DIVING SAFETY AT SWIMMING POOLS

## Summary of Key Information

The below grid summarises key information from this guideline and should be read in combination with the full guideline:

| **Type of Dive** | **Diving Height** | **Minimum Depth** | **Optimal Depth** | **Minimum Forward Clearance** | **Additional Safety Considerations** |
| --- | --- | --- | --- | --- | --- |
| **Recreational Diving** | From Water Level | 1.8m | 2m | 6m from the edge of the pool, the first 5m of which should be at least the recommended water depth | Lifeguards required, signage in compliance with ISO 20712, no running dives, diving in wave pools, or diving from starting blocks if depth < 2m |
| **Recreational Diving** | From Starting Blocks or Upstands (up to 0.75m above the water line) | 2m | 2m | 6m from the edge of the pool, the first 5m of which should be at least the recommended water depth | Lifeguards required, signage in compliance with ISO 20712, no running dives, diving in wave pools, or diving from starting blocks if depth < 2m |
| **Teaching Diving** | Sitting Dive | 1.2m | 1.5m | 6m from the edge of the pool, the first 5m of which should be at least the recommended water depth | Qualified instructors only, temporary signage required for lessons, progressive instruction sequence, no running dives, diving in wave pools, simultaneous instruction, or diving if depth/clearance is inadequate |
| **Teaching Diving** | Instructor-assisted Crouching Dive | 1.3m | 1.5m | 6m from the edge of the pool, the first 5m of which should be at least the recommended water depth | Qualified instructors only, temporary signage required for lessons, progressive instruction sequence, no running dives, diving in wave pools, simultaneous instruction, or diving if depth/clearance is inadequate |
| **Teaching Diving** | Crouching and Standing Dive | 1.5m | 2m | 6m from the edge of the pool, the first 5m of which should be at least the recommended water depth | Qualified instructors only, temporary signage required for lessons, progressive instruction sequence, no running dives, diving in wave pools, simultaneous instruction, or diving if depth/clearance is inadequate |
| **Competitive dive starts** | Concourse Level (up to 0.2m above the water line) | 1.2m | 2m | 7.5m from the edge of the pool, the first 5m of which should be at least the recommended water depth | Coaches and/or official required, signage warning about dive entries, advanced warning to competitors, starting block inspection, no diving if depth/clearance is inadequate |
| **Competitive dive starts** | 0.2-0.4m Above the Water Line | 1.35m | 2m | 7.5m from the edge of the pool, the first 5m of which should be at least the recommended water depth | Coaches and/or official required, signage warning about dive entries, advanced warning to competitors, starting block inspection, no diving if depth/clearance is inadequate |
| **Competitive dive starts** | 0.4m-0.75m Above Water Level | 1.5m | 2m | 7.5m from the edge of the pool, the first 5m of which should be at least the recommended water depth | Coaches and/or official required, signage warning about dive entries, advanced warning to competitors, starting block inspection, no diving if depth/clearance is inadequate |
| **Diving Towers and Springboards** | 1m Springboard | 3.4m | 3.5m | 5m, then additional 4m to any wall ahead | Lifeguards required, daily checks, handrails, surface agitation, lighting, supervised use only, no recreational diving beyond 3m platforms/springboards |
| **Diving Towers and Springboards** | 3m Springboard | 3.7m | 3.8m | 6m, then additional 4.25m to any wall ahead | Lifeguards required, daily checks, handrails, surface agitation, lighting, supervised use only, no recreational diving beyond 3m platforms/springboards |
| **Diving Towers and Springboards** | 1m Platform | 3.2m | 3.3m | 4.5m, then additional 3.5m to any wall ahead | Lifeguards required, daily checks, handrails, surface agitation, lighting, supervised use only, no recreational diving beyond 3m platforms/springboards |
| **Diving Towers and Springboards** | 3m Platform | 3.5m | 3.6m | 5.5m, then additional 4.0m to any wall ahead | Lifeguards required, daily checks, handrails, surface agitation, lighting, supervised use only, no recreational diving beyond 3m platforms/springboards |
| **Diving Towers and Springboards** | 5m Platform | 3.7m | 3.8m | 6m, then additional 4.25m to any wall ahead | Lifeguards required, daily checks, handrails, surface agitation, lighting, supervised use only, no recreational diving beyond 3m platforms/springboards |
| **Diving Towers and Springboards** | 7.5m Platform | 4.1m | 4.5m | 8m, then additional 3m to any wall ahead | Lifeguards required, daily checks, handrails, surface agitation, lighting, supervised use only, no recreational diving beyond 3m platforms/springboards |
| **Diving Towers and Springboards** | 10m Platform | 4.5m | 5m | 11m, then additional 2.5m to any wall ahead | Lifeguards required, daily checks, handrails, surface agitation, lighting, supervised use only, no recreational diving beyond 3m platforms/springboards |
| **Diving Towers and Springboards** | Above 10m Platform | Not recommended for use in aquatic facilities | Not recommended for use in aquatic facilities | N/A | Platforms above 10m are not recommended for use in Aquatic Facilities |

## Background

Without sufficient risk management, diving can be a dangerous activity. When conducted safely, diving is an integral part of the aquatic experience. Research has shown unsafe diving is one of the more prevalent causes of spinal cord injury (10% of all spinal injury cases, 20% of all quadriplegia cases), particularly in children aged 6 to 15 years. The highest incidence occurs among those aged 10 to 14, followed by the group aged 5 to 9 years. The cost to the Australian economy of spinal cord injuries is estimated at $A674 million annually (as at 2024). This is why developing, implementing and updating safety protocols for diving at aquatic facilities is so important.

## Purpose

To provide guidance to enhance the safety of diving practices in aquatic facilities, covering all aspects from recreational diving, competitive dive starts, teaching diving, to the design and supervision of diving boards, platforms, and pool tanks.

## 3. Scope

This guideline applies to all aquatic facilities where diving activities occur. It sets minimum standards for pool design, supervision, and safety requirements to prevent accidents and injuries.

This guideline does not cover scuba diving, nor does it provide guidance for the sport of diving (except for dive tower and springboard design safety).

All persons who wish to participate in swimming or like (e.g. Lifesaving) competitions should be instructed in the principles of safe water entry and diving techniques, and competitive dive starts in a progressive education program under the instruction of an appropriately qualified Coach or Instructor.

All participants in swimming or like competition should receive appropriate instruction prior to participating in any swimming or like competitions.

This guideline contains information relating to the management of activities occurring at aquatic facilities, further guidance relating to the design of aquatic facilities is contained in the [Guidelines for Safe Pool Operations - Swimming Pool Design](https://www.royallifesaving.com.au/subscribers/GSPO/swimming-pool-design/swimming-pool-features/sp11-diving-pools-and-facilities) .

## 2. Definitions

**Diver Entry:** Entry into water where the upper body (hands, arms, and head followed by the torso and lower limbs) enters first.

**Forward Clearance**: is defined as the distance out from the platform from which the diver departs, for which the water should be unobstructed. Obstructions may be permanent, such as pool walls, or temporary, such as pool equipment or other swimmers.

**Competitive Dive Start:** is defined as entry into water from the side of the pool (flush or raised) or from a starting block for the purpose of starting a swimming based competition or training for a swimming based competition that may include the following:

* Swimming and related (triathlon, distance swimming) squad training;
* Swimming competition instruction;
* Swimming competitions/meets for swimming clubs, schools and other groups;
* Lifesaving competition

**Plummet:** the plummet line is a vertical line extending through the centre of the front edge of the platforms, board, tower or pool edge.

**Teaching Diving:** refers to aquatic education programs which are conducted for the purposes of teaching someone how to dive, or how to improve their dive, and may be conducted during the following programs:

* Swimming and water safety instruction
* Swimming and related (triathlon, distance swimming, Lifesaving Sport) squad instruction
* Lifesaving instruction

## 3. Description

### 3.1 Recreational Diving (current ref: AP13)

Recreational diving should only be permitted provided the following is in place:

**Risk Assessment**

Aquatic facility owners / operators should complete a Recreational Diving Risk Assessment (or incorporate into the broader aquatic supervision risk assessment and supervision plan).

The risk assessment should consider:

* Whether the facility has the appropriate water depths for safe recreational diving
* What qualifications, training, professional licensing (if applicable) and experience the lifeguards needs to supervise diving effectively and ensure safety
* Whether the lifeguard is medically fit and healthy to supervise diving and conduct diving-related rescues (such as deep-water spinals)
* The availability of suitable aquatic spinal injury management rescue equipment
* The availability of appropriate signage to indicate where recreational diving is permitted and/or prohibited

**Water Depth Requirements**

* **Minimum Depth for Diving From Water Level**: 1.8m
* **Optimal** **Depth for Diving From Water Level:** 2m
* **Minimum Depth for Diving from Starting Blocks or Upstands (up to 750mm in height above water level)**: 2m
* **Forward Clearance**: 6m of forward clearance from the edge of the pool, the first 5m of which should be at least the recommended water depth.

**Supervision**

* **Lifeguards**: Should be in place wherever recreational diving is permitted.
* **Protocol**: Lifeguards should enforce facility rules and prohibit diving if the water depth or forward clearance requirements are not met.

**Additional Safety Considerations**

* **Signage**: Should comply with [Guidelines for Safe Pool Operations - Aquatic Signage](https://www.royallifesaving.com.au/subscribers/GSPO/aquatic-signage) and ISO 20712- Water safety signs and beach flags.
* **Prohibited Practices**: Running dives and diving in wave pools should be prohibited, regardless of depth.
* **Starting Blocks:** Should be isolated to prevent recreational use where the pool depth is less than 2m
* **No Diving Areas:** Should be clearly marked with ‘no diving’ signage, consistent with the [Guidelines for Safe Pool Operations - Aquatic Signage](https://www.royallifesaving.com.au/subscribers/GSPO/aquatic-signage) and ISO 20712- Water safety signs and beach flags.

### 3.2 Teaching Diving (current ref: AP9)

Teaching a student in a structured and formal class is inherently different from permitting recreational users from diving (or teaching diving to others), and that if delivered with appropriate risk management by suitably trained and qualified instructors, is an important part of teaching swimming and water safety skills.

The teaching of diving in the context of swimming and water safety lessons can pose a serious risk of injury to the swimmer which could result in a spinal injury, particularly to the head and neck, if teaching diving is not conducted safely and in an appropriate environment.

There is also a significant difference in the level of risk posed by the size / height of the student in relation water depth (e.g. adult-sized vs toddler sized).

Diving should be taught using a progressive instruction sequence, such as:

* In-water push glides from a standing position
* Instructor-guided seated push and glide
* Poolside seated dive
* Instructor-assisted crouching dive
* Poolside un-assisted crouching dive
* Poolside standing dive
* Starting block dive

Progression to the next level should only be permitted after successful demonstration of the current skill.

Swimming and water safety teachers are (generally) not qualified to teach competitive dive starts entries. Swim and/or diving coaching accreditation are needed for instructing this skill.

Minimum depths assume a typical-sized student in typical conditions, and settings should be adjusted based on the physical attributes of the student.

Teaching of diving should only be permitted provided the following is in place:

**Risk Assessment**

Aquatic education program providers should complete a Teaching Diving Risk Assessment (or incorporate into a broader aquatic education program or aquatic risk assessment).

The risk assessment should consider:

* Whether the facility has the appropriate water depths for the safe teaching of diving in relation to the size of the student
* The qualifications, training, professional licensing (if applicable) and experience the swimming and water safety instructor needs to conduct diving lessons safely
* The teaching progression for safe diving lessons
* Whether the swimming and water safety instructor is medically fit and healthy to teach diving lessons
* The availability of backup supervision and trained personnel in aquatic spinal injury management
* The availability of suitable aquatic spinal injury management rescue equipment
* The availability of appropriate signage during the lesson to indicate that ‘diving lesson in progress’

In addition to the documented risk assessment, aquatic education program providers should undertake dynamic risk management strategies that consider the instructors’ physical attributes and the students’ physical attributes and the environment.

**Water Depth Minimum Requirements**

* **Minimum Depth for Sitting Dive:** 1.2m
* **Optimal Depth for Sitting Dive:** 1.5m
* **Minimum Depth for Instructor-assisted Crouching Dives:** 1.3m
* **Optimal Depth for Instructor-assisted Crouching Dives:** 1.5m
* **Minimum Depth for Unassisted Crouching and Standing Dives**: 1.5m
* **Optimal Depth for Crouching and Standing Dives**: 2m
* **Forward Clearance**: 6m of forward clearance from the edge of the pool, the first 5m of which should be at least the recommended water depth.

**Supervision**

* **Qualified Personnel for Teaching Diving**: Only qualified swimming and water safety teachers or swim coaches should teach diving. Refer: [Guidelines for Safe Pool Operations – Training & Qualifications](https://www.royallifesaving.com.au/subscribers/GSPO/training-and-qualifications) for qualification requirements.
* **Qualified Personnel for Spinal Management**: a person holding a lifeguard skillset (or the appropriate complex water rescue competencies for aquatic spinal management) who has access to appropriate spinal rescue equipment should be on site when diving is being taught.
* **Protocol**: Swimming and water safety teachers should not permit or teach diving activities if the water depth and/or forward clearance is inadequate.

**Additional Safety Considerations**

* **Signage:** In addition to the usual permanent pool safety signage, when teaching sitting diving or diving in a pool depth between 1.2m and 1.8m, temporary signage should be displayed stating that “Warning: Lesson in Progress. Dive Entries Permitted by Students Under Instructor Supervision Only”, or similar. Note: A sign is not necessary where the pool is being used solely for learn to swim under supervision.’ ‘No diving’ signage should be mounted around the pool anywhere where the depth is less than 1.8m.
* **Instructor height:** It is noted that many swim instructors may not be able to assist a student through a sitting or crouch dive when the pool depth is 1.5m or greater, due to the manual handling risk on the instructor. In these circumstances, aquatic facility operators should ensure the manual handling risk is considered.
* **Teaching Points:** can be used to assist in student safety, such as ‘Lock hands, lock head steer up. Grip edge with toes.’
* **Prohibited Practices:** Running dives and diving in wave pools should be prohibited, regardless of depth.
* **Simultaneous Instruction**: Diving classes should be segregated from swimming areas; one teacher should not attempt to conduct both diving and swimming instruction simultaneously.
* **Facility Familiarisation**: Students should receive instructions on safety considerations prior to the commencement of diving lessons.
* **Water Depth Check**: Teachers should verify water depth and forward clearance before diving.
* **Student Vulnerabilities:** Teachers should consider whether students have any features or characteristics that may mean additional safety precautions are needed, such as a particularly large or tall student, or a student with either physical or intellectual impairments that may make following safety instructions more difficult. Reasonable adjustments should be made to ensure student safety, including if necessary, forgoing diving instruction.

3.3 Competitive Dive Starts (for Trained Competitors) (current ref AP12)

Competitive Dive Starts is the practice of diving off the pool edge or start blocks for the purposes of commencing a swimming or lifesaving race event, or training. The dive is typically a shallow dive performed with the intent of travelling as far forward as possible and accelerating the competitor’s start to their swim. Trained competitors are people who have had extensive training and practice at performing competitive dive starts. The risk of injury in a pool with sufficient forward clearance at the appropriate depth is low, however there are heightened risks where pools have submersible booms or where competitors are inexperienced or poorly trained. For these reasons, competitive dive starts for school carnivals or where there are submersible booms should be treated with extra care.

Competitive Dive Starts should only be permitted provided the following is in place:

**Risk Assessment**

Competition organisers and coaches and instructors supervising training for competition or providing competitive training programs should complete a Competitive Dive Starts Risk Assessment (or incorporate into a broader event, program or aquatic risk assessment).

The risk assessment should consider:

* Whether the facility has the appropriate water depths for the competitive dive starts
* What qualifications, training, professional licensing and experience the coaches, officials and instructors needs to conduct/supervise competitive dive starts safely
* Whether coaches, officials and instructors are medically fit and healthy to supervise and/or instruct competitive dive starts
* The availability of backup supervision and trained personnel in aquatic spinal injury management
* The availability of suitable aquatic spinal injury management rescue equipment
* The availability of appropriate signage during the competition to indicate that ‘competitive dive starts is in progress’

**Water Depths for Competitive Swimming and Training**

Competitive dive starts activities should be prohibited if the required water depth or forward clearance is not available.

* **Minimum Water Depth for Dive Starts:**
	+ **From concourse level:** 1.2m. Competitive dive starts may be permitted from concourse level to a maximum height above water of 0.2m (measured from the water line to the plummet).
	+ **0.2-0.4m above the water:** 1.35m (measured from the water line to the plummet).Competitive dive starts may be permitted from concourse level to a maximum height above water of 0.4m. If the start is greater than 0.4m above the water, the start should be commenced in the water.
	+ **From 0.4m-0.75m:** 1.5m or greater. Competitive dive starts may be permitted from a maximum height of 0.75m.
* **Optimal Water Depth for Dive Starts:** 2m.
* **Forward Clearance:**
	+ **Standard:** 7.5m from the edge of the pool, the first 5m of which should be at least the recommended water depth.

**Supervision**

* **Coaches and Officials:** Must ensure competence and supervise dive starts. Refer [Guidelines for Safe Pool Operations – Training and Qualifications](https://www.royallifesaving.com.au/subscribers/GSPO/training-and-qualifications/tq3-aquatic-program-instructors) for relevant minimum qualifications, licensing and training.
* **Lifeguards:** Required for general supervision to enforce rules and signage.

**Additional Safety Considerations**

* **Signage:** In addition to the usual permanent pool safety signage, warning signs are required in areas where dive starts are being conducted. Signage should read: “Warning: Dive Entries Permitted by Trained Swimmers Under Supervision Only”, or similar. Note: A temporary sign is not necessary where the entire pool is closed to the public and being used solely for competition swimming/training or learn to swim under supervision.
* **Advanced Warning:** Prior to participating in swimming events swimmers should be advised and warned of the water depth into which they may be required to dive start into during the course of any competition. Competition entry forms and promotional material should clearly advise competitors of the water depth in which competition(s) will be held and the height above water from which dive starts will occur.
* **Starting Blocks**: Starting blocks should be inspected prior to each use to ensure they are correctly fitted, sturdy and free of any potential hazards, and should only be available for use by those persons deemed as competent at executing a safe forward dive entry. In pools where non-complementary activities are being conducted, starting blocks should be isolated from use when not used for competition or instruction. In most circumstances, starting blocks should not be available to the recreational user.

### 3.4 Recreational Use of Diving Towers and Springboards (Current ref: SV26)

Recreational diving from towers and springboards should only be permitted provided the following is in place:

**Risk Assessment**

The owner or operator of the aquatic facility should complete a Dive Tower and Springboard Risk Assessment (or incorporate into a broader diving or aquatic risk assessment).

The risk assessment should consider:

* Whether the facility has the appropriate water depths for use of diving towers and springboards
* What qualifications, training, professional licensing and experience the lifeguards, coaches, officials and instructors need to conduct/supervise the use of springboards and dive towers safely
* Whether lifeguards, coaches, officials and instructors are medically fit and healthy to supervise and/or instruct diving from towers and springboards, including retrieval from the deepest section of the pool.
* Ensuring dive towers and springboards are supervised at all times they are in use, and that supervisors have no other supervision responsibility for other areas or pools at that time.
* Ensuring that access to dive towers and springboards are restricted when not open for use.
* The availability of backup supervision and trained personnel in aquatic spinal injury management.
* The availability of suitable aquatic spinal injury management rescue equipment
* The availability of appropriate signage which encourages safe use of diving towers and springboards.
* Procedures to minimise the risk of a collision, such as prohibiting entry into the dive pool from any other point that the springboard or tower, entry only after previous user has exited the pool.
* Restrictions for recreational users vs competitive or training users, such as recreational users being restricted when diving to a maximum height of 3 metres on either springboards or platforms, when entering the water feet first (i.e. jumping or bombing) to a maximum height of 5 metres and ensuring that recreational users can only use one board or platform in any one session.
* The maintenance and inspection schedule for the springboards and dive towers, including daily pre-opening inspections and isolation, signposting and reporting procedures for defective or faulty equipment.
* Ensuring that children are not able to access springboards or dive towers unsupervised and that railings prevent the possibility of falls from height.

**Height Restrictions**

* **Maximum Height for Recreational Diving**: 3m for springboards/platforms; 5m for feet-first entries.

**Water Depth and Forward Clearance Requirements**

| **Features** | **Minimum Water Depth** | **Optimum Water Depth** | **Minimum Forward Clearance at Minimum Depth** |
| --- | --- | --- | --- |
| 1m Springboard | 3.4m | 3.5m | 5.0m, then additional 4.0m to any wall ahead |
| 3m Springboard | 3.7m | 3.8m | 6.0m, then additional 4.25m to any wall ahead |
| 1m Platform | 3.2m | 3.3m | 4.5m, then additional 3.5m to any wall ahead |
| 3m Platform | 3.5m | 3.6m | 5.5m, then additional 4.0m to any wall ahead |
| 5m Platform | 3.7m | 3.8m | 6.0m, then additional 4.25m to any wall ahead |
| 7.5m Platform | 4.1m | 4.5m | 8.0m, then additional 3.0m to any wall ahead |
| 10m Platform | 4.5m | 5m | 11.0m, then additional 2.5m to any wall ahead |
| Above 10m Platform | Platforms above 10m are not recommended for use in Aquatic Facilities |

**Supervision**

* **Dedicated Lifeguards**: Must supervise diving areas exclusively, equipped for deep water rescues (e.g. fins available).
* **Focused Supervision**: Lifeguards should be solely dedicated to overseeing the diving area and not distracted by other pool activities.

**Equipment Maintenance**

* **Daily Checks**: Required for all diving equipment before use.
* **Handrails and Barriers**: Handrails on 3m springboards should be surrounded by handrails with a minimum clearance of 1m between vertical pairs.

**Additional Safety Features**

* **Surface Agitation**: Mechanical surface agitation should be installed under diving facilities to aid the diver’s visual perception of the water surface.
* **Lighting**: Minimum illumination of 600 lux required at 1m above water surface.
* **Protocol**: Diving activities should be restricted if the equipment is not in good working order or if the forward clearance is inadequate.

Diving Pools and Facilities(Current Ref: SP11)

Refer [Guidelines for Safe Pool Operations – Swimming Pool Design – SP 11 – Diving Pools and Facilities](https://www.royallifesaving.com.au/subscribers/GSPO/swimming-pool-design/swimming-pool-features/sp11-diving-pools-and-facilities)

## References

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* Guide to Ontario Public Pools Regulation, 2nd Edition, 2004, Lifesaving Society, Toronto
* Managing Health and Safety in Swimming Pools, 3rd Edition, 2003, Sport England Publications, Wetherby.
* GSPO Guideline FD24 Design of Starting Blocks (Starting Platforms)
* GSPO Guideline SU22 Safe Water Entry For Competitions
* GSPO Guideline PR8 Qualifications For Providing Safe Aquatic Programs
* Teaching Swimming and Water Safety – The Australian Way, 2nd Ed, 2008, Mosby
* Safe Depths for Teaching Children to Dive (Blanksby B.A, Wearne F.K, Elliott B.C 1996), The Australian Journal of Science and Medicine in Sport.

## Previous Guidelines

* Guideline AP12 – Supervision of Safe Water Entry (Diving) for Competitions, Issue 1,
* Guideline AP13 - Supervision of Safe Water Entry (Diving) For Recreational Swimming, Issue 1,
* Guideline AP9 - Teaching of Safe Water Entries And Diving, Issue 1,
* Guideline SP8 - Starting Blocks (Starting Platforms), Issue 1,
* Guideline SU22 Safe Water Entry for Competitions – Competitive Dive Starts, Issue 1, Nov 2005
* Guideline SU21 Safe Water Entry for Competitions – Competitive Dive Starts, Issue 1, Nov 2002
* Guideline SU21 Supervision of Competitive Events Issue 1, November 1997
* Guideline SU23 Supervision of Diving (Recreational Swimming), Issue 1, January 2001
* Guideline PR7 Teaching of Diving Issue 3, April 2013
* Guideline PR9 Teaching of Water Entry and Diving, Issue 2, November 2002
* Guideline PR9 Teaching of Water Entry and Diving, Issue 1, July 1996