International Life Saving Federation of Europe
European Basic Guidance for Safety in Swimming pools

(Version 2005-01)

1   INTRODUCTION

Swimming is an important skill. It provides the means for many thousands of adults and children to participate in a healthy and enjoyable exercise. Although swimming pools are safer places to swim than open waters, death still occurs. This guidance is for those who have any involvement with the operation and management of health and safety in swimming pools, primary pool owners or other pool operators, for example pool hirers. Its aim is to provide guidance on the risks associated with swimming pool operation and the precautions which may be taken to help achieve a safer environment for people who use swimming pools. Following the advice in the guidance will help to prevent or reduce accidents and incidence of ill health. The guidance applies to all types of public swimming pools used for swimming and leisure. Any pool will be safer if bathers are aware of potential hazards and act responsibly. As far as is reasonably practicable the hazards should be brought to bather's attention as soon as possible. This can be achieved in a variety of ways, such as:

- notices displayed at reception, in changing areas and on poolside,
- a leaflet handed over to bathers as they arrive and to those in charge of organised groups (including school-parties)
- oral reminders, where necessary by lifeguards.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

2   TERMS AND DEFINITIONS.

For the purpose of this guidance the following terms and definitions apply.

Table 2-1: Definitions

Term	Explanation
diving boards	fixed platforms or springboards used by pool users to enter the water from a height above the pool surface greater than 0.38 m
deep water	water of 1.5 m depth or greater
drowning alarm system	device or series of devices in order to alert employees in the pool hall and elsewhere in the premises to a possible emergency in the pool hall
freeboard	height of the pool edge above the water level
lifeguard	individual responsible for the monitoring of pool users, preventing accidents and responding to emergencies
organisation	company, establishment or other body responsible for the control and operation of the swimming pool
pool hall	area that surrounds the pool tank
pool operator	individual(s) managing the delivery of the service at the pool on behalf of the organisation
pool tank	structure containing the pool water
public pool	non-domestic pool intended for specific use by members of the public engaged in water based recreational activities
rescue equipment	equipment available to assist lifeguards and others
shallow water	water less than 1.5 m in depth
sub-aqua	organized underwater swimming activity using breathing apparatus
waterslide	equipment with an inclined surface, down which the user descends by sliding usually under the influence of gravity and with water as the friction- reducing medium either freely or with the

Term	Explanation
	use of ride enhancement devices, if so designed
wave machine	mechanical device that generates a wave configuration of water

3   ABBREVIATIONS

Abbreviation	Explanation
CPR	Cardiopulmonary Resuscitation
EAP	Emergency Action Plan
FINA	Federation International de Natation
NOP	Normal Operation Plan
PSOP	Pool Safety Operation Plan

4   SAFETY DOCUMENTATION AND SYSTEMS

4.1   Safety management system

4.1.1   General requirements

In order to manage health and safety effectively, the organisation should plan and coordinate its approach. The cornerstone of this approach is the health and safety management system.

The health and safety management system should include:

- a safety policy
- training and competency requirements
- procedures for dealing with non-conformances and corrective actions
- risk assessments
- Pool Safety Operating Procedures (PSOPs) consisting of normal operating plans (NOPs) and emergency action plans (EAPs)
- maintenance of records and processes to monitor, measure, review and improve the health and safety management policy

4.1.2   Safety policy

The organisation should define and document a policy for the general operation and safety of the swimming pool. This is often referred to as the Normal Operating Plan (NOP). The organisation should ensure that this policy is communicated, implemented and maintained.

4.1.3   Non-conformance and corrective and preventive action

The organisation should establish and maintain procedures for defining responsibility and authority in order to deal with non-conformance and potential non-conformance in a timely and appropriate fashion. This should include:

- handling and investigating non-conformance
- taking action to mitigate any impacts from non-conformances
- initiating and completing corrective and preventive action.

Any corrective or preventive action taken to eliminate the causes of actual or potential non-conformances should be appropriate to the magnitude of the problem and commensurate to the risk. Records should be maintained of significant non-conformances and corrective or preventive action taken.

4.1.4   Monitoring, measurement and analysis, review and improvement

4.1.4.1   Monitoring

The organisation should define the routine performance monitoring requirements for the operation of the pool. These requirements should be suitable and sufficient to provide useful data on compliance to required standards. This might include routine patrols of the pools and ancillary areas to monitor for hygiene, housekeeping, users behaviour and lifeguard performance.

4.1.4.2 Measurement and analysis

Measuring the adequacy of the operating system and the degree of compliance to established operating standards is crucial and this should include:

- assessment of individual (e.g. lifeguard) and overall operational performance
- compliance to operational plans, procedures and performance requirements
- the success (or otherwise) of corrective and preventive actions
- the management of incidents and emergencies
- feedback from users of the pool and other stakeholders on pool safety issues.

4.1.4.3 Review

The organisation should formally review the operation of the health and safety management system to ensure it is achieving the defined safety policy objectives. This review should be carried out at planned intervals of normally no less than one year.

4.1.4.4 Improvement

The review should include assessing opportunities for improvement and the need for changes to the pool health and safety management system to ensure it remains suitable, adequate and effective.

4.1.5 Records

A record system should be established and managed. Records should be clearly identifiable. Records should be maintained to provide evidence that the requirements have been complied with and of the effective operation of the health and safety management system with regard to swimming pool safety. Such records should include details of:

- training
- review and improvement meetings
- incidents, accidents and subsequent investigations
- accident/incident trend analysis
- risk assessments
- changes to NOPs and EAPs
- inspection and equipment checks
- any other information that might demonstrate compliance to the requirements of this PAS.

Records should be retained for a suitable and defined period of time in order to be used by the pool operator.

4.2 Normal operating plan

4.2.1 General

There should be a documented NOP, which details the routine and appropriate safety standards, tasks and responsibilities for the operation of the swimming pool. The NOP should include the information listed in 4.2.2 to 4.2.17, where it is applicable to the pool.

4.2.2 An organisation chart

The organisation chart should detail the lines of authority, individual responsibilities and the allocation of functions for all those involved in ensuring pool safety.

4.2.3 Details and description of the pool(s)

Details and descriptions of the pool(s) should include the dimensions, depth and features of the pool(s).

4.2.4 Principal hazards

The principal hazards should be divided into three broad areas:

- physical
- people
- activity

Specific hazards at the pool should be outlined. The NOP should detail how these principal hazards are controlled.

4.2.5   Control of admission to the pool

Control of admission to the pool should include:

- access control at the pool reception, specifying users or groups not permitted to enter.
- the policy for admission of users under the age of 8 years (see 11.1)
- security arrangements to prevent unauthorized access when the pool is closed.

4.2.6   Lifeguard duties and responsibilities

Lifeguard duties and responsibilities should include:

- the role and purpose of the lifeguard, in particular: accident prevention, pool surveillance and dealing with emergencies
- good practice supervision principles when lifeguarding the pool, e.g. not to stand together, remain at allocated station, remain facing the pool at all times
- principal duties in addition to the lifeguarding role, e.g. cleaning, equipment set up and break down
- the poolside rules that pool users are required to follow and that the lifeguards uphold, e.g. no running, no diving areas

4.2.7   Lifeguard ability to view the pool

The degree to which glare and specula reflection impedes the ability of lifeguards to view their allocated zone should be considered and detailed in the NOP. Any arrangements put in place to reduce the risk of glare and specula reflection should be recorded.

Any physical obstructions to lifeguard sight lines within the pool hall, e.g. pillars or waterslide support structure should be documented.

4.2.8   Lifeguard training policy

The lifeguard training policy, including standards for frequency of attendance and performance criteria should be recorded.

In pools where lifeguards are not required, the NOP should detail the qualifications of personnel appointed to respond to a pool emergency.

4.2.9   Details of pool capacity and capacity control systems

Details of pool capacity and capacity control systems should be included to ensure the pool does not become overcrowded with users. The pool capacity should be based upon:

- the design of the pool
- the pool plant
- the nature of use
- the supervision measures in place on the principle of 3 m² of area provided for each user.

4.2.10 Management of special features

Arrangements for the management of special features (e.g. waterslides, wave machines, inflatables) should be included. The planned control requirements for the special features should be documented and should include maintenance and supervision.

4.2.11 Managements of events

Arrangements for the management and supervision requirements of events, e.g. galas and private hire set up, should be detailed.

4.2.12 Management of pool users with special needs

Arrangements for use of the pool by users or groups with disabilities, users with medical conditions for which special arrangements might be necessary, e.g. users with an epileptic condition not under the control of medication, users using colostomy bags, should be recorded.

4.2.13 Use of pool equipment

Instructions for the use of pool equipment (e.g. pool covers and hoist) should be detailed to ensure the equipment is erected and dismantled in order to prevent injury to users and employees.

4.2.14 First aid

Details of first aid provision should include first aid equipment (e.g. spine board) and training qualifications of employees to enable the treatment of users and employees.

4.2.15 Poolside safety equipment

Poolside safety equipment should be listed including, for example, throw bags and reach poles, fire safety equipment/alarms and pool-drowning alarms. Arrangements for testing/checking the equipment, individual responsibilities and maintenance of test records should be documented.

4.2.16 Conditions of pool hire

Conditions of pool hire issued to outside organisations when booking exclusive use of the pool should be recorded. The hirer should be made aware of his/her responsibilities and that they will be monitored to ensure these are being fulfilled.

4.2.17 Non-conformance

Procedures for the identification of and action for non-conformances in accordance with the recommendations of this PAS should be detailed.

4.3 Emergency action plans

The EAP should adequately detail the action to be taken in the event of the following foreseeable emergencies:

- overcrowding
- disorderly behaviour (including violence to employees)
- lack of water clarity
- outbreak of fire (or sounding of the alarm to evacuate the building for any foreseeable emergency)
- bomb threat
- lighting failure
- structual building failure
- emission of toxic gases e.g. chlorine
- serious injury to a user
- faecal contamination of the pool water
- spinal cord injury
- discovery of a casualty in the water
- chemical spillages, e.g. inadvertent mixing of cleaning chemicals.

The EAP should:

- detail the specific arrangements at the pool for raising the alarm, the communication between all employees both on poolside and in supporting roles (e.g. calling the emergency services)
- clearly identify the role of all employees at the various relevant stages of the appropriate emergency
- consider the management of emergencies at all relevant operational times, including when reduced staffing levels are employed.

4.4 Incident management

Competent and suitably qualified employees should deal with first aid treatment and incidents, including pool rescues! Individual records of accidents and incidents should be separately maintained for pool users and employees! All first aid treatments, incidents, in-water emergencies, near misses and potential incidents should be recorded!

First aid/incident records should include, where applicable:

- circumstances of the accident/incident

- date and time of the accident/incident
- location of the accident/incident
- casualty/victim details, e.g. name, age, address etc
- injuries sustained
- any witness reports or comment
- treatment/recommendations or advice given
- details of the first aider or individual completing the form
- details of any follow up or investigation by the organisation

A member of the pool management should review all first aid/incident records and maintain records of the review and any action required and taken. A trend analysis system should be in place for accidents, incidents and pool rescues. The analysis should be conducted at planned intervals of no less than once a year. Records of trend analysis and the review by pool management should be maintained.

5   RISK ASSESSMENT

Risk assessment is central to the effective management of health and safety. It is the duty of pool operators to ensure risks are adequately identified, assessed and controlled to prevent harm to those who are visiting the pool environment and using the swimming pool. An assessment of risk is a careful examination of aspects that could cause harm to people, to establish whether enough precautions have been taken to prevent harm, or whether more precautions need to be taken. As part of the risk assessment pool operators will need to consider all hazards and risks associated with the pool.

- A hazard is anything that may cause harm
- A risk is a chance, great or small, that someone will be harmed by a hazard.

There are five steps which pool operators need to take to make sure a proper risk assessment is done.

- Step 1   Look for hazards
- Step 2   Decide who might be harmed and how
- Step 3   Assess the risks and take proper action
- Step 4   Record the findings
- Step 5   Review the assessment from time to time and revise if it is necessary.

The risk assessment should include information about:

- the physical environment of the pool hall and changing rooms
- safety and cleaning equipment used by employees and activity equipment such as play equipment or teaching aids
- the hygiene levels required for user comfort and safety
- the handling and storage of cleaning chemicals
- safety arrangements for unsupervised pools
- lifeguard training
- lifeguard safety in the normal course of their duties
- the supervision, safety arrangements and control of each type of swimming activity
- the operation of water features and specialized equipment such as waterslides, wave machines or water cannons
- the employment of individuals classified as young persons or children.

6   SAFETY SIGNS

6.1   Different kinds of signs

Safety signs and signals cover prohibition, warning, mandatory, emergency escape and first aid signs. Acoustic signals are also safety signs and may be needed for example with wave machines and water slides.

6.2   Prohibition signs

Prohibition signs (as used for "no diving") should be a white circle with red edging and should contain a black pictogram indicating the danger. Pool operators should be free to design or choose suitable pictogram, which will help maintain a safe pool environment.

These signs may be particularly important where it is necessary to show areas where it is unsafe to swim or to dive.

6.3   Warning Signs

Warning signs should be a yellow triangle with a black edge and black symbol.

These signs may be used where there are sudden changes of depth, marking the depth of the water, and where there may be slippery surfaces

6.4   Mandatory signs

Mandatory signs should be a blue circle with white outlined symbols.

These signs may be used when it is necessary to provide instructions on the safe use of the pool and its equipment.

6.5   Location of safety signs

Pool operators will need to:

- maintain any safety signs which is provided
- ensure that signs are located in appropriate positions and unobstructed, eg. by equipment, plants etc.
- maintain the depth of water in accordance with the information displayed.

Furthermore it is important that

- the existing signs meet the recommended requirements and are clearly visible to bathers, both on the pool surrounds and in water
- all water areas have water depth signs
- the signs can be read by bathers with visual impairments
- the signs include pictorial elements for non-readers.

The pool operator should provide clear signage at all appropriate points depending on pool configuration, including point of entry into the pool.

"No diving" signs should be placed so as to clearly indicate where diving is prohibited because of water depth.

7   REGULATIONS AND RESCUE EQUIPMENT

7.1   Regulations

Regulations for the swimming-pool must be placed beside the entrance in a plain way and easy for all visitors to observe. There must also be sign-boards with regulations on central places in the pool environment.

The regulations shall contain practical rules such as

- information about the open and closing times of the swimming pool
- rules about the use of the swimming pool and other areas
- the use of the room for changing clothes
- rules about sending visitors away from the swimming pool
- situations when children must be accompanied by adults
- situations when children must be able to swim for visiting the swimming pool.

The rules must show that adults always have the full responsibility when bringing children to the swimming pool.

7.2 Rescue equipment

All swimming pools should provide rescue equipment for use in emergency. The type of equipment will be at the discretion of the pool operator and may include items such as:

- reaching poles
- rescue tubes
- lifejackets
- throwing ropes or throwing bags
- spine board
- self contained breathing apparatus
- oxygen equipment

Rescue equipment should be within easy access of every lifeguard when on duty. All lifeguards shall be trained in the use of pool rescue equipment. Regular maintenance of all pool rescue equipment is essential

8   SAFETY MEASURES IN THE POOL AREA

In this section especially recommendable safety measures in the pool area are described.

8.1   Pool tank profile

It is recommended that changes in depths should be clearly identified by the use of colour-contrasted materials or patterned finishes so as to indicate to bathers when they are proceeding to water of different depth. Where colour is used, this should not reduce the visibility of a body on the pool bottom.

8.2   Pool tank edge

The pool tank edge should be colour-contrasted with the pool water so as to render it clearly visible to bathers in the water and on the pool surround. This is particularly important for deck-level pools where the pool edge may be partially submerged.

8.3   Pool tank detailing

Careful consideration will need to be given to the design of recesses, ledges or rails so as to ensure that they are not a hazard. It is important that:

- wave machine openings, sumps or inlets and outlets of the pool water circulation system should have suitable protective covers or grilles
- handrails should be recessed into the pool tank in such a way that it is not possible for limbs to become trapped between the grab-rail and the rear wall of the recess or the tank wall.
- resting ledges should be recessed into the pool wall
- handrails, steps and ladders providing access to the pool must be of sufficient strength and firmly fixed to the surround and tank walls and should have treads which are slip-resistant and have no sharp edges
- ramps should have a slip-resistant surface and handrails on both sides.

8.4   Pool tank bottom

A slip-resistant and non-abrasive finish should be provided on the end walls of the pool and in leasure pools on the beach area and other shallow water areas. The ability to see the bottom of the pool clearly is essential to effective lifeguarding.

8.5   Glazing

It is important to find ways to reduce the amount of glare by the glazing which could affect the view of lifeguards and pool users.

8.6   Diving boards and platforms

Diving boards and platforms should be

- of sound construction and adequate strength

- adequately protected against corrosion
- non abrasive with a slip-resistant surface for divers to walk on
- safe to use.

8.7 Water slides

Where water slides are provided it is important to arrange sufficient lifeguard observation points and a proper queue-system for the users. Acoustic signals can be necessary to regulate the use of the slides. The use of warning-signs is recommended.

8.8 Wave machines, inner-tube rides, slow and fast river rides

Appropriate lifeguarding should be provided when wave machines are in motion and when bathers are travelling in inner-tube rides and slow and fast river rides

9 SUPERVISION ARRANGEMENTS TO SAFEGUARD POOL USERS (POOL SAFETY MANAGEMENT)

9.1 Introduction

All pools require some measures of supervision but arrangements for each location must be determined by the risk assessment. The risk assessment undertaken at a swimming pool will need to include not only the physical hazards but those hazards relating to swimmers and swimming-related activities. When pool operators access the need for supervision they will need to consider

- local circumstances
- the pool structure and equipment
- the way the pool is used and the characteristics of those who may use it.

In order to plan for safe procedures pool operators will need to have an appreciation of the main hazards and risks to users. Most important factors which in the past have contributed to deaths or serious injuries are inadequate or inappropriate supervision or absence of or inadequate response by lifeguards in an emergency.

9.2 The pool lifeguard

Safe operation of pools generally requires the deployment of lifeguards. The aim of all lifeguards should be to provide adequate supervision of the day to day operations of swimming facilities to ensure safety of the users. It is the responsibility of the pool operator to ensure that they are sufficient in number, adequately trained, effectively organised and diligent in their duties.

9.2.1 Duties of a lifeguard

Arguably prevention is the most important duty of the pool lifeguard and can be achieved through encouraging pool users to act responsibly and in a safe manner. The key functions of the lifeguard are to:

- keep a close watch over the pool and the pool users, exercising the appropriate level of control
- communicate effectively with pool users and colleagues
- anticipate problems and prevent accidents
- intervene to prevent behavior which is unsafe. The lifeguard has to ensure that
- **there is no running**
- **there is no pushing**
- **there is no diving or jumping in shallow water**
- **there is no offensive behaviour**
- **users are protected from unruly behaviour and dangerous actions**
- **users abide by local laws pertaining to the centre and any other regulations**
- imposed by the management
- **users are enjoying their desired activity in a pleasant, healthy and safe environment**

- identify emergencies quickly and take appropriate action
- carry out a rescue from the water
- give immediate first aid to any casualty
- be able to supervise

9.2.2   9.2.2 Lifeguard qualification

A pool lifeguard qualification requires two elements: core or foundation knowledge and skills as well as site-specific knowledge and skills. All lifeguards need frequent, suitable training, which should be recorded to ensure the retention of these skills. Lifeguard training should include knowledge of pool supervision and supervision skills and practical skills in scanning and observation. Effective supervision requires high level of concentration and attentiveness and the length of duty spells on the poolside is one important factor affecting lifeguards. Lifeguards are in the front line of pool user education and can help prevent accidents. Therefore good communication skills are essential. Lifeguards can educate pool users about the hazards and risks with a particular pool or activity and about water safety generally. An effective method is to firmly draw attention to clearly designed and well-placed signs.

An essential skill required by a lifeguard attempting to carry out resuscitation is the ability to perform basic life support using the technique of rescue breathing and chest compression, together known as cardiopulmonary resuscitation (CPR). Lifeguards should also have sufficient knowledge about the use of approved methods of extended life support including skills of oxygen insufflation and automated external defibrillation (AED). A small but nonetheless significant number of accidents occur in swimming pools, in which the casualty sustains a spinal injury. The lifeguards should receive adequate training in awareness of spinal injuries so that they ensure an absolute minimum of movement of the casualty's spine when they are moved and when ensuring a clear airway. It is essential that where specially designed spinal boards are available lifeguards are trained, individually and as a team, in their use and practise their techniques on a regular basis.

9.2.3   Requirement of a lifeguard

In order to perform their duties lifeguards will need to:

- be physically fit, have good vision and hearing, be mentally alert and self-disciplined
- be strong, able and confident swimmers
- be trained and have successfully completed a course of training in the techniques and practices of supervision, rescue and first aid in accordance with a syllabus approved by a recognized training organisation
- receive a programme of induction (to include health and safety management) prior to undertaking their duties and as specified by the pool operator
- receive a programme of regular ongoing training.

9.2.4   Physical fitness

A lifeguard should have a good level of physical fitness. A lifeguard's level of hearing and vision will need to take this into account when carrying out their risk assessments and ensure that the lifeguard's standard of hearing and vision is such that it does not interfere with the duties the lifeguard has to undertake.

9.2.5   Swimming ability

It is strongly recommended that all lifeguards are sufficiently fit and have the ability to swim on their front for 100 m without stopping, and to swim 100 m on their back without stopping and to swim 50 m within 60 seconds and to surface dive to a depth of at least 2 m. The risk assessment will determine what levels are needed for each pool where the requirements may be greater than stated here.

9.2.6   Lifeguard training

All lifeguards need to be effectively trained by qualified persons to enable them to carry out their role and tasks efficiently and for the health, safety and welfare of all in their charge. The duties should be suitably restricted and supervised until the necessary competence has been re-

ceived. All training should ensure that there is adequate time spent of observation and surveillance techniques, and also on the effective conduct of simulated emergency situations.

It is essential to maintain written records for all training sessions, which include: names of those involved, what they did, including use of equipments, date and length of training sessions. It is strongly recommended that pool lifeguards hold a current qualification issued by an appropriate national governing body.

9.2.7 Clothing

Lifeguards need to wear distinctive clothing so that they can easily be recognized in an emergency. They also need to carry whistles. It is recommended that pool operators consider the clothing (uniform) worn by lifeguards when on duty. It needs to be distinctive and pool operators may wish to consider the internationally accepted colours of red shorts/shirts and yellow top. Clothing for lifeguards should be of a design appropriate to their role and should not hamper them during an in-water rescue. The International Lifesaving Federation recommends the colours of red and of yellow as those to be worn by lifeguards. (i.e. Yellow 'top' and red 'bottoms).

9.3 Deployment of lifeguards

9.3.1 Duty spells and structuring of duties

The length and structuring of duty spells require careful consideration by pool operators who should specify the maximum period of uninterrupted supervision, the length of the working day and programmed breaks from duty. To maintain the high levels of vigilance and concentration required by lifeguards, pool operators should make allowance for any of the following factors when deciding the length of duty spells:

- features of pool design affecting vision, hearing or concentration
- inappropriate illumination
- problems of glare and reflection
- inadequate ventilation system
- poor acoustics
- extreme temperatures or excessively high humidity, or hot sun in open pools, solar gain
- water turbulence, crowded conditions and excessive noise will tend to increase risks
- wave machines/flumes, features and other equipment
- distractions from poolside activities, e.g. radios, ball games and similar activities.

Any of these may suggest the need for an increase in the number of lifeguards and for a decrease in surveillance spells, for example when pools are close to capacity and where seasonal or other peak loading can be expected.

9.3.2 Lifeguard numbers

Given the wide range of pool facilities and the ways pools are used it is not possible to make specific recommendations for lifeguard numbers. Pool operators will need to consider what is required and take into account all relevant local circumstances at any particular time. Circumstances to consider are for example:

- the size and form of the pool
- the surfaces and the depth of the pool
- the possibilities to survey the pool if special features are available or in operation such as diving installations, wave machines, currants, water slides, inner tube rides, slow and fast river rides, falling rapids, walls for climbing.

A minimum of one qualified lifeguard should be supervising, facing and watching people in the water at all times. Where only one lifeguard is on duty at the poolside there should be adequate means, such as an alarm or some form of bleeper of summoning assistance rapidly to the pool area. This is essential where a single lifeguard is involved in an in-water rescue. The remaining bathers are no longer supervised until backup lifeguards arrive and the recovery of a casualty from the water often requires at least two people. There should be sufficient numbers of lifeguards during unprogrammed sessions for all bather loads, see table below.

Table 9-1: Lifeguard Numbers: Basic Guideline

Approximate pool size	Area	Minimum number of Lifeguards	number of Lifeguards in busy conditions
20 m x 8.5 m	170 m²	1	2
25 m x 8.5 m	212 m²	1	2
25 m x 10 m	250 m²	1	2
25 m x 12.5 m	312 m²	2	2
33.3 m x 12.5 m	416 m²	2	3
50 m x 20 m	1,000 m²	4	6

Busy conditions for the pool should be defined in the NOP. The impact of currently available technology should be assessed in relation to the supervision requirement A risk assessment should be conducted for programmed swimming sessions.

9.3.3 Surveillance/ zones

All areas of the pool and its environs must be adequately observed and supervised. The pool may be divided into zones to ensure all areas are covered. Each zone will need to be continuously scanned. Zones will include the water area above and below the surface plus steps, ladders, activity equipment, walkways entrances and the poolside. Cameras and computer aid surveillance system are useful to assist in pool supervision. Scanning is the skill required by lifeguards to constantly watch a particular zone using a sweeping action. They will need to be able to scan their zone of supervision in 10 seconds and to be close enough to get to an incident within 20 seconds. This is an internationally recognised practise and is known as the 10-20 system.

10 SUPERVISION REQUIREMENTS FOR SPECIAL ACTIVITIES

Where specialist equipment is provided the pool operator will need to consider the risk and hazards stemming from its use and make arrangements for safe system of work. Special equipment used by bathers can be:

- diving boards and platforms
- water slides
- wave machines
- river rides of different kind.

10.1 Diving boards and platforms

Diving boards and platforms should be directly supervised at all times they are open for use to ensure that they are used correctly and safely and that swimmers and divers do not endanger each other. The supervisor of lifeguard should be trained to recover a person from the deepest pool. Queuing and congestion on narrow stairways should be avoided. Where equipment is positioned over an area of a main pool some form of segregation on the surface of the water should be provided and additional supervision by lifeguards is likely to be required.

Diving from the poolside should not take place in unprogrammed swimming sessions where:

- the depth of the water is less than 1.5 m; or
- there is less than 7.6 m forward clearance; or
- where the height of the pool surround above the level of the water is more than 0.38 m

Diving from the poolside should not be taught where the depth of the water is less than 1.8 m and then only shallow dives should be taught. The teaching of diving from diving boards should only take place in installations that meet FINA requirements.

Competitive swimming racing dives should not be performed if the depth of the water is less than 0.9 m.

Starting platforms for dives should be no more than 0.75 m above the level of the water

Each pool and teaching situation for diving is different and a risk assessment should be conducted which considers the following factors:

- the suitability of the general design of the pool area for teaching and coaching;
- the depth of the water
- water quality
- pool organisation and responsibilities
- qualifications, skills and experience of teachers and coaches
- pupils and their abilities.

10.2 Water slides

The slide will need to be inspected daily. Use and supervision arrangements for the slide should:

- take account of the manufacturer's instructions, e.g. on methods of riding (no going down in pairs or chains or one rider too close to the next, no standing up on the slide, no going down head-first
- regulate the use to avoid multiple use or queuing on narrow staircases
- always see to that the slides are supervised at water level in case of an accident and that supervision may also be necessary at the entry to the water slide for safety or regulatory reasons
- include the display of suitable instructions and safety signs appropriately sited
- include details for when the slide is in use
- ensure good communication between the supervising lifeguards.

In certain circumstances pool operators may wish to consider controlling the water slide by providing a traffic-light system at the top of the slide which utilises body movement sensors at the top and bottom of the slide path.

10.3 Wave machines

Those operating the equipment should have received instruction on switching off machine safely in case of an emergency. Bathers will need to be aware, where appropriate, of different wave patterns and strength and that the waves will make swimming more difficult. The pool operator will need to consider:

- that lifeguards must be kept in position at all times when the machinery is in motion
- intervals between successive operations
- the effort of the waves on other features
- that supervision will need to be from the sides in order to see between the waves.

10.4   River rides (Inner-tube rides, slow and fast river rides, falling rapids)

The operator will need to consider especially adequate lifeguard numbers to visually cover the whole of the river park, positioning of lifeguards to provide observation of complete ride and to allow easy access in the event of an emergency.

11 USER GROUPS

11.1 Users under 8 years of age.

- There should be a documented policy in place detailing the ratio of under 8 years olds accompanied by a responsible individual to be admitted into the pool.
- Users under the age of 8 years should always be accompanied in the pool water and directly supervised by a responsible individual.
- A responsible individual should accompany children under the age of 4 in the water on a ratio of one responsible individual to one child.
- A responsible individual should accompany children between the ages of 4 and 7 in the water on a ratio of one responsible individual to two children.

- Variations to above ratios should be justified by a documented risk assessment that considers risk reduction measures of design, additional supervision, use of approved flotation devices and user competence.
- The pool management should ensure that all responsible individuals are aware of the rules of admission for children under 8 years old before they enter changing rooms.

11.2 Weak swimmers

There should be a process in place for lifeguards to monitor unaccompanied weak swimmers over 8 years of age. Signs should be displayed and physical barriers used where necessary, cautioning weak swimmers from entering areas of the pool that might place them in danger.

11.3 Teaching and coaching

- Teachers and coaches should be competent and qualified to an appropriate recognized national rescue award to rescue their pupils, or there should be qualified lifeguards to supervise the pool.
- Where qualified lifeguards are employed to supervise swimming lessons or play activity within the lesson, the division of responsibility between lifeguard and swimming teacher/coach should be clearly defined and documented in the NOP
- Teachers and coaches responsible for rescue should limit class sizes in accordance with Table 11-1.

Table 11-1 Teacher/coach to user recommended ratios

Class ability	Recommend ratio of teacher to pupils
Beginners and non- swimmers	1:12
Adult and child classes	1:12
Improvers (can swim 10 m) up to competent (can swim 25 m and tread water for 2 min)	1:20
Competitive swim training	1:30
In-water teaching	1:4
Swimmers with disabilities	1:8 (plus helpers) 1:20 (deep water)
Aerobics	1:30 (shallow water) 1:12 (beginners and improvers)
Diving	1:15 (competitive divers)
Synchronised swimming	1:20

Qualified lifeguards should be on duty during any unprogrammed play (e.g. mat sessions) within swimming lessons, or where unprogrammed swimming is taking place adjacent to a swimming lesson.

12 EMERGENCY ARRANGEMENTS

Where a risk assessment determines that a pool does not require constant poolside supervision it is strongly recommended that the arrangements should include:

- signs at the entrance, in the changing rooms and in the pool area indicating that the pool is not staffed and drawing the attention to simple rules of use and safety
- signs in the pool area showing the depth of the water
- an alarm to summon help in an emergency and a notice giving instructions in its use
- suitable rescue equipment (poles,throwing ropes, buoyance aids) available by the poolside and clearly identifiable.

12.1 Emergency equipment and alarm system

All pools should have emergency equipment for use by lifeguards and others who may have supervisory responsibilities. Staff or other users should be trained in the use of the equipment and it would be good practise to keep a record of the training. There may be a number of alarms for different types of emergencies, e.g. fire, plant failure, drowning etc. Each alarm should be distinctive and it may help in buildings with a public address system to have recorded messages alerting staff to a particular type of emergency. All alarms should be tested daily and there should be a record of equipment and alarm checks. The alarm-shot must be placed in a way which gives the lifeguard on duty the possibility to reach it without any delay. The alarm must have such capacity that it can be heard and seen by all staff on duty. The nature of the signals should be included in the emergency procedures section of the pool operator's manual. Emergency signals should only be used when an emergency occurs, except in training sessions.

12.2 Emergency room

The emergency room should be located in the immediate neighbourhood of the pool. The room should provide the following:

- a removable screen or curtain which protects the privacy of the casualty
- medical examination couch with blankets and pillows
- hot and cold water
- good ventilation
- a toilet nearby
- two chairs
- stretchers
- access to a spine board and set of rigid extrication (cervical) collars
- access to container for the collection and subsequent disposal of soiled medical items used in first aid
- sharps container for collection of any dangerous sharps, e.g. syringes
- access to oxygen equipment
- soap and nailbrush
- suction apparatus operated by hand or foot
- pressure bandage
- First Aid case.

The emergency room must easily be reached by the ambulance attendants and the ambulance must have the possibility to be driven as near the emergency room as possible and be parked in such a way that curious people can not come close to it. An employee in the swimming pool must be chosen with special responsibility for the readiness and equipment of the emergency room.

12.3 Plans for alarm and evacuation

12.3.1 The plan for alarm

The plan for alarm should point out the person or persons responsible for:

- accomplishing water life saving and CPR
- alarming the SOS rescue centre and/ or ambulance
- taking out the First Aid equipment, stabilizing stretcher and neck-collar
- meeting and showing the way for the ambulance and rescue attendants
- making a note about the data for report of the accident (name address, telephone etc)
- keeping curious people away
- contacting relations and school.

12.3.2 The plan for evacuation

A plan for evacuation should be established. This plan should show:

- the person who is responsible for informing and teaching all the staff about the plan
- the person who is responsible for regularly modifying and revising the plan

- the location of the staff on places and exits which are chosen in advance
- information about a smooth way to alarm the visitors and a prepared loud-speaker message
- that when it is necessary the lifeguard on duty leads the evacuation
- that the lifeguard on duty shall alarm the SOS rescue centre
- the person who has the task of meeting the rescue attendants and police and then be able to give proper information if visitors or staff still are to be found in the swimming pool area.

13 REPORTS AND STATISTICS

Pool operators may find it a useful practise to record and monitor all accidents and incidents, particularly successful rescues. This will help:

- to ensure effective risk assessment
- to identify possible problem areas
- in possible cases of civil legal action at a later date.

Careful recording and consideration of any incidents experienced at the pool will help to ensure that safety arrangements remain relevant. Accidents or incidents which have occurred within the swimming pool should be reported by the lifeguard on duty. The report should be handed over to the pool operator and shall contain:

- Name, address, telephone number and age of the victim
- Time and date of the occurrence
- Place of the occurrence
- Description of the occurrence
- Any witness report or comments
- Arrangements
- Ambulance transport
- Possibilities to prevent or preclude the occurrence
- Staff on duty
- Signing.

Together with the report given periodical statistics about accidents and incidents and places in the pool area where the accident or incident occurred shall be established. These statistics shall then be established yearly and be used as a basis for measures of maintenance and improvement and be considered when making risk assessments.