The View from the Stand: Lifeguard Platform Basics

Lifeguard platforms or stands in a pool must be elevated and located near the water's edge, providing a clear, unobstructed view of the swimming area's surface and bottom. The ability of a lifeguard to have the best, unobstructed view of the bottom of the pool is primarily determined by the height of the stand. But is this enough? We'll examine the proper height and placement of the lifeguard platform for an aquatic facility.

Surveillance Zones

When establishing safety coverage, supervisors or managers must ensure all areas of the water, from the bottom of the pool to the surface, are covered and fully visible to a lifeguard. Pool coverage is separated into surveillance zones.

According to American Red Cross Lifeguarding guidelines:

1. Lifeguards must be able to recognize a victim and reach them in their assigned zone within 30 seconds and;
2. Lifeguards must be able to recognize an emergency, get to the swimmer, extricate, and start giving ventilation within 1 ½-2 minutes.

This is a lot to ask of a lifeguard. Therefore, making sure lifeguards are in the best position to identify a swimmer in distress is important. Lifeguard training programs primarily focus on recognition and response within 30 seconds, but many aquatic facilities fail to establish surveillance zones that make these safety practices feasible.

Visibility Obstructions

Line-of-sight obstructions, glare, turbulence, and refraction affect a lifeguard's ability to see swimmers in the water or objects below the surface. In addition, other line-of-sight obstructions, including divider walls, play features, and lane ropes, block the ability of a lifeguard to quickly identify a person in distress, especially when their stand isn't in a good position; a risk factor that may lead to a drowning. Adjusting the stand's placement and height can make a tremendous difference.

The images below demonstrate what a lifeguard sees while seated in a 2.5-foot lifeguard chair (left photo) and from an elevated position (right photo). These two photos, taken simultaneously at different heights, demonstrate that increasing the height of the lifeguard stand dramatically improves the ability to monitor the swimmers below the surface. At the lower height, glare on the surface causes the children swimming underwater to be nearly invisible. Meanwhile, swimmers' legs nearest the lifeguard stand appear hidden. Any submerged swimmer, invisible to the lifeguard, increases the risk of a fatal accident.

View from 2.5-foot-high lifeguard chair *(courtesy of Maria Bella, Aqua Conscience).*

View from 8-foot-high lifeguard chair *(courtesy of Maria Bella, Aqua Conscience).*

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Stand Positioning

The position of lifeguard stands should work year-round, every hour the pool is open; keeping in mind the time of day and season may affect visibility. For example, as the sun's location changes throughout the day, it can cause a glare or even cast shadows from nearby objects across the surface of the water. So, changes in the appearance of the water's surface will impede the lifeguard's ability to identify a struggling swimmer. Therefore, every aquatic facility should test and evaluate stand placement throughout the day and season and make periodic adjustments.

Unfortunately, there is no magic bullet for stand placement. Instead, facilities need to test various scenarios, beginning by placing the lifeguard stand at the pool's midpoint, near the water's edge. While this sounds simple, it's not.

Lifeguards will have difficulty identifying a drowning victim from their zone if:

1. The chair is too low, or the chair is not in the correct position
2. The lifeguard is focused on counting heads rather than scanning the whole pool, both above and below the surface

Many aquatics facilities have indoor pools designed with overhead lighting or windows. Unfortunately, these design elements create glare on the water's surface. Adding tinted windows or shades can help reduce glare. Even so, aquatics facilities must assess where to position their lifeguards, so they have a clear view of every inch of the pool from their surveillance zone.

It's All About the Angle

When lifeguards are in a higher stand, they have visibility beyond the surface of the water. Refer again to the photos above.

According to Maria Bella, a 40-year aquatics industry veteran from Aqua Conscience, "As soon as you put lifeguards on low stands, the optics change. Glare is a bigger problem, turbulence is a bigger problem, and line-of-sight obstructions – patrons in the way of lifeguard's line of sight – are a much bigger problem." Also according to Bella, it's difficult for lifeguards on lower stands to identify a submerged victim, "because their zones are too big or their chairs are too low." Facilities with lower chairs should add additional lifeguards to ensure the safest zone coverage.

Taking Time to Study

Lifeguards should be positioned, so each has an unobstructed, three-dimensional view of their surveillance zone. Identifying optimum surveillance zones is achieved after testing under various conditions: open swim, lap swim, swim lessons, birthday parties, and others, in the morning, afternoon, and evening hours.

Silhouettes are not the best instruments to validate a zone, as they are two-dimensional. Mannequins are also imperfect for zone validation because they don't mimic the type of activity a swimmer makes while swimming in a pool.

ANGELS™ Devices

A system exists to help aquatics facilities validate lifeguard zones with proper height and placement of the lifeguard stands. ANGELS devices help determine the optimum vantage point to view an object in three dimensions. ANGELS is an acronym for Area Notification Gear for Effective Lifeguard Surveillance. These are anthropometrically accurate devices that provide more precise lifeguard zones, stand placement, and chair height recommendations. The devices are designed to see through to the bottom of the pool and help train a lifeguard's brain to develop consistent, high-quality scanning of the entire surveillance zone. To learn more about the ANGELS devices and process, visit https://www.aqua-conscience.com. Also, watch the webinar on Lifeguard Effectiveness hosted by the National Drowning Prevention Alliance, featuring Maria Bella from Aqua Conscience: https://www.aqua-conscience.com/post/ndpa-webinar-video.

The ANGELS devices test three dimensions of a lifeguard's vision throughout their assigned surveillance zone, allowing them to quickly assess if their zone meets optimum criteria. This way, facilities can alter chair height or the size of the surveillance zones.

Consider this, when a drowning occurs, 98% of the time, the lifeguard was performing their job correctly. It's unfair to put a lifeguard on the stand and make them responsible for human life without properly validating their zone. Furthermore, they have a limited timeframe to complete a rescue, ideally reaching a struggling swimmer within a 30-second window. When considering lifeguard placement and training, do you want a program based on luck or science?

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