping, Aquatic Consultant; Kathy Moore, Aquatic Facilities Manager, Selwyn Aquatic Centre; Lauren Hudson, Facility Manager, Naenae Pool, Hutt City Council; Linda Newman, Waterworld Educare Supervisor, Hamilton City Council; Nigel Newbery, Pool Operations Manager, AC Baths, Taupo District Council; Noel Gulliver, Service Manager, Rotorua Aquatics Centre; Patrick Blackman, Team Leader, Freyberg Pool, Wellington City Council; Peter Thompson, Aquatic Services Manager, Southland Aquatic Centre, Richard Lindsay, Facilities Consultant Community Sport, Sport NZ; Rowan Cordwell, Facility Manager Freyberg Pool, Wellington City Council; Royce Williams, Facility Manager Karori Pool, Wellington City Council; Sarah Cresswell, Senior Training Consultant, Opus International Consultants; Stephen Keatley, Community Facilities Manager, Hutt City Council; Tracey Prince, Aquatics Project Manager, NZ Recreation Association; Vaughan Hope, Facility Manager, ASB Aquatic and Fitness Centre, Richmond; Virginia Munro, Aquatics Consultant; Yvonne Hughey, Training Manager, Hanmer Springs Thermal Pools & Spa.
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1 Introduction

If you look around the country you will see a vast range of aquatic facility designs. Many were designed to meet the community needs at the time and took little consideration of future demands and needs. Others, designed to the highest levels, are under-utilised or uneconomic. Therefore it is imperative before any facility is built that a thorough and considered process is undertaken.

New Zealanders need the right aquatic facilities in the right places to achieve the various and sometimes competing community aspirations and outcomes. Generating greater participation and success of these facilities requires clear identification of facility needs, good decision making, more collaboration and smarter investment by relevant stakeholders and agencies.

A recent review of aquatic facilities identified one of the biggest issues in facility management was the lack of involvement of facility managers at the design stage. Many issues affecting the operation and management of a facility occur because of a lack of understanding and knowledge of post-construction use of facilities by engineers, architects and designers. Facility managers are best placed to provide advice at the design phase regarding both design and operational issues as well as provide balanced input into user demands and needs.

The six stages in the lifecycle of a facility identified by Sport NZ are:

- **Concept**: Identifying the need for a facility and developing the strategic case for developing it, including assessing the specific need in the wider context of the desired facility network.
- **Plan**: Ensuring the facility will be fit-for-purpose, sustainable, and future-proof. Assessing and determining feasibility.
- **Design**: Developing the functional and spatial requirements of the facility. Details are confirmed and estimates finalised.
- **Build**: The construction of the facility.
- **Operate**: The management and maintenance of the facility to ensure it delivers a quality experience, including developing the most effective and efficient operating model and the programming of the facility.
- **Improve**: Evaluating the success of the facility, how it has delivered on the identified outcomes, and what improvements can be made.

The greatest impact on the strategic outcome is made in the concept, plan and improve stages of the facility lifecycle.

In 2013, the National Facilities Strategy for Aquatic Sport was completed. This document provides a framework for developing aquatic facilities in the future, which meet the needs of users.

Further information


2 Facility Development Trends

Traditionally many local authority leisure facilities have been built for specialist or limited market users (i.e. competitive aquatic sports). The demographic profile of residents in the project area, their current participation patterns and use of surrounding facilities requires organisations developing facilities to consider three distinct user markets:

**Recreation and leisure market:** (60-70% of users) usually made up of families, people coming with friends and groups for fun, relaxation, social activity and low level competition/participation.

**Competitive/training/fitness market:** (20-30% of users) usually made up of people predominantly attending facilities alone for structured fitness or aquatic sport activities and competition.

**Health and therapy market:** (10% of users) usually made up of older adults and specialist health condition groups such as those with arthritis, asthma or mobility conditions. They require water of higher temperature and facilities associated with health and relaxation such as spa or hydrotherapy pools.

Research throughout New Zealand and overseas indicates that the recreation and leisure market will continue to be the largest as it contains people of all ages, ability, types, interests and gender. The competitive/training/fitness is a more specialist market containing younger, fitter and more active people who make time to train and compete.

Industry facility trends indicate that the majority of current community indoor aquatic facilities revenue does not meet annual operating costs. To ensure the best financial viability and attract potential interest from other funders or investors, any future facility must be designed with components that can:

- Provide a mix of shallow water leisure/recreation water with some deeper water areas for programmed activities
- Provide components that have the potential to contribute positive revenue streams such as spa, sauna facilities, food and beverage, retail sales, childcare and meeting space for hire
- Provide health and fitness facilities that have the capacity to be profitable and off set pool operating costs and/or attract private commercial investment or delivery interest
- Provide ancillary services that are complimentary to co-location with the aquatic facility and that can be leased space for services such as sports medicine, health therapies and massage.

Develop facilities that can be co-located with other community facilities and services so as to create social infrastructure hubs.

The ultimate is a facility of good quality that meets the expectations of a wide cross section of its community and that is appropriate for a long life (50 years), low maintenance civic amenity. Sound design and detailing should reflect minimising the long term costs of operating the facility and thorough consideration to practical issues such as:

- Planning for convenience of operation
- Selection of materials, building systems and standards
- Minimising any internal moisture
- Free draining floors
- Thermal insulation including all glazing
- Ease and frequency of maintenance and cleaning
- Discrete effect of ventilation and associated plant and equipment.
• Frequency of plant and maintenance shutdown
• Heat recovery and energy management
• Hot water reticulation
• Water quality and standards for compliance
• Acoustic performance (target reverberation time maximum 1.7 seconds).
Initial Planning

The first questions which need to be asked and answered are:

- What are the key reasons for developing the facility?
- Who is the facility being built for?
- How do we know it is going to be used by those groups and individuals?
- Where is the best location?
- How is it going to be managed?
- How will the design/construction costs be met?
- How will the ongoing operational and development costs be met?

Needs Assessment

- Establish the need for the project
- Establish key characteristics of the population
- Establish the type, number and requirements for facilities mix
- Engage with other organisations/activities who could co-locate
- Define roles and responsibilities within the stakeholders
- Identify a gap in facility provision (re-development, reallocation of space and new facilities should all be considered).

Feasibility

- Formalise the need
- Assess locations for the facility (including redevelopments)
- Assess the scope of the facility, building on the facilities mix
- Concept costs including whole of life and operational costs
- Is the project feasible to progress to business case?
4 Planning Process

The planning process for the development of a new, or redevelopment/retrofit of an existing facility can be broken down into the stages outlined below.

4.1 Stage 1 – Needs assessment

An aquatic facility aims to meet the needs of the community. A facility's financial sustainability is also linked to how well it services existing and future sport and recreation needs. Initial clarity about the needs of the community that will be met by the indoor facility, and the setting of clear objectives to reflect needs is a key ingredient for success. Understanding need may involve: defining the facility catchment, undertaking a strategic view of community facilities in the long term in the area, and identifying what role the facility can play in addressing the need. It is important that the drivers for a facility in terms of community need can be clearly articulated and where possible quantified.

A thorough assessment of needs is fundamental to the success of the project. For local authorities there is a statutory obligation to consult with the affected community; for other facility developers it is commercially astute to determine needs before investing significant funds.

Needs assessment checklist:

- Define the project and prepare study briefs
- Resource the project
- Identify key community values and organisational philosophy
- Review previous reports
- Identify current and future trends
- Analyse social indicators
- Review existing and comparative provision
- Consult the community
- Identify gaps and duplications
- Analyse information gathered
- Develop options.

As a guide, the needs assessment and feasibility stages of the planning process may cost up to 5% of the total cost of development, but can determine up to 65% of the final building cost. It is worth doing, and doing well, in order to minimise future costs and investment.

4.2 Stage 2 – Feasibility

To determine the meaning of success, facility providers must identify what they want to achieve through their proposed facility. Setting objectives for the facility should also clearly determine the relative commercial and community focus of a facility. Some facilities may have greater focus on commercial success, while other facilities may weight delivery on social objectives (social inclusion, health, participation, safety).

A feasibility study will assess the viability of the facility proposal. A good study provides an excellent guide to what will be developed for the capital investment and minimises or eliminates unanticipated surprises during construction and operation.

It should determine:

- The range of opportunities and services to be offered at the facility
• How the facility should be managed
• The best location for the facility
• Projected use and demand
• Projected income and expenditure over a 10 year period
• What areas and features should comprise the facility
• The practicality of the design and technical aspects
• Whether the community and funders can afford both the cost of construction and ongoing operation of the facility
• The economic and social impact that the proposed facility is likely to have on the community
• Feedback and input from other facility managers who can advise on options based upon their experiences.

Case study: Kapiti Coast

Feasibility Study - Kapiti Coast Aquatic Centre

Case study: Far North District Council

Aquatic Strategy and Feasibility Studies for Kaikohe, Kaitaia and Kerikeri

Case study: Timaru

http://www.stuff.co.nz/timaru-herald/1402773/Simpler-aquatic-centre-feasible

In preparing a business case, there are several key steps to include. They are:
• Set vision and objectives. Determine the purpose of the facility
• Identify service mix required to meet community needs and ensure alignment to existing strategies and policies (e.g. Sport and Recreation Plans)
• Select the site. Demonstrate that the site is located within a growth area or urban regeneration area
• Identify and engage further with stakeholders and the community, particularly potential operators
• Select management and operating model including determination of the following:
  • Are other parties able to contribute to capital and/or operating costs
  • Will the facility or programmes generate full-time use
  • Resourcing – are the right skills available in-house
• Ability to retain and mitigate risk including ownership, financial, construction and ongoing operations
• Who pays the operational costs
• Set principles for design of the facility that address functionality, user experience, access and sustainability
• Provide strategy for ongoing asset managements
• Prepare concept design including preliminary costing
• Identify funding opportunities and sources
• Prepare business case.

Engaging stakeholders

Good relationships and common values between facility partners are a key component of the success of facilities. A relationship of trust and common purpose between partners is a characteristic of facilities that operate well. Engagement of stakeholders and the community should be undertaken at targeted points throughout the various stages described above.

In principle, early awareness and involvement of stakeholders and community in the process will provide greater ‘buy in’ and ownership of the facility, and allow best management of potentially complex relationships between stakeholder groups.

Identify and engage potential partners
• Partners in the successful development and operation of a facility can include user groups, clubs and associations and commercial service providers
• A particular operating model such as a shared use will involve particular partners
• Do all partners share the vision? If not how can they be aligned?
• Are there any partners missing that are needed to deliver on the vision?
• Is there potential for a shared use model and if so who should be engaged?
• Consider site selection and operating and management models.

Engagement strategy
• Identify communities of interest
• Who will have input and who will be informed
• How the community will be engaged and when
• The organisations, groups, and individuals to be consulted with may be different at different stages of the project.

4.3 Stage 3 – Design process

Design

While the design of recreation facilities is undertaken by many, few have aquatic experience. It is imperative that the design team has aquatic expertise, as many post-construction maintenance issues arise from a lack of understanding and knowledge of aquatic environments. For example, designing a facility where water flows from a toddlers’ pool into a leisure pool may look nice but would not achieve acceptable water treatment standards. When designing an aquatic facility, designers need to work from a functional perspective of operators and users, viability and target markets as well as a design/visual perspective.

The design of an aquatic facility will involve consideration of the size, location and nature of the site and its surrounds, the facilities to be developed, the objectives of the facility, who the primary user groups will be, and the budget. Implementing a facility design that suits the
activities and the users is also a component of success. Responsive design can create a place where people come to play, meet and connect with the local community, that is inviting and stimulating, visually sensitive and expressive, and has a feel good atmosphere for people of all ages and cultures.

Factors to consider in concept design:

- Site analysis
- Size and shape
- Topography
- Vegetation
- Exposure to wind
- Views
- Watercourses
- Land contamination
- Compatibility with surrounding land uses
- Opportunities and constraints
- User requirements
- Facility users’ needs in terms of pool space and ancillary area, characteristics of spaces, linkages between spaces and accessibility
- Identity of facility
- User groups, club identities, desired facility outcomes
- Flexibility and changing functions
- Shared use
- Passive surveillance and crime prevention through design (CPTED)
- Cost estimates
- Approvals.

Site selection

Selection of the appropriate site is critical and will be a significant factor in the success of the facility. Where possible, co-location with existing infrastructure including public transport, education, health and community services, existing local sports clubs, business and shops can contribute significantly to the success of facilities. Key considerations in site selection are:

Location

- Areas of demand
- Accessibility for pedestrians, cyclists, private vehicles and public transport (including those with a disability)
- Physical barriers such as rivers and major roads
- Existing infrastructure.

Availability

- Land ownership
- Land tenure
- Land cost and affordability.

Site analysis

- Size and shape
- Topography
- Vegetation
- Exposure to wind
- Views and visibility of the site
- Watercourses
- Geotechnical information
- Land contamination
- Compatibility with surrounding land uses.
Linkages

- Proximity to and ability to link with adjacent or nearby complementary facilities or services (e.g. schools, childcare, existing sport and recreation facilities, libraries, community centres, shopping centres, medical centres etc.).
- Transport links (to all modes) are important.

Functional and iconic potential

- Gateway site
- Site well known to the regional community
- Extent of support and interest in the site as an indoor facility by stakeholders and the community; network of existing clubs and organisations willing to participate
- Interest of potential private sector partners – are there areas of the site that will be attractive to them?

4.4 Pool specifications

NZS 4441:2008 covers the essentials of design and construction of public and institutional, fresh and salt water swimming pools and the provision for water treatment. This has been updated to take into consideration changes within the aquatic, building, health and safety and legal environments. The Building Act and Building Code have superseded the original NZS 4441 specifications and should be thoroughly reviewed in association with NZS 4441:2008 when preparing pool specifications for design and build criteria.

4.5 Stage 4 – Construction and handover

Commissioning and handover of the facility needs to be planned and timed to ensure the facility is fully operational before the doors are opened to the community. Often political pressure and demands dictate opening of facilities before they have been fully tested and commissioned, leading to operational implications for both management and users. Do not underestimate the time required – a minimum of 23 weeks should be included in the project timetable for commissioning and handover.
5 Description of Activity Spaces

5.1 Main pool

The main swimming pool should be 25m long with a minimum width of 20m sufficient to accommodate eight lanes at 2.5m wide each. Wheelchair and disability access (ramp) to be provided but should not occupy any area of the swimming lanes. Depth of water should be incorporated into the main pool structure to provide an even sloping floor from 1350mm to 1800 or 2000mm. This will provide for programme and activity space where people can stand and an area of deeper water for skill development of aquatic sports such as water polo and underwater hockey but not for national competition level. The depth of the pool can be adjusted through the inclusion of a moveable floor for use by aquatic sports requiring significantly deeper pools.

Flush to concourse rollout or overflow channels to ease access and enhance the attractiveness of the main pool. Turning areas at each end of the main pool are not to be flush but provide an up stand fit for the purpose of turning while swimming. The concourse area surrounding the main pool should not be less than 3.0m in width with the exception of the side of the main pool which incorporates the access ramp (1m wide).

Pool concourse drainage and pool water return flow should be kept separate.

The main pool will preferably be tiled with appropriate fully vitrified ceramic swimming pool tiles. Pool floor and pool ends to incorporate non-slip tiles with all dimensions and pool markings to comply with the most recent FINA regulation for swimming. The main pool must have a separate balance tank, circulation and filtration system. Spectator seating (elevated) for between 250 and 300 persons should be provided.

5.2 Leisure and water play pool

The leisure pool should have a minimum water surface area of 150 m$^2$ and the water depth should vary from 0.0 mm to 1200 mm and provide ease of access for persons with disabilities or mobility difficulties. Depending on the design, size and dimensions selected for the main pool consideration to providing additional space at 1.2 m in this area may be required to provide a range of structured fitness programmes and activities in water operated at a higher temperature.

This pool should provide outlets and equipment that facilitate interactive water play and fun activities that will be attractive to families and children. A minimum of six water features is recommended and these should be designed and installed in such a way that they are easily inter-changeable. Features that include moving water, small slides, geysers, fountains, pipes and waterfalls, spouts and sprays. The range of interactive water features should be developed to compliment rather than compete with those provided elsewhere.

A separate balance tank, circulation and filtration system provided and rollout and overflow channels flush with the concourse and separated from pool water flow return. Pool surfaces should be tiled and non-slip where people’s feet come into contact with the pool floor. Given the nature of activity consideration to a pool membrane safety surface such as the Myrtha Pool system may be worthwhile. An area of spectator seating should be incorporated

5.3 Pre-school (toddlers) pool

A toddlers pool adjacent but physically separate to the shallow water area of the leisure pool should have a water surface area of not less than 30 m$^2$ and vary in depth from 300 mm – 400 mm. As the pool is designed to cater for children under five years it should be easily accessible.
The pool should have its own balance tank, circulation and filtration system. Pool surfaces should be non-slip pool tiles of safety surface membrane.

Parent and caregiver seating should be located in close proximity to this pool.

5.4 Teaching and hydrotherapy pool

These pool share similar characteristics. They are generally the same size and operate a higher water temperature (34 °C). The pools can either be designed as separate bodies of water or integrated into one pool tank with the ability to discreetly separate appropriate space for teaching or hydrotherapy programmes.

The minimum desirable water space for both activities is 100 m² (Teaching 60 m² and Therapy 40 m²).

The teaching area water depth will ideally be 700 mm to 800 mm deep while the hydrotherapy pool area 1400 mm deep. Access via a ramp and chair/bed hoist should be provided.

This pool or pools should have a separate balance tank, circulation and filtration system.

5.5 Spa and sauna facilities

A spa pool separate from any other body of water with capacity for up to 15 people is desirable along with a dry sauna facility of approximately 10 m² directly adjacent.

A cold water plunge pool or shower facility should also be in the immediate proximity. Seating within and external to the spa pool should be provided to encourage socialisation between those in and out of the spa pool.

5.6 Health and fitness facility (optional)

280 – 300 m² of floor area visually connected but physically separate from the pool hall will provide adequate space for fixed fitness equipment and clear floor area for aerobic exercise and fitness programmes.

This area should have separate air conditioning and ventilation and have floor surfaces appropriate for high impact from weights equipment and protection for those doing exercise.

5.7 Food and beverage area (optional)

An area of approximately 80m² clear space with tables and seating for 45 (10-12 tables. Kitchen/preparation area 30m² and servery area of not less than 15m². The option to take food and beverage to defined seating areas in the pool hall should be included.

Space for vending options should be allowed for. This can be accommodated in the designated food/eating space or in the entrance and lobby area adjacent to reception for supervision purposes.

An option for inclusion of outdoor courtyard to extend social areas and that provides opportunity for facility users to enjoy moving to an outdoors space is desirable.
5.8 Secondary and support areas

Entrance lobby and foyer
Entrance to the facility should have an air lock lobby area that protects heat loss from the building. Sufficient area for large groups queuing or assembly while entering or exiting the building should be provided. This will customarily be up to one full school class (approximately 30 people).

Provision of large open space with lots of natural light is desirable. Foyer areas should be tiled with some seating for those waiting to collect others or for facility programme or general enquiries.

The foyer and entrance lobby should be physically and acoustically separate from the main pool hall but have strong visual connectedness. Space for notice boards and signage should be provided to communicate facility programmes, activities and important notices.

Reception
The reception area should be immediately apparent to those entering the facility and directly adjacent to the lobby and foyer. Adequate space for two people to operate behind the reception desk (20 m²). This location should if possible provide supplementary not primary supervision of activity in the pool hall so should be visually connected.

Administration offices
Offices for functions of programmes administration, facility operations and management should be provided and connected to the reception and area of most customer interaction. A minimum of two offices, each of approximately 12 m² – 5 m². One room will also be used for the reconciliation and safe keeping of monies received. CCTV for the reception area and this office should be included.

Female and male changing
A total minimum area of 260 m² should be provided for accommodating changing facilities for both male and female customers. Equal space allocation is to include both open change space to accommodate large groups such as school classes and separate private change cubicles (approximately five). In addition this area will include appropriate numbers of toilet and shower facilities to comply with building consents and ordinances.

Fresh hot water showers as well as toilet facilities for each changing area are to be located and designed in a way that encourages and makes it easy for swimmer to use before entering the pool.

Family and accessible changing
Separate changing/toilet/shower facilities for families and those with disabilities are to be provided. These can be dual use with similar services in up to a minimum of four rooms of 5 m² in area each. They would include a toilet, basin, shower, seating and change table and have compliant access features such as rails and handles.

Staff facilities
Staff facilities should include a space for breaks in work. This area should be approximately 20 m² with washing, cooking and fridge facilities and space for up to four people to sit at any one time. An area for bathroom facilities, changing and safekeeping of staff property should be connected or immediately adjacent. An area of 10 m² each for male and female staff should be provided.

Equipment storage
An equipment store with direct access to both poolside and external to the building is needed. The minimum area for storage of equipment in a facility of this size is 30 m².
Meeting room

A small well-appointed meeting room with capacity for up to 25 people is desirable. This room would provide hire space for use by regular facility users and groups wishing to conduct small meetings on site. It would not be allocated to anyone group or organisation and would also be used for regular community group or facility staff meetings. The area of this room would ideally be 30 m².

Outdoor area and play space

Access to outdoor recreation and activity space is an important feature of indoor facilities. Functionally this can provide space for facility users to enjoy the outdoors and participate in alternative activities as individuals and groups.

Outdoor space provides opportunity for picnicking, barbeques, sports, play and relaxation. Ideally located in close proximity to the leisure pool and food and beverage area of the indoor facilities it provides direct indoor-outdoor flow and should be designed in such a way that it is viewed as a functional extension to the indoor leisure space. A total outdoor space of between 800 m² -1200 m² is desirable and which provides the following features:

• Paved area for outdoor seating (tables and chairs) ideally as an extension to the indoor food and beverage area
• Paved area incorporating minimum two gas or electric barbeque units with bench/table seating in close proximity for groups of up to 20
• Paved area with vertical water jets (12 -15) – free draining recycled water feature that provides link between indoor and outdoor water play theme. Jets when activated stop and start randomly. (Children enjoy interaction, standing on and running through).
• (Optional) Basketball half court (14 m x 15 m) with single backboard – ideally surface will be synthetic for safer use impact resistance and/or a beach Volleyball Court (22 m x 13 m) sand court
• Children’s (Under eight years) adventure play structure
• Generous shade provision as built extensions to the building or independent shade structures strategically located throughout the outdoor area.

Note: Area should be secure, well landscaped with lighting levels sufficient to make the entire area useable at nighttime.

5.9 Typical community pool primary and secondary components

<table>
<thead>
<tr>
<th>Description of component</th>
<th>Area (m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Pool (25 m x 20 m)</td>
<td>500</td>
</tr>
<tr>
<td>Leisure Pool</td>
<td>120</td>
</tr>
<tr>
<td>Toddlers Pool</td>
<td>25</td>
</tr>
<tr>
<td>Teaching and Hydrotherapy Pool</td>
<td>100</td>
</tr>
<tr>
<td>Spa Pool</td>
<td>10</td>
</tr>
<tr>
<td>Sauna/shower</td>
<td>15</td>
</tr>
<tr>
<td>Kitchen and Social area</td>
<td>100</td>
</tr>
<tr>
<td>Foyer and entry</td>
<td>100</td>
</tr>
<tr>
<td>Reception</td>
<td>30</td>
</tr>
<tr>
<td>Administration Offices/storage</td>
<td>35</td>
</tr>
<tr>
<td>Description of component</td>
<td>Area (m²)</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Male and Female Change</td>
<td>260</td>
</tr>
<tr>
<td>Family and Access Change</td>
<td>40</td>
</tr>
<tr>
<td>Staff facilities</td>
<td>30</td>
</tr>
<tr>
<td>Pool store</td>
<td>30</td>
</tr>
<tr>
<td>Meeting</td>
<td>30</td>
</tr>
<tr>
<td>Pools concourse, access ways and corridors</td>
<td>270</td>
</tr>
<tr>
<td>Spectator seating</td>
<td>190</td>
</tr>
<tr>
<td>Plant rooms</td>
<td>220</td>
</tr>
<tr>
<td><strong>Total estimated building area</strong></td>
<td><strong>2105</strong></td>
</tr>
</tbody>
</table>

**Exclusions** – Development areas that will also need consideration in facility developments:

- Car parking and landscaping
- Inclusion of existing pool facilities
- Separate public toilets
- Crèche/child-minding facilities
- Health therapy facilities (massage/physio/sports medicine)
- Fitness centre
- Waterslide or other attraction
- Bicycle racks
- Flag poles
- External seating
- External lighting
- Signage.

### 5.10 Buildings

Buildings need consideration of their uses, pedestrian and vehicle traffic patterns, durability, aesthetics and economies. Materials used and methods of construction should account for any environmental procurement policies that the future asset owners or authorities may have.

The substantive building for the pool hall should provide clear spans over all pool areas and their surrounds, allowing for a minimum 3.0 m wide pool deck and minimum ceiling height of not less than 5 m at any one point. Provision within the roof and or walls is to be made for natural light penetration without significantly sacrificing too much thermal insulation or contributing too much glare affecting supervision or user comfort.

A single plant-room capable of storing appropriate plant and equipment selected for circulation, filtration, and chemical water treatment is required with separate rooms to accommodate heating and ventilation equipment.

Provision needs to be made for the storage of customers clothing and valuables in lockable lockers and open lockers.
Services

Adequate plant and services will be required to meet the recommended minimum turnover rates for each separate body of water.

<table>
<thead>
<tr>
<th>Pool type</th>
<th>Minimum turnover time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main pool</td>
<td>3 hours</td>
</tr>
<tr>
<td>Leisure pool</td>
<td>2 hours</td>
</tr>
<tr>
<td>Teaching/ hydrotherapy pool</td>
<td>2 hours</td>
</tr>
<tr>
<td>Toddlers pool</td>
<td>30 minutes</td>
</tr>
<tr>
<td>Spa pool</td>
<td>30 minutes</td>
</tr>
<tr>
<td>Waterslide</td>
<td>15 minutes</td>
</tr>
</tbody>
</table>

A separate balance tank, filtration system and circulation system is recommended for each pool to minimise the risk of microbiological contamination of pool water and the down time and revenue losses associated with interruptions to service. The toddler’s pool should have capacity to be easily and quickly drained and re-filled from the teaching pool, leisure pool or main pool.

Water treatment systems that include UV, ozone water sterilisation and sodium hypochlorite disinfection are recommended. This provides for both better water and air quality making for better user experience and repeat visits. Effective water treatment practice also ensures the long-term protection of important community assets. All plant services systems and processes must comply with standards and legislation relating to the safe and efficient operation of public swimming pools i.e. NZS 4441 and NZS 5826.

5.11 Water temperatures

Industry accepted water temperatures for the different pool types are:

- Main pool: 27°C (± 2 °C)
- Leisure pool: 32°C (± 2 °C)
- Teaching/Hydrotherapy pool: 34°C (± 2 °C)
- Toddlers pool: 33°C (± 2 °C)
- Spa pool: 38°C (± 2 °C)

Air circulation to the pool hall enclosure and surrounding amenities should have a target temperature of 25°C – 27°C, with humidity no greater than 70%. A forced air heating and ventilation system should provide six air changes per hour.

5.12 Lighting and sound

Non-glare or diffused artificial lighting is required to provide a minimum light level to the main pool hall of 500 lux. Water glare should be avoided and theme lighting considered to provide alternative levels/mood to the leisure pool area and surrounds.

Acoustic control is important to maintain a comfortable and healthy environment for swimmer and spectators. Machinery noise levels outside the facility should be kept at less than 40dB above the ambient level both day and night.
5.13 Finishes

Non-slip and non-abrasive surfaces to pool areas are important and tiling to all pool and public areas is preferable if the allocated funding permits. Other suitable alternatives are also worth consideration. Wall finishes must be impervious, easily cleaned and maintained.

All structural elements need to be of sufficient quality or protected in such a way that makes them fit for use in an indoor swimming pool environment. Any fittings or fixtures in contact or near to swimming pool water or wet areas must be of an appropriate grade stainless steel. Ceiling linings in the pool hall and amenity areas should have sound absorption capability, non-corrosive and not contribute to creating too much glare.
6 Design Pitfalls

A review of selected aquatic facilities in 2005 (Aquatics Facility Review, Sport NZ 2005) identified a number of pitfalls and issues, which occurred during the design of new or retrofitted facilities that lead to operational, managerial, maintenance, and financial issues.

6.1 Projected vs. actual use

Projection rates declined after an initial high use of a new or retrofitted facility. Most aquatic facilities experience a significant reduction after the first 18 months. Top performing council facilities average eight swims per capita per annum, but nationally it is more realistic to base projected use on an average 5.5 swims per capita per annum.

6.2 Aesthetics vs. operational costs

In many instances aesthetics were the key consideration in facility design, with little consideration given to the impact on future operational costs. A poorly designed facility could result in the facility needing higher numbers of lifeguards resulting in higher operational costs. Staff costs can account for up 50% of an annual operating budget.

The location of spectator seating, foot traffic flow, floor drainage and slopes, surface colours and cleanability all have an impact upon the use and safe operation of the facility.

6.3 Cost cutting or cost incurring

Cutting costs at the design stage by removing heat recovery units, downsizing plant rooms, removing storage areas, not installing acoustic installation, not putting ventilation into switchboard, or installing lighting which requires scaffolding to replace light bulbs incur significant and unnecessary operational costs. Taking design shortcuts will only lead to increased operational costs and potentially increased capital expenditure post-opening to reconcile the issues raised from omissions at the design phase.

The Energy Efficiency and Conservation Authority (EECA) have produced a number of case studies on energy savings in swimming pools. They estimate installing a heat recovery unit at the time of construction has a payback period of less than three years. The payback period for post-construction installation of heat recovery units is considerably longer.

Further information


Case study

Case Study - Centennial Pool
6.4 Use appropriate materials

While it sounds obvious it is often overlooked in the design phase. Aquatic environments are highly corrosive so materials should be durable and easily maintainable. For example the use of high grade stainless steel, nonslip surfaces for pool surrounds are assumed but some facilities have been designed without due consideration to such issues.

6.5 Pool size

A rule of thumb for costing facilities is based on the estimate that 20-25% of the capital cost will be the annual operating cost. To build an Olympic specification pool in a small town would not achieve anything except financial ruin. Therefore, building an aquatic facility appropriate to the community must be at the top of any design brief. More important is determining what the facility will be used for and by whom. In the past, most facilities focused on competitive swimming as the determining factor for pool size. Now the range of aquatic activities is highly varied and their requirements are all quite different.

Similarly, depending upon the proposed use, the provision of equipment – touch pads, goals, scoreboards, storage, seating location and traffic flow need to be considered. It is noted that the FINA rules clearly state that they relate to competitive use and training and are not designed to govern issues related to general public use of aquatic facilities. Often facilities are built to high FINA specifications when no such use will occur or will be limited.

For specific information on national aquatic sporting and competition requirements, contact the national organisation for their policies and procedures. Do not rely upon local clubs and interest groups’ interpretations, as they may not be consistent or compatible.

6.6 Multipurpose options vs. dedicated designs

The rise in leisure pool demand has seen a significant reduction in the amount of pool space dedicated to ‘learn to swim’. Wave/fun pools have not lived up to the promise of being able to provide good teaching facilities and be good income generators, and there are other ways of making a traditional rectangular pool work as a leisure space.

Learn to swim is an area which continues to grow, especially as schools have moved away from providing these opportunities. Providing purpose designed and built facilities for learn to swim may be more financially astute than opting for a multipurpose design, which does not meet any needs adequately.

The inclusion of moveable pool floors provides flexibility for a wide range of pool users as the pool depth can be adjusted to suit the different needs of pool based activities e.g. scuba diving training, springboard diving, and underwater hockey.
7 Design Considerations

7.1 “Field of play” dimensions

<table>
<thead>
<tr>
<th>Pool use</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learn to swim</td>
<td>25 m x 25 m, depth 0.90 m (max)</td>
</tr>
<tr>
<td>Recreational swimming</td>
<td>No specifications</td>
</tr>
<tr>
<td>Competitive swimming</td>
<td>50 m x 25 m, depth 2 m (Olympic pool specs only)</td>
</tr>
<tr>
<td></td>
<td>25 m x 25 m, depth 1.35 m (min with starting blocks)</td>
</tr>
<tr>
<td>Diving</td>
<td>Width and length dependent upon platform size, depth 1.8 m (min)</td>
</tr>
<tr>
<td>Waterpolo</td>
<td>30 m x 20 m (men), 25 m x 20 m (women), depth 1.8 m (min)</td>
</tr>
<tr>
<td>Underwater hockey</td>
<td>20 m – 25 m x 10 m – 15 m, depth 1.5 m – 2.5 m</td>
</tr>
<tr>
<td>Canoe polo</td>
<td>35 m x 23 m, depth 0.9 m (min)</td>
</tr>
</tbody>
</table>

7.2 Siting of pools

The siting of pools within a facility needs to be considered in the context of access, thoroughfares, use levels, water flows and safety. Siting a learners' pool beside a dive pool increases the risk and hazard issues and similarly impacts upon lifeguarding requirements. In some facilities the location of the wave pool as the first pool within the facility means users of other amenities within the facility need to pass directly past the wave pool, which when in use, becomes inconvenient (potential for customers to get wet) and hazardous. Considering all users, access and seating within a facility during the design phase is essential for good design and user comfort.

7.3 Interactive features

When incorporating interactive features into the facility design the following should be taken into consideration:

- Location and appropriateness of features and pools
- Water flow, circulation and treatment requirements
- Location and accessibility of controls and safety switches
- Accessibility for maintenance
- Ease of supervision and lifeguarding
- Impact upon other facility users
- Ability to be ‘closed’ to users.
7.4 Seating

Appropriate seating for customers, spectators and competitors should provide for easy access to the pool deck as well as good lines of sight into the pools. Different types of seating will provide different benefits. To ensure the appropriate seating is used, the requirements of users should be considered during the feasibility phase. For example, competitive users require space for gear bags and equipment, so often seating capacity may be reduced by nearly half to accommodate this space demand. Similarly, providing no seating around a toddlers’ pool could lead to the use of movable seating, which may become a hazard.

7.5 Accessibility

Providing for disability access to various pools and their associated facilities is an important consideration for pool design. This should include the inclusion of permanent ramp access, or the use of hoists and temporary ramps for redeveloped pools. If using a hoist, consideration needs to be given to its location in terms of both the pool, and space poolside for wheelchairs to be parked. When providing ramp access to pools, location and gradient of the ramp are important factors to ensure safe entry to the pool. A storage space for water wheelchairs also needs to be considered in the design stage to ensure there is an appropriate place for these to be located.
8 Facility Upgrades

8.1 Common upgrades

NZS 4441:2008 indicates provisions required for upgrade of existing facilities. If and when components in the plant room or pool surround are in need of replacement, this Standard will help with the sizing and minimum requirements of these items.

8.2 Current thinking

Meeting customer needs: Meeting the needs of the community and providing the correct balance between fun attractions such as hydro slides, splash pools and spas and more functional pool spaces for ‘learn to swim’ and other aquatic programmes can affect the long term financial return on the upgrade and repeat business.

Technology: Including where appropriate new technology such as variable speed drive on electric motors, off-peak low rate operation of pumps, independent water treatment systems for each attraction and continuous electronic water quality monitoring and dosing systems.

Energy use: Incorporating energy efficient measures into a facility upgrade should be standard practice.
Case Study: PowerCo Aquatic Centre, Hawera

In 2008/2009 PowerCo Aquatic Centre in South Taranaki completed a facility upgrade to their indoor pool complex. A new thermal pool, children’s spray park and a hydro slide were installed and a new splash feature was added to the outdoor toddlers pool.

Community: Desire for more fun factors at the Aquatic Centre triggered an upgrade of the facility. A steering committee, which included community stakeholders, was formed to guide the re-development.

Innovation: Attractions - The hydro slide, thermal pool and spray-park have made the facility more popular as a recreation and leisure venue while smart programming has established more options suitting the differing needs of different customers. This combination has resulted in the total number of visits increasing from 68,727 per year and the current average attendance is 94,666 per year.

Programmes: The AquaSchool delivered 8,500 lessons per annum. Introduction of the new children’s spray park and leisure pool, released the indoor learners’ pool for increased learn to swim activity. Focus turned to increasing the capacity of the swim school to meet known demand and increase financial viability of the Aquatic Centre. In the space of four years, the number of swim lessons increased to 21,429 lessons for the 2012/2013 financial year.

Technology: The upgrade project featured a number of advanced technological applications, which include electronic Variable Speed Drive (VSD) units to enable soft graduated starts for all electric motors, and off-peak low rate operation of pumps and fan motors during periods of low demand. The new attractions have independent water treatment systems all of which feature Prominent™ medium pressure ultra-violet light irradiation units for secondary disinfection of pathogens and also reduce undesirable chloramine and trihalomethane by-products of chlorine disinfection.

Controlling energy use: The Aquatic Centre has dual heating systems with an efficient electrical heat pump backed up by existing dual gas fired boilers and the indoor pool has a run-around-coil heat recovery system. Low energy lighting systems have been introduced with auto switching and electric motors ramp down overnight to save energy.

Electronic water quality monitoring and dosing: Continuous monitoring of the water quality and treatment is through a Prominent™ multi-channel controller which records and reports data for each of the pools, managed through a dedicated computer. This computer is accessible online by Siemens (Auckland) so that remote fault analysis is possible by technicians. This reduces the costs of maintenance issues for minor interruptions to service. With this advanced level of technical support the plant runs with few interruptions to service and rarely requires technicians on site.

Results: The increased levels of attendance following the facility upgrade show that improvements have met the needs identified through the community consultation. Significant energy savings have also been made.

Further information

Facility Management Manual www.nzrecreation.org.nz

NZS 4441: 2008 – Swimming Pool Design Standard
AQUATIC FACILITY GUIDELINES

9 Legislation & Standards
Commissioned by: New Zealand Recreation Association with funding from Sport NZ and the ACC Drowning Prevention Fund, managed by Water Safety New Zealand.

Authors: Robyn Cockburn and Trish Amos, Lumin

February 2015


The Aquatic Facility Guidelines have been developed for use by aquatic managers. They provide detailed information covering the management and operation of an aquatic facility.

This document is a companion document to the Facility Management Manual which can be found on the Sport NZ website and the NZ Recreation Association website:


Acknowledgements

Alex Brunt, General Manager, Water Safety New Zealand; Alison Law, Aquatic Facilities Manager, Te Kāiwhakahaere Wāhi Roto i te Wai, Kāpiti Coast District Council; Bevan Smith, H&S Development Advisor, Parks, Sport and Recreation, Wellington City Council; Brian Milne, Director, Xyst; Craig Rouse, Centre Manager, Manurewa Pool and Leisure Centre, Auckland City; Caroline Ancell, Assistant Manager, Powerco Aquatic Centre, South Taranaki District Council; David Cameron, Contracts Manager, Filtration and Pumping Commercial Ltd; David Lee, Aquatic Services Manager, Powerco Aquatic Centre South Taranaki District Council; Esther Bukholt, Community, Recreation and Sport Project Manager, NZ Recreation Association; Esther Hone-Moore, AUSTSWIM Aotearoa; Fee Botcher, Customer Service Assistant, Gore Multisports Complex; Haydn Wilton, Wellington Regional Aquatics Centre Programmes Team Leader, Wellington City Council; Halina Dorne, Administration Officer, Aquatics, Coastlands Aquatic Centre; Jamie Delich, Facilities Consultant Community Sport, Sport NZ; Jenni Pethig, Learning & Development Advisor, Community Recreation & Arts, Skills Active; Joanne Saxton, Wellington Regional Aquatics Centre Operations Team Leader, Wellington City Council; Judy Tipping, Aquatic Consultant; Kathy Moore, Aquatic Facilities Manager, Selwyn Aquatic Centre; Lauren Hudson, Facility Manager, Naenae Pool, Hutt City Council; Linda Newman, Waterworld Educare Supervisor, Hamilton City Council; Nigel Newbery, Pool Operations Manager, AC Baths, Taupo District Council; Noel Guilliver, Service Manager, Rotorua Aquatics Centre; Patrick Blackman, Team Leader, Freyberg Pool, Wellington City Council; Peter Thompson, Aquatic Services Manager, Southland Aquatic Centre, Richard Lindsay, Facilities Consultant Community Sport, Sport NZ; Rowan Cordwell, Facility Manager Freyberg Pool, Wellington City Council; Royce Williams, Facility Manager Karori Pool, Wellington City Council; Sarah Cresswell, Senior Training Consultant, Opus International Consultants; Stephen Keatley, Community Facilities Manager, Hutt City Council; Tracey Prince, Aquatics Project Manager, NZ Recreation Association; Vaughan Hope, Facility Manager, ASB Aquatic and Fitness Centre, Richmond; Virginia Munro, Aquatics Consultant; Yvonne Hughey, Training Manager, Hanmer Springs Thermal Pools & Spa.
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1 NZ Standards

Standards New Zealand develops, approves and adopts standards and codes of practice which are given legal status by the Standards Act 1988. Standards can be revised so it pays to always check the most recent standard. Relevant standards include:

NZS 246:2010 – Guidelines for managing risk in sport and recreation organisations

This document has been written for application across the whole spectrum of sport and recreation.

AS/NZS 1838:1994 – Swimming pools: pre-moulded fibre-reinforced plastics - design and fabrication

Sets out requirements for pre-moulded plastic swimming pools exceeding 7500 L in volume and 750mm in depth, constructed from fibre-reinforced plastics based on thermosetting resin systems.


Sets out the procedures for the installation of pre-moulded fibre-reinforced plastic swimming pools complying with the requirements of AS/NZS1838:1994, for above and below ground locations.

AS/NZS 2865:2001 – Safe working in confined spaces

NZS 4121:2001 – Design for access and mobility: buildings and associated facilities

Gives requirements for making buildings and facilities accessible to and useable by people with physical disabilities. Provides a means of compliance with the New Zealand Building Code.

NZS 2416.1:2010 – Water safety signs and beach safety flags

Prescribes water safety signs intended for use in connection with the aquatic environment. It is intended for use by owners and operators of aquatic environments and by manufacturers of signs and equipment.

NZS 2416.3:2010 – Water safety signs and beach safety flags

Provides guidance for the selection and use of water safety signs as specified in ISO 20712:1 in aquatic environments. It provides guidance on their location, mounting positions, lighting and maintenance. It also provides guidance on the design and location of multiple signs.

AS/NZS 4360:2013 – Risk management principles and guidelines

NZS 4441:2008 – Swimming pool design standard

This standard covers only the essentials of design and construction of swimming pools and the provision of water treatment facilities. The standard applies to public, institutional, and private swimming pools.
NZS 5823:2005 – *Specification for buoyancy aids and marine safety harnesses and lines*

Sets out general and specific requirements for the following types of buoyancy aids for surface water such as boating and water skiing: coastal lifejackets for use in coastal waters; lifejackets for sheltered waters; buoyancy vests; buoyancy aid wet suits; buoyancy garments; rescue buoys; float-off buoyancy aids and specialist lifejackets. Also covers selection of the various buoyancy aids and their care.

NZS 5826:2010 – *Pool water quality*

This standard covers the essential aspects of the operation and maintenance of pools in regard to pool water quality criteria including reference to methods of water treatment. It does not cover maintenance of heating equipment or mechanical and electrical equipment. It covers all fresh water and sea water swimming pools and spa pools and geothermal pools during use. Safe handling of swimming pool chemicals is also covered.

NZS 5828:2004 – *Playground equipment and surfacing*

Specifies general requirements for playground equipment and surfacing, with the adoption of BS EN 1176 Parts 17: 1998, BS EN 1177:1998 and BS 7188:1998, with addendums for playgrounds and playground equipment to meet the needs that are specific to the New Zealand environment.

SNZ HB 5828.1:2006 – *General equipment and surfacing handbook*

SNZ HB 5828.2:2006 – *Supervised early childhood facilities - playground equipment and surfacing handbook*

NZS 8500:2006 – *Safety barriers and fences around swimming pools, spas and hot tubs*

Assists people to avoid a swimming pool related drowning by presenting various options designed to deny, delay or detect unsupervised entry to the swimming pool area. Options for the location of effective safety barriers that will restrict the access of young children to swimming pools are provided, and requirements for the design, construction and performance of fences, gates, retaining walls and door sets intended to form a barrier to restrict access of young children to swimming pools are specified. This Standard is intended to become a compliance document under the Building Code for new pools and to be used by territorial authorities in developing safe solutions for existing pools.

Further information

Standards New Zealand [www.standards.co.nz](http://www.standards.co.nz)
2 Legislation

A summary of legislation that impacts on facility management is described below. For full details on current legislation refer to www.legislation.govt.nz

Legislation can be revised and updated so it pays to always check the most recent legislation.

2.1 Financial

Charitable Trusts Act 1957
This Act defines charitable purposes and which organisations can be deemed charitable trusts.

Charities Act 2005
This legislation establishes the Charities Commission which register societies, institutions and trustees of trusts as charitable entities. The Act also outlines the obligations required of charities.

Companies Act 1993
This Act provides basic and adaptable requirements for the incorporation, organisation, and operation of companies.

Goods and Services Tax Act 1985
This Act provides for the provision of the collection of goods and services tax (GST). This Act sets out responsibilities for businesses when registering for GST, filing returns, calculations, payment, invoicing and pricing.

Income Tax Act 2007
This Act sets out obligations and requirements for employers, self employed persons and employees in respect of PAYE, tax exemptions, deductions and specific requirements for particular classifications of employment.

Incorporated Societies Act 1908
The Act makes provision for the incorporation of societies which are not established for the purpose of pecuniary gain.

KiwiSaver Act 2006
The Act aims to encourage long-term savings by individuals principally through the workplace. It also details the compulsory obligations of employers to support employees choosing to opt-in to the scheme.
2.2 Resource management & services

**Building Act 2004**
The Building Act and the Building Code provide for the regulation of building work and setting of performance standards for buildings. This Act and Code is fully detailed by the Department of Housing and Building.

**Consumer Guarantees Act 1993**
The Act sets out guarantees that are implicit with the provision of goods and services and the rights of redress where those guarantees are breached.

**Fair Trading Act 1986**
An Act to prohibit certain conduct and practices in trade, to provide for the disclosure of consumer information relating to the supply of goods and services, and to promote product safety.

**Food Act 2014**
The Act outlines the requirements for the sale of food including the Food Hygiene Regulations 1974.

**Local Government Act 1974 & Bylaws**
The Act sets out the various requirements of local authorities.

**Local Government Act 2002**
This Act states the purpose of local government; provides a framework and powers of local authorities to decide which activities they undertake and the manner in which they will undertake them; promotes the accountability of local authorities to their community; and provides for local authorities to play a broad role in promoting the social, economic, environmental, and cultural wellbeing of their communities, taking a sustainable development approach.

**Local Government Official Information & Meetings Act 1987**
The Act makes official information held by local authorities more freely available and protects official information held by local authorities.

**Resource Management Act 1991**

**Resource Management Amendment Act 2013**
The Act details sustainable management of the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety.

**Sale and Supply of Alcohol Act 2012**
This Act outlines provision for the sale of alcohol to the public.

**Smoke-Free Environments Act 1990**
This Act aims to reduce the exposure of people who do not themselves smoke to any detrimental effect on their health caused by smoking by others.

**Trespass Act 1980**
The Trespass Act provides for the control of persons trespassing on or in a facility.
2.3 Human resources

**Accident Compensation Act 2001**

The purpose of the Act is to enhance the public good and provide for a fair and sustainable scheme for managing personal injury.

**Employment Relations Act 2000**

The Act aims to build productive employment relationships through the promotion of good faith in all aspects of the employment environment and of the employment relationship.

**Equal Pay Act 1972**

This Act makes provision for the removal and prevention of gender discrimination in rates of pay of employees. It also provides procedures for recourse to the Employment Relations Authority for aggrieved employees.

**Health & Safety in Employment Act 1992**

An Act to reform the law relating to the health and safety of employees, and other people at work or affected by the work of other people. Key areas of the Act include the duties of employers in relation to: hazard management; training and supervision; recording and notification of accidents and serious harm; and duties to people who are not employees.

*Note: This Act will be replaced by the Health and Safety at Work Act 2015, effective from 1 April 2015.*

**Holidays Act 2003**

The purpose of this Act is to promote balance between work and other aspects of employees’ lives and, to that end, to provide employees with minimum entitlements.

**Human Rights Act 1993**

This Act protects human rights in New Zealand and is in general accordance with United Nations Covenants or Conventions on Human Rights. It outlines prohibited discrimination in: employment; the provision of goods and services; racial and sexual harassment. It also provides procedures for investigation of complaints by employees and for recourse to the Equal Employment Opportunities Tribunal, Human Rights Commission, and Race Relations Commission for aggrieved employees.

**Minimum Wage Act 1983**

This Act establishes minimum rates of wages payable to employees of certain age groups.

**Official Information Act 1982**

The Act makes official information more freely available, provides for proper access by each person to official information relating to that person, and the protection of official information consistent with public interest and the preservation of personal privacy.

**Parental Leave and Employment Protection Act 1987**

The Act sets out minimum entitlements with respect to parental leave for male and female employees, protects the rights of employees during pregnancy and parental leave, and entitles certain employees to a defined period of paid parental leave.
Privacy Act 1993
The Act promotes and protects individual privacy in respect to the collection, use and disclosure by public and private sector agencies of information relating to individuals. It also provides for access to personal information held by public or private sector agencies by that person.

Volunteer Employment Protection Act 1973
This Act makes provision for the protection of the employment of volunteers to the Armed Forces for training or service.

Wages Protection Act 1983
This Act provides that no deductions can be made by employers from wages of an employee without their consent. It also stipulates the methods in which wages may be paid to employees.

2.4 Other legal considerations

Children, Young Persons & their Families Act 1989
This Act relates to children and young persons who are in need of care or protection or who offend against the law and is administered by the Ministry of Social Development. It is this Act which defines a child as a boy or girl under the age of 14 years, and a young person as a boy or girl aged 14 years or older but under 17 years. These definitions are used within the industry standards and codes of practice.

Conservation Act 1987
This Act promotes the conservation of New Zealand’s natural and historic resources, and is administered by the Department of Conservation. The Act defines the ability for concessions, leases, licences and permits for authorised activities on the conservation estate.

Crimes Act 1961
Administered by the Police, the Act outlines criminal activities, injury to persons, and property damage, and the consequence of conviction on indictment.

Education Act 1989
The Act reformed the administration of education including the role and responsibility of boards of trustees, staffing and resourcing, property, and the establishment of the New Zealand Qualifications Authority.

Fencing of Swimming Pools Act 1987
The Act outlines the requirements for fencing of certain pools under the Building Act 2004 and it is administered by territorial local authorities.

Harassment Act 1997
The Act provides for criminal and civil remedies in respect of harassment.

Hazardous Substances and New Organisms Act 1996
This act covers the handing and storages of hazardous chemicals.

Industry Training and Apprenticeships Act 1992
The Act provides for the recognition and funding of organisations (to be known as industry training organisations) setting skill standards for, and administering the delivery of, industry-based training.
**Land Act 1948**

The Act defines the ability for concessions, leases, licences and permits for authorised activities on Crown land.

**National Parks Act 1980**

This Act outlines the establishment, control and administration of national parks, as well as outlining acceptable activities permitted within National Parks. The Act is administered by the Department of Conservation.

**Reserves Act 1977**

This Act outlines the acquisition, control, management, maintenance, preservation, development and use of reserves. Reserves are administered by the Department of Conservation and territorial local authorities.

**Sport & Recreation New Zealand Act 2002**

The purpose of this Act is to promote, encourage, and support physical recreation and sport in New Zealand by establishing an agency called Sport and Recreation New Zealand (SPOANZ).

**Standards Act 1988**

The Act establishes Standards New Zealand as the developer, approver or adopter of standards and codes of practice which are given legal status by this Act.

**Tourist & Health Resorts Control Act 1908**

The Act outlines the administration and control of tourist and health resorts and reserves.