3 Surveillance and Recognition

Your primary responsibility as a lifeguard is to help ensure patron safety and protect lives. The main tool used to accomplish this is **patron surveillance**—keeping a close watch over the people in the facility and intervening when necessary. You will spend most of your time on patron surveillance. To do this effectively, you must be alert and attentive—and ready to react—at all times as you continuously supervise patrons.

3-1 AN OVERVIEW OF THE PROCESS OF DROWNING

Drowning is a continuum of events that begins when a victim's airway becomes submerged under the surface of the water (Figure 3-1). The process can be stopped, but if it is not, it will end in death. The process of drowning begins when water enters the victim's airway. This causes involuntary breath-holding and then **laryngospasm** (a sudden closure of the larynx or windpipe). When this occurs, air cannot reach the lungs. During this time, the victim is unable to breathe but may swallow large quantities of water into the stomach. As oxygen levels are reduced, the laryngospasm begins to subside, and the victim may gasp for air but instead inhales water into the lungs.

Due to inadequate oxygen to body tissues, cardiac arrest may occur. This can happen in as little as 3 minutes after submerging. Brain damage or death can occur in as little as 4 to 6 minutes. The sooner the drowning process is stopped by getting the victim's airway out of the water, opening the airway and providing resuscitation (with ventilations or CPR), the better the chances are for survival without permanent brain damage.

No two drowning situations are alike. There are many intervening variables that can affect the outcome, such as any underlying medical conditions of the victim or the time until advanced medical care intervenes. However, in general, if the victim is rescued within 1 1/2 to 2 minutes of submerging, giving ventilations may resuscitate the victim.

Lifeguards must understand that only a few minutes can make the difference between life and death. To give a victim the greatest chance of survival and a normal outcome, you must recognize when a person needs help or is in danger of drowning, and you must act immediately. If there is any question whether a person in the water is beginning to drown or merely playing games, it is essential that you intervene and, if necessary, remove the person from the water immediately and provide care.

Figure 3-1 | Drowning begins when a victim's airway becomes submerged under the surface of the water.

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3-2 EFFECTIVE SURVEILLANCE

With effective surveillance, you can recognize behaviors or situations that might lead to life-threatening emergencies, such as drownings or injuries to the head, neck or spine, and then act quickly to modify the behavior or control the situation. Effective surveillance has several elements:

- Recognition of dangerous behaviors
- Victim recognition
- Effective recognition
- Zone of surveillance responsibility
- Lifeguard stations

Recognition of Dangerous Behaviors

A focus of preventive lifeguarding is to intervene quickly to stop potentially dangerous behaviors that could result in an emergency. This may include redirecting a child to shallower water, stopping a group of teens from having breath-holding contests or stopping swimmers from **hyperventilating** (breathing rapidly and deeply) and swimming underwater for extended periods. Swimmers and nonswimmers, regardless of age, can become victims quickly because of dangerous behaviors (Figure 3-2, A–C). Examples include:

- A weak swimmer or nonswimmer who is:
  - Bobbing in or near water over their head.
  - Crawling hand-over-hand along a pool wall.
  - Beyond arm's reach of a supervising adult, even if wearing a flotation aid.
  - Clinging to something or struggling to grab something to stay afloat.
  - Wearing a life jacket improperly.
- A person who is:
  - Breath-holding or swimming underwater for an extended period after hyperventilating.
  - Participating in a high-risk, high-impact activity, such as diving.
  - Experiencing a medical emergency.

Figure 3-2A | A small child crawling hand-over-hand toward deep water.

Figure 3-2B | A toddler beyond arm's reach of an adult.

Figure 3-2C | A victim experiencing a medical emergency.

Victim Recognition

Another element of effective surveillance is being able to recognize when someone is in trouble in the water. It is important to understand the behaviors that a victim shows when in distress or drowning. Someone in trouble may struggle at the surface for just a short time or may quickly disappear beneath the surface without any signs of distress. Others may be submerged already when the process of drowning begins, such as the person who has jumped or slipped into water over their head and is struggling to reach the surface.

A swimmer may be in distress or actively struggling to survive. Others may be passive and therefore unable to help themselves, showing little or no movement. Understanding these behaviors enables lifeguards to recognize quickly when someone needs help. Lifeguards should be able to recognize and respond to a drowning victim within **30 seconds**.

Swimmers in Distress

A swimmer can become distressed for several reasons, such as exhaustion, cramp or sudden illness. Quick recognition is key to preventing the distressed swimmer from becoming a drowning victim. A distressed swimmer makes little or no forward progress and may be unable to reach safety without assistance. Distressed swimmers may be:

- Able to keep their face out of the water.
- Able to call for help.
- Able to wave for help.
- Horizontal, vertical or diagonal, depending on what they use to support themselves.
- Floating, sculling or treading water.

The distressed swimmer generally is able to reach for a rescue device, such as a rescue tube (Figure 3-3). If a safety line or other floating object is nearby, a distressed swimmer may grab and cling to it for support. As conditions continue to affect the distressed swimmer, such as fatigue, cold or sudden illness, they become less able to support themselves in the water (Figure 3-4). As this occurs, their mouth moves closer to the surface of the water, and anxiety increases. If a distressed swimmer is not rescued, they may become a drowning victim; therefore, you need to immediately initiate a rescue.

Figure 3-3 | A distressed swimmer may reach for a rescue device, such as a rescue tube or a rope line.

Figure 3-4 | A distressed swimmer may wave for help, float on the back, scull or tread water.

Drowning Victim—Active

A drowning victim who is struggling to remain at the surface of the water has distinctive arm and body positions. These are efforts to try to keep the mouth above the water's surface in order to breathe (Figure 3-5). This universal behavior is called the **instinctive drowning response**.[1] Once it is recognized that a victim is drowning, the lifeguard must perform a swift and immediate rescue.

Some victims cycle through these behaviors quickly and might submerge within seconds, whereas others are able to remain near the surface of the water for a short time. A drowning victim who is struggling:

- May not be able to call out for help because their efforts are focused on getting a breath.
- Works to keep the face above water in an effort to breathe.
- May be in a horizontal face-down position during the struggle because they are unable to lift their face out of the water. This may be particularly likely with a younger swimmer, such as a toddler.
- Has extended their arms to the side or front, pressing down for support.
- Is positioned vertically in the water with an ineffective kick. A young child may tip into a horizontal face-down position.
- Might continue to struggle underwater once submerged.
- Eventually will lose consciousness and stop moving.

Figure 3-5 | A drowning victim may become unable to support themselves and struggle at the surface of the water.

Figure 3-6 | A drowning victim may struggle to breathe and cannot call out for help.

Drowning victims who are struggling to breathe may not always look the same. For some, the mouth sinks below the surface and reappears, sometimes repeatedly. While the mouth is below the surface, the drowning victim attempts to keep the mouth closed to avoid swallowing water. When above the surface, the drowning victim quickly exhales and then tries to inhale before the mouth goes below the surface again. While the victim is gasping for air, they also might take water into the mouth. For a victim who is in a horizontal face-down position but struggling, they are not able to keep the mouth above the surface of the water at all.

[1] *The Instinctive drowning response – Pia, F. "Observations on the Drowning of Nonswimmers" Journal of Physical Education (July 1974): 164-167*

Often, a drowning victim at or near the surface is unable to call out for help (Figure 3-6). They can take in only enough air to breathe, so no air is left to call out.[2] For this and other reasons, a drowning in progress often is silent.

A drowning victim does not make any forward progress in the water. A young child may appear to be doing a "doggy paddle" but has no forward progress; all efforts are devoted to getting air. The victim might be able to stay at the surface for only 20 to 60 seconds, if at all. They may continue to struggle underwater but eventually will lose consciousness and stop moving.

A victim may slip into water over their head, incur an injury or experience a sudden illness and struggle underwater to reach the surface. If unable to swim or make progress, they will be unable to reach the surface. This drowning victim may appear to be a person who is playing or floating underwater. It may be easier to recognize a swimmer in distress or a victim struggling on the surface than to recognize a victim who has submerged already or is submerging.

Never assume that anyone exhibiting these behaviors is playing or faking; it is essential that you intervene and, if necessary, remove the person from the water immediately and provide care.

> *If in doubt, do not delay—go right away.*

Drowning Victim—Passive

Some drowning victims do not struggle. They suddenly slip under water due to a medical condition or another cause, such as:

- A heart attack or stroke.
- A seizure.
- A head injury.
- A heat-related illness.
- Hypothermia (below-normal body temperature).
- Hyperventilation and prolonged underwater breath-holding activities.
- Use of alcohol and other drugs.

[2] *Active drowning victims and their inability to call out for help – Pia, Frank, On Drowning. Water Safety Films, Inc. (1970)*

Figure 3-7 | A drowning victim may float face-down at or near the surface of the water.

Figure 3-8 | A drowning victim may be face-down at the bottom of a pool.

These drowning victims:

- Might float face-down at or near the surface or might sink to the bottom (Figure 3-7).
- May be limp or have slight convulsive-like movements.
- May have no defined arm or leg action, no locomotion and no breathing.
- May appear to be floating, if at the surface of the water.
- May be face-down, on one side or face-up, if at the bottom (Figure 3-8).

Anyone who is exhibiting one or more of these presentations should be considered a drowning victim and responded to immediately. It can be difficult to clearly see a victim who is underwater or at the bottom of a pool because of glare, reflections or water movement from the wind or other swimmers. The victim may appear to look like a smudge, a shadow or an object like a towel. Do not expect to see a clear outline of a person on the bottom. At waterfronts, submerged victims may not be visible, depending on the water depth or water clarity. If you see something on the bottom that should not be there, do not delay, go right away.

Specific Behaviors

When conducting surveillance, actively search your assigned zone for behaviors that indicate a patron in need of immediate assistance. It is important to recognize the behaviors of a drowning victim (Table 3-1).

Notice:

- Breathing
- Appearance or facial expression (if the face is visible to you)
- Arm and leg action
- Head and body position
- Body propulsion or locomotion (movement) through the water

Understanding these behaviors helps you to quickly recognize when someone needs help. When you see some or all of these behaviors, react. Do not spend time second-guessing yourself; immediately initiate a rescue. Quick action can mean the difference between life and death for a distressed or drowning victim.

Table 3-1: Behaviors of Distressed Swimmers and Drowning Victims

	Distressed Swimmer	Drowning Victim-Active	Drowning Victim-Passive
Head position	Above water	Titled back with face looking up	• Face-up or face-down in the water • Submerged
Appearance and, if visible, facial expressions	• Trying to support self by holding or clinging to a lane line or safety line • Expression of concern for personal safety	• Struggling to keep or get the head above the surface of the water • Struggling to reach the surface, if underwater • Expression of panic, wide-eyed	• Limp or convulsive-like movements • Floating or submerged • Eyes may be closed • If submerged, may look like a shadow
Breathing	Is breathing	Struggles to breathe	Not breathing
Arm and leg action	• Floating, sculling or treading water • Might wave for help	Arms to sides or in front, alternately moving up and pressing down	None
Body position	Horizontal, vertical or diagonal, depending on means of support	Vertical, leaning slightly back	Horizontal or vertical
Locomotion	• Little or no forward progress • Less and less able to support self	None	None
Sounds	Able to call for help but may not do so	May not be able to call out for help	None
Location	At the surface	At the surface, underwater or sinking	Floating at the surface, sinking or submerged on the bottom

Hyperventilation and Extended Breath-Holding

The practices of hyperventilation preceding underwater swimming and extended breath-holding in the water are dangerous and potentially deadly activities. These actions can put the body in a state of hypoxia—a condition in which the body is deprived of adequate oxygen supply—which can result in hypoxic underwater blackout.

Voluntary hyperventilation (rapid, deep breathing) is a dangerous technique used by some swimmers to try to swim long distances underwater or to hold their breath for an extended period while submerged in one place. These swimmers mistakenly think that by taking a series of deep breaths in rapid succession and forcefully exhaling that they can increase the amount of oxygen they breathe, allowing them to hold their breath longer underwater. This is not true. Hyperventilation does not increase the amount of oxygen or allow a swimmer to hold their breath longer; instead, it lowers the carbon dioxide level in the body. The practice is risky because the level of carbon dioxide in the blood is what signals a person to breathe. As the level of carbon dioxide increases, a person normally takes a breath. When a person hyperventilates and then swims underwater, the oxygen level in the blood can drop to a point where the swimmer passes out before the body knows it is time to breathe. Then, when the person finally does take a breath instinctively, water rushes in and the drowning process begins.

Do not allow swimmers to participate in contests, games or repetitive activities to see who can swim underwater the farthest or hold their breath underwater the longest. Hyperventilation, prolonged underwater swimming for distance and breath-holding for time are extremely dangerous. If you see these dangerous activities, you must intervene. Explain to patrons that they should only take a single inhalation before submerging when swimming and playing underwater. In addition, instructors must prevent these activities during instructional periods, such as swim lessons, lifeguard classes, SCUBA classes and competitive swimming.

Alcohol

The following are some ways that alcohol can affect a person in the water and lead to drowning or head, neck or spine injuries:

- Alcohol affects balance. Some people with alcohol in their body have drowned in shallow water when they lost their balance and were unable to stand up. "Ordinary" actions on steps, ladders, diving boards or play structures become hazardous for an intoxicated person.
- Alcohol affects judgment. A person might take unusual, uncharacteristic risks, such as diving into shallow water.
- Alcohol slows body movements. It can greatly reduce swimming skills, even those of an excellent swimmer.
- Alcohol impairs one's ability to stay awake and respond appropriately to emergencies.

One of the biggest myths about alcohol is that an intoxicated person can sober up by going swimming. Splashing water on a person's face or immersing a person in water will not reduce the amount of alcohol in the bloodstream or reduce the effects of alcohol.

Effective Scanning

Knowing what to look for to determine if a victim is in trouble in the water is a first step, but you also need to know how to look. **Scanning** is a visual technique for guarding patrons in the water (Figure 3-9). When scanning, you should not just watch patrons in the water. Effective scanning requires you to deliberately and actively search your zone to continually observe swimmers' behaviors and look for signals that someone in the water needs help. You must actively search all areas of your zone, seeing all patrons in and under the water, regardless of the type of activities taking place.

Figure 3-9 | Scanning is a surveillance technique for watching patrons.

Search, don't watch.

Guidelines for Effective Scanning

Drowning and injuries can happen in an instant, often silently. Scanning your entire area of responsibility quickly and thoroughly is important. You cannot prevent or save what you cannot see. Table 3-2 provides guidelines for effective scanning.

Table 3-2: Guidelines for Effective Scanning	
When scanning:	**Ensuring that you:**
Scan all patrons in your assigned area of responsibility.	Actively search so that you see all the patrons in the water.
Stay focused.	Do no let your attention drift.
Maintain an active posture.	Do not slouch, lean back, sit back with legs crossed or rest your head in your hand. These postures may cause you to become too relaxed and lose focus.
Search the entire volume of water.	Search the bottom, middle and surface of the water.
Move your head and eyes and look directly at each area, rather than staring in a fixed direction.	Look directly at the patrons—rather than relying on side vision—to help you recognize someone in trouble.

Table 3-2: **Guidelines for Effective Scanning, continued**

Scan from point to point thoroughly and repeatedly.	Do not neglect any part of the assigned area, including any deck or beach areas as well as those areas under, around and directly in front of the lifeguard station.
Focus on effective patron surveillance instead of the scanning pattern itself.	Keep your focus on searching your zone for potential dangerous behaviors and patrons in trouble.
Search for signs of potential problems.	Look for arm and leg action. Body position and movement through the water may indicate that a patron is a weak swimmer and is in trouble in the water.
Scan crowded and high-risk areas carefully.	Recognize that partially hidden arm movements might indicate that a victim is actively drowning.
Pay close attention to nonswimmers or weak swimmers.	Consider that excitement or lack of knowledge can lead nonswimmers or weak swimmers to become unknowingly careless. For example, they may accidentally enter deep water.
Adjust your body position or stand up to eliminate blind spots.	Remain aware of areas that are difficult to see. Areas might be blocked when patrons cluster together. Water movement, such as from fountains or bubbles, may also distort the view underwater.
Change your body position regularly to help stay alert.	Switch positions, such as between seated and standing positions while in an elevated station, when necessary, to prevent fatigue.
Do not be distracted by people or activities outside of your area of responsibility.	Keep focused on the assigned zone.
Do not interrupt scanning an area if a patron asks a question or has a suggestion or concern.	Acknowledge the patron and quickly explain that although you cannot look at them while talking, you are listening. Politely but briefly answer the patron's question, suggestion or concern, or refer them to the head lifeguard, facility manager or another staff member.

Scanning Challenges

There are many challenges to scanning (Figure 3-10, A–D). You must be aware of the challenges and actively employ tactics to combat them. The lives of patrons depend on it. Table 3-3 presents some scanning challenges that you may encounter along with tactics to overcome them.

Figure 3-10A | Glare on the water

Figure 3-10B | Murky water

Table 3-3: **Scanning Challenges**	
Challege	**Tactics**
Monotony	▪ Stay fully engaged in what you are seeing—do not let your attention drift ▪ Change body position and posture periodically ▪ Sit upright and slightly forward ▪ Rotate stations ▪ Search, don't watch
Fatigue	▪ Request additional lifeguard coverage ▪ Keep hydrated, cool off and get out of the sun when on break ▪ Exercise during one of your breaks
Distractions	▪ Stay focused on patron surveillance ▪ Do not daydream, have conversations with coworkers or patrons or watch events outside of your area ▪ Keep patron activities safe and orderly. Signal for an additional lifeguard or supervisor if assistance is needed
Blind spots	▪ Adjust your location or body position, or stand up ▪ Search all potential blind spots, such as under the stand, at play features or any other part of the zone
Glare (from sun or overhead lights)	▪ Use polarized sunglasses ▪ Change body position—stand up to look around and through glare spots ▪ Reposition your lifeguard station (with permission from your supervisor)

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Figure 3-10C | Water movement obscuring the bottom of the pool

Figure 3-10D | Fatigue is a challenge for lifeguards.

Table 3-3: Scanning Challenges, continued

Challenge	Tactics
Water movement and surface distortion of the water	▪ Adjust your body position ▪ Be aware of the normal appearance of the bottom of the pool; know the appearance of drains, colored tiles or painted depth markings ▪ Search the bottom carefully
Murky water	▪ Adjust your location or body position ▪ Stay alert for high-risk activities ▪ Signal for additional assistance to get extra coverage for your area
Heavy patron loads	▪ Stand up frequently ▪ Signal for additional assistance to get extra coverage for your area
Low patron loads	▪ Change body position and posture frequently ▪ Change to a ground-level station, if appropriate
High ambient temperature	▪ Use fans to cool the surrounding air, if in an indoor setting ▪ Stay in the shade; use umbrellas if available ▪ Rotate more frequently ▪ Cool off by getting wet during your break ▪ Stay in cooler areas during breaks ▪ Stay hydrated by drinking plenty of water

THE RID FACTOR

If an active victim drowns while lifeguards are on duty, it is probably due to one or more of the following causes:[3]

- Lifeguards fail to recognize the victim's instinctive drowning response.
- Secondary duties intrude on lifeguards' primary responsibility of patron surveillance.
- Lifeguards are distracted from surveillance.

This set of causes often is referred to as the "RID factor," where the acronym, RID, stands for recognition, intrusion and distraction.

R - Recognition
I - Intrusion
D - Distraction

Recognition

Knowing how to recognize that a swimmer is in distress or a person is drowning is one of the most important lifeguarding skills. You must be able to distinguish such behavior from that of others who are swimming or playing safely in the water. You must recognize when someone needs to be rescued. You cannot expect the victim or others to call for help in an emergency.

With good surveillance and scanning techniques, you can recognize even a passive victim who has slipped underwater without a struggle if the victim is in clear water.

Intrusion

Intrusion occurs when secondary duties, such as maintenance tasks, intrude on your primary responsibility of patron surveillance. Lifeguards often have to sweep the deck, empty trash cans, pick up towels, check locker rooms and perform other maintenance duties. While these duties might be part of the job, you should not perform them while conducting patron surveillance. Before you begin these duties, you must be sure that another lifeguard has taken over surveillance for your assigned area of responsibility.

Similarly, you cannot perform adequate surveillance duties while also coaching a swim team or teaching a swimming lesson. These additional responsibilities should be performed by a different lifeguard, coach or instructor, even if there are no other patrons in the water.

Distraction

Distractions, such as talking with other lifeguards or friends, can also affect patron surveillance. A brief conversation might seem innocent, but during that time, you could miss the 20- to 60-second struggle of a young child at the water's surface. The child could die because you were distracted. You should not engage in social conversation while you are on duty.

[3] *The RID Factor – Pia, F "The RID Factor as a Cause of Drowning" Parks and Recreation (June 1984):52-67*

Zones of Surveillance Responsibility

Your lifeguard supervisor or facility manager will establish and post each lifeguard's **zone of surveillance responsibility**—referred to as **zones**. These are the specific areas of the water, deck, pier or shoreline that are your responsibility to scan from your lifeguard station (Figure 3-11).

When establishing coverage, supervisors or managers must ensure that:

- All areas of the water—from the bottom through to the surface—are covered and can be seen by a lifeguard.
- There is overlapping coverage when more than one lifeguard is performing surveillance.
- Lifeguards have unobstructed views of their zones from each station.
- The size and shape of each zone allows lifeguards to respond quickly to victims in the water:
  ◦ Lifeguards should be able to recognize and reach a victim in their zone within 30 seconds.
  ◦ In each zone, lifeguards should be able to

recognize an emergency, get to a victim, extricate and start giving ventilations within 1½ minutes to 2 minutes.

- Regular zone tests are conducted to ensure that recognition and response times are achievable in each zone.

Supervisors or managers should post diagrams or charts showing the size, shape and boundaries of each zone. These can change throughout the day, depending on the following:

- Number of patrons
- Types of activities
- Variety of activities
- Time of day
- Environmental conditions, such as glare from the sun

Management needs to notify lifeguards of any changes to zones. To ensure that all areas of the pool are covered, you might be assigned **zone coverage**, **total coverage** or **emergency back-up coverage**.

Figure 3-11 | The zone of surveillance responsibility refers to the specific area a lifeguard is responsible for scanning.
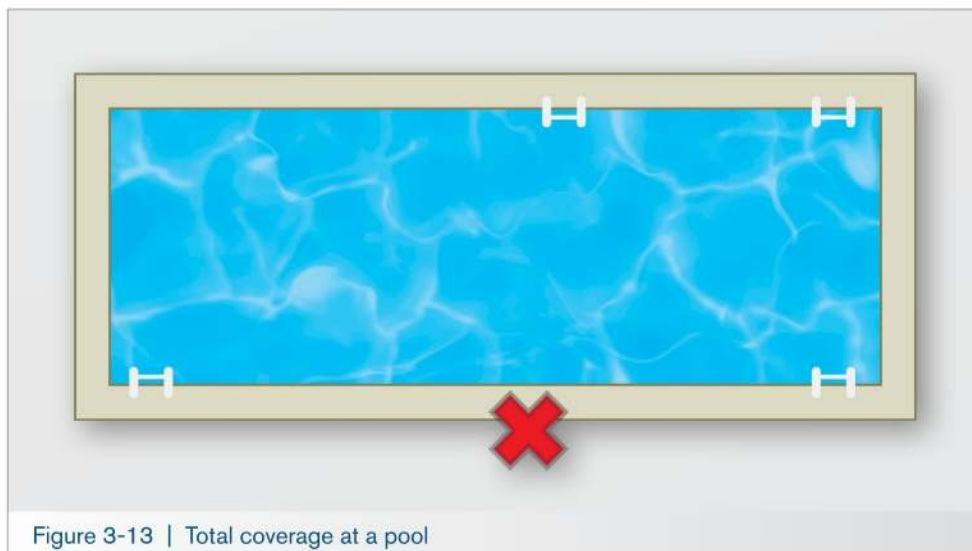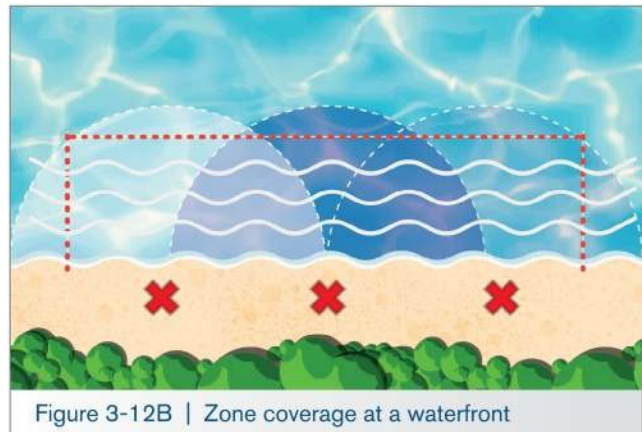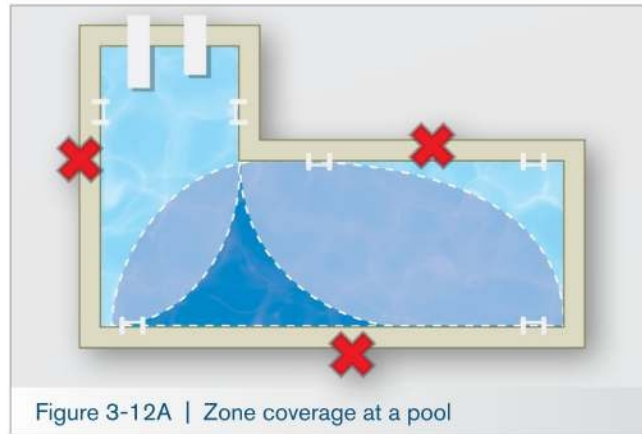
Zone Coverage

In zone coverage, the swimming area is divided into separate zones, with one zone for each lifeguard station (Figure 3-12, A–B). Zones can be designated by markers, such as ladders, lane lines, lifelines, buoys or the shape of the pool. Zone coverage is effective for high-risk areas or activities, avoiding blind spots and reducing the number of patrons watched by each lifeguard. When zone coverage is being provided, each lifeguard needs to know the zone for each guarding position.

At a minimum, zones should overlap by several feet so that the boundaries between them have double coverage. This prevents any area from not being scanned. When zones overlap, it is important that each lifeguard react to an emergency; that is, you should not assume that the other lifeguard will notice a problem and react.

Total Coverage

When you are assigned total coverage, you will be the only lifeguard conducting patron surveillance while you are on duty. Some facilities, such as a small pool, assign their lifeguards total coverage. When only one lifeguard is conducting patron surveillance, that lifeguard has to scan the entire area, control the activities of patrons in and out of the water and recognize and respond to emergencies (Figure 3-13). If adequate coverage cannot be provided for all patrons, inform a supervisor that help is needed.

Figure 3-12A | Zone coverage at a pool

Figure 3-12B | Zone coverage at a waterfront

Figure 3-13 | Total coverage at a pool

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Emergency Back-Up Coverage

In emergency situations when two or more lifeguards are on duty and one lifeguard must enter the water for a rescue, lifeguards who remain out of the water must now supervise a larger area. They might need to move to better vantage points or close part of the swimming area, depending on the facility's design. Alternatively, the emergency plan may require lifeguards who are not on patron surveillance duty to take the rescuing lifeguard's place at the vacant lifeguard station.

Figure 3-14A illustrates zone coverage when three lifeguards are on surveillance duty. Figure 3-14B shows an example of emergency back-up coverage for the same three-zone facility. This figure depicts Lifeguard Y as the primary rescuer. They signal and enter the water (indicated by a dotted line). The other two lifeguards (Lifeguards X and Z) stand in each of the lifeguard chairs and divide the responsibility for scanning the pool. Meanwhile, additional lifeguards or safety team members monitor the rescue, prepare to assist with additional equipment and call emergency medical services (EMS) personnel, if appropriate.

Figure 3-14A | Zone coverage with three lifeguards

Figure 3-14B | Back-up coverage during a rescue at a three-zone facility
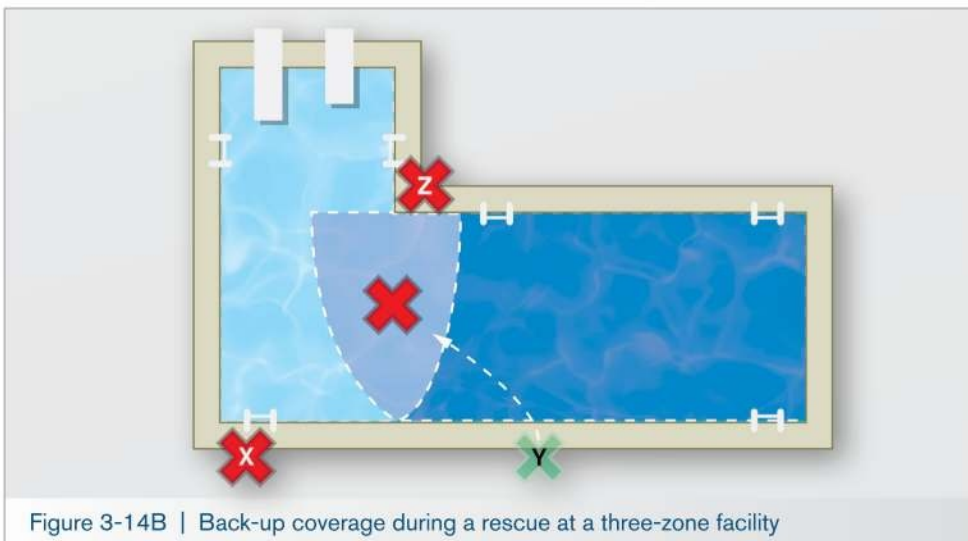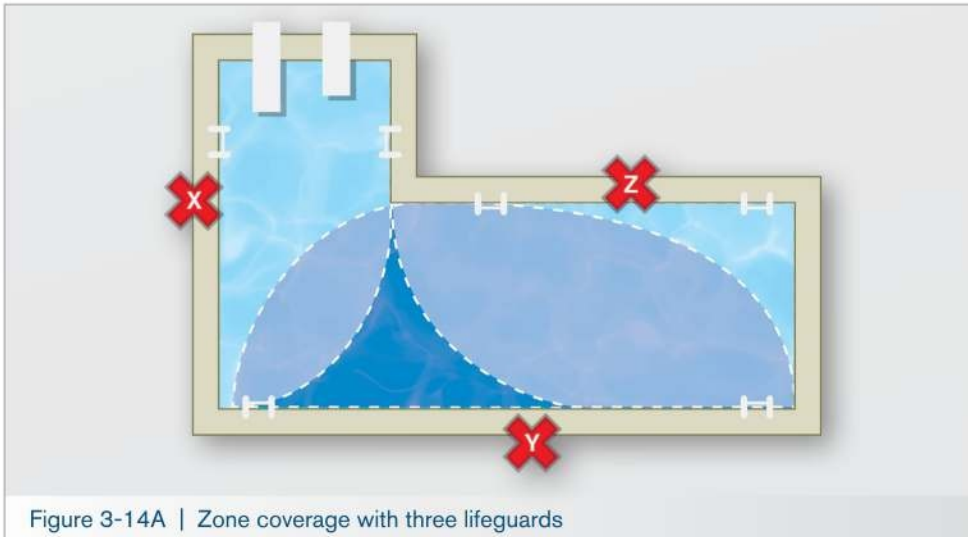
ZONE EVALUATIONS

Lifeguard zones should be set up for success—the lifeguard must be able to clearly see all parts of the zone as well as quickly respond in an emergency. Several factors influence the ability of the lifeguard to see: obstacles (backstroke flags or bulkheads), blind spots (glare or features), size and shape of the zone, type of station (elevated or ground-level), depth of the water, and shape of the pool or aquatic areas. These factors may also influence the amount of time it might take lifeguards to perform a water rescue, extricate and begin lifesaving care at each station. In addition, a lifeguard's ability to provide care can be affected by the availability and location of trained assisting responders and rescue equipment (backboards, masks and gloves).

Managers should use various tools to help identify the effectiveness of their zones and make any modifications as necessary. As a lifeguard, you may expect to participate in a variety of drills to help train you and improve performance.

Ask Drills

It is important to know what lifeguards can and cannot see from each station. One method to help accomplish this is to simply ask them in what is referred to as an "ask" drill. To conduct an ask drill:

1. A supervisor places an object, such as a manikin or silhouette, or a "live" victim in various locations, including the surface and the bottom.
2. Ask the lifeguard if they can see the object.
3. Have the lifeguard determine if the object is something that would cause them to respond.

Each zone should be tested at different times of day and for different activities or conditions. For example, conduct an ask drill during a kayak rental in a pool and again in that same zone during lap swim.

These simple ask drills should be done regularly and at any time the zone or the characteristics of the zone change. Supervisors should always encourage lifeguards to inform them of any challenges or areas of a zone which they cannot see and which might prevent them from identifying a person in trouble in the water.

Live Recognition Drills

The size and shape of each zone should allow the lifeguard to see all areas of the zone, from the bottom through to the surface. The size and shape should also allow the lifeguard to be able to recognize a victim and reach the extremes of each zone—furthest and deepest—in 30 seconds. Facilities should conduct regular live action recognition drills during operations as a method to help identify the effectiveness of surveillance. It is as important to evaluate surveillance as it is to evaluate skills. This helps the lifeguard and the management to evaluate how they are doing with surveillance and to identify challenges, performance issues or areas that need further training.

ZONE EVALUATIONS

To conduct a live recognition drill:

- Conduct a surprise "victim" drop. The lifeguard should not be aware of the introduction of a victim into their zone. Suitable victims include a mixture of real people and manikins or silhouettes.
- Observe and evaluate. The supervisor observes the drill and records the length of time for the lifeguard to recognize and reach the "victim." The supervisor should consider factors that influenced the outcome and make modifications to the zone or provide in-service training to any staff member who was unable to meet the timeline of 30 seconds.

Lifeguard Station Response Time Testing

This drill tests the response time only (not the recognition of a victim) for a lifeguard station. The purpose of this drill is to help evaluate the ability of any lifeguard to be able to get to a victim in that zone and conduct a worst-case scenario rescue (submerged, passive victim), extricate the victim and start ventilations. This testing should be done with a variety of different lifeguards for the extremes of each zone. To ensure ideal conditions, the zone being tested should be closed so there is no interruption.

It is important to know if the average lifeguard at the facility can accomplish this within a timeline of 1½ to 2 minutes at each station under ideal conditions. If they cannot, modifications may need to be made to the size, shape or coverage of the zone; location of the back-up rescue equipment; and where the responders that are assisting during an EAP are located. The results can also help identify where more training and practice is needed, such as in bringing equipment, putting on gloves, preparing equipment, reaching the victim and extricating the victim.

To conduct lifeguard station response time testing:

- Place the lifeguard at the station and the support staff where they would normally be.
- Initiate the drill:
  - Place the "victim" in the pre-arranged location (for example, a submerged victim in the farthest corner of the zone).
  - Have the lifeguard activate the EAP.
- Time the response. Start timing at the whistle blast/EAP signal and stop when the victim has been extricated from the water and 2 ventilations have been given.
  - Each station test should not exceed 1½ minutes from any location within that zone. (Factor in an average recognition time of no more than 30 seconds and add it to the response time for a total that should not exceed 2 minutes).
  - If the response time exceeds 2 minutes, adjustments should be made, and the test should be performed again. Repeat until the times are achieved.
  - Adjustments might include:
    - Moving the lifeguard station.
    - Adjusting the zone coverage, such as splitting the zone.
    - Adjusting the placement of emergency equipment or emergency back-up personnel.

Lifeguard Stations

Lifeguards perform patron surveillance from a variety of positions including elevated, ground-level, roving and floating stations. Additional coverage at waterfront areas is sometimes provided by foot patrols, boat patrols and four-wheel-drive vehicles. The goal is to provide optimum coverage for the whole facility by placing lifeguards in positions to quickly recognize and respond to emergencies. To ensure that lifeguards stay alert, periodic rotations and breaks from surveillance are built into their surveillance schedules.

The location of any lifeguard station must allow you to see your entire zone. The lifeguard stand may need to be moved or repositioned during the day to adapt to the changing sun, glare, wind or water conditions. It is critical for you to have a clear view of your entire zone.

Elevated Stations

Elevated lifeguard stations generally provide the most effective position for a broad view of the zone and patron activities (Figure 3-15). This is especially important at a facility where a single lifeguard at a time performs patron surveillance. When you are scanning from an elevated station, be sure to include the area under, around and directly in front of the stand. Movable stands should be positioned close to the edge of the water with enough room to climb up and down from the stand.

The area surrounding an elevated stand must be kept clear of patrons or objects that might interfere with your ability to respond. You must know how to safely exit the stand, both in the course of a normal rotation and in an emergency. Be sure to practice with the rescue tube so that you are able to do so quickly and without getting injured. A safety zone should be established that allows access to the water in case of an emergency. At a waterfront, the safety zone should be thoroughly inspected with rakes and shovels before opening each day. This helps to prevent injuries to lifeguards during emergency exits from the lifeguard stand.

Figure 3-15 | An elevated lifeguard station

CHAPTER 3: SURVEILLANCE AND RECOGNITION

Ground-Level Stations

Lifeguards sometimes are assigned to a fixed location on a deck or in shallow water (Figure 3-16). These stations allow for quick response and are common around winding rivers, in shallow water areas with play structures and at the ends of slides. The primary purpose of ground-level stations is to be close to patrons so you can easily make assists and enforce safety rules for patrons in the water and on the deck. While maintaining surveillance, you also can educate patrons about the reasons behind the rules; however, you should never become distracted from surveillance duties by talking socially with patrons or other staff.

Figure 3-16 | A ground-level lifeguard station

Roving Stations

When a facility becomes unusually crowded, such as during a special event or activity, supervisors or managers might assign a lifeguard to a **roving station**. The roving lifeguard is assigned a specific zone, which also is covered by another lifeguard in an elevated station. These roving, or walking, lifeguards are mobile and able to position themselves where needed within the zone. Combining the views from elevated stations with the mobility of the roving lifeguard provides extra coverage to help ensure effective patron surveillance.

Floating Stations (Rescue Watercraft)

In many waterfront facilities, lifeguards are stationed to watch swimmers from a watercraft, usually as extra coverage. Rescue watercraft typically are used to patrol the outer edge of a swimming area. Often, someone in trouble in the water can be reached more quickly from watercraft than from a lifeguard station on the shore.

In a small, calm area, a rescue board, kayak or flat-bottom rowboat might be used (Figure 3-17). When patrolling on a rescue board, sit or kneel on the board for better visibility (Figure 3-18). Some protocols may require you to keep the rescue tube or buoy strapped across your chest or attached to the board. In rough water, rowboats might be used. Powerboats, inflatable boats and personal watercraft also can be used as rescue watercraft. Facility management normally provides on-the-job training in the use of watercraft at a facility.

If stationed on watercraft in water with a current, you might have to row or paddle to stay in position. Some watercraft have a special anchor line with a quick release for lifeguards to make a rescue. In some larger watercraft, one lifeguard maintains the craft's position while a second watches the swimming area.

Make sure that you are well trained in operating the facility's watercraft before using it for surveillance or to make a rescue. Use caution with motorized watercraft to avoid injuring swimmers or damaging lifelines when crossing into the swimming area to make a rescue.

Figure 3-17 | Rescue water crafts, such as kayaks, may be used at waterfront areas.

Figure 3-18 | A rescue board may be used to help with patron surveillance at waterfront areas.

Dispatch Stations

Lifeguards working at dispatch stations are responsible for assessing each potential rider to ensure that the rider meets all of the requirements for riding the attraction that have been established by the manufacturer and the facility.

Riders must often meet physical requirements, such as a minimum height or a maximum weight, in order to ride an attraction. To facilitate screening, many attractions are equipped with height measurement stations, weight scales or both (Figure 3-19, A–B). When an attraction allows groups of riders to ride together, the entire group must step on the scale together to ensure that maximum weight limits are not exceeded.

In addition, lifeguards working at dispatch stations must verify that each rider wishing to ride the attraction is capable of holding themselves in the proper riding position. If the ride vehicle has handles, the rider must also be able to grasp them. Riders who appear unable to maintain a safe riding position should not be allowed to ride. The operational procedures for the attraction will provide guidelines for assessing riders who may not be able to ride the attraction safely due to physical, mental or behavioral disabilities.

Landing Zone Stations

The lifeguard stationed in the landing zone also has several unique responsibilities in addition to surveillance. These responsibilities include helping riders to exit the ride, making sure that the landing zone is clear of people and equipment and signaling the dispatching lifeguard that it is safe to send the next rider.

Riders may need help exiting the ride vehicle or slide runout or getting out of the catch pool (Figure 3-20). When you are stationed in the landing zone, you must recognize when a rider needs assistance and maintain surveillance of your assigned area while providing that assistance.

Figure 3-19A | Many attractions are equipped with height measurement stations.

Figure 3-19B | A lifeguard checks a patron's height.

Figure 3-20 | Riders may need help exiting a ride vehicle or catch pool.

Other key roles of the lifeguard in the landing zone include making sure that the landing zone is completely clear of riders before signaling to the lifeguard at the top to dispatch the next rider and removing ride vehicles from the catch pool and placing them in a holding area or on a conveyor belt.

After the landing zone has been cleared of people and equipment, and after verifying that the water level is appropriate, the lifeguard stationed in the landing zone signals the dispatching lifeguard that it is safe to send the next rider.

Lifeguard Rotations

All facilities should have a defined rotation procedure. Rotations include moving from one station to another as well as taking breaks from surveillance duty. Lifeguards should get regular breaks from surveillance duty to help stay alert and decrease fatigue. Typically, you might perform patron surveillance for 20 or 30 minutes at one station, rotate to another station for 20 or 30 minutes, and then rotate off of patron surveillance duty to perform other duties or take a break for 20 or 30 minutes, thereby getting a break from constant surveillance. Rest and meal breaks should be factored into the rotation.

An emergency back-up coverage "station" often is included as a part of the rotation. The location may be in a staff room or on the pool deck, pier or shoreline within sight of the swimming area(s). The lifeguard at this station is not responsible for patron surveillance but is expected to be able to immediately respond to the EAP signal in an emergency. (Chapter 5 covers information about emergency action plans.)

Your supervisor will establish a plan for lifeguard rotations, usually based on:
- Locations of stations
- Type of station (elevated, ground-level, roving or floating)
- The need to be in the water at some stations
- The number of patrons using an attraction
- The activity at the station, such as wave durations at a wave pool
- EAPs

The rotation begins with the incoming lifeguard. While rotating, each lifeguard should carry their own rescue tube, and both lifeguards must ensure there is no lapse in patron surveillance, even for a brief moment. Each lifeguard must know who is responsible for scanning, or "owning," the zone and at what time during the rotation. Lifeguards should transfer scanning responsibilities back and forth as the incoming lifeguard gets into position and the outgoing guard prepares to leave the station. Keep any necessary conversations brief, and make sure that eye contact remains on the water.

As the incoming lifeguard, you should search the zone and be aware of the activity level in the zone you will be guarding. Begin searching your zone as you are walking toward your station, checking all areas of the water from the bottom to the surface.

The outgoing lifeguard should inform you of any situations that need special attention. The exchange of information should be brief, and patron surveillance must be maintained throughout the entire rotation. Once in position, with the rescue tube strapped in place, make any adjustments needed, such as removing shoes or adjusting an umbrella before confirming to the outgoing lifeguard that you own the zone. Confirm and signal that the zone is clear and transfer responsibility for the zone. The outgoing lifeguard should continue scanning as they are walking toward the next station. The skill sheet at the end of this chapter outlines the steps for rotations for ground-level and elevated stations.

Some attractions may have additional specific responsibilities with each rotation, such as dispatch zones. Be sure to know your facility-specific rotation requirements.

3-3 WRAP-UP

A lapse in coverage—even for just a few seconds—could result in injury or death. A lifeguard must be alert for dangerous behaviors and able to recognize a distressed swimmer and a drowning victim who is active or passive. Effective scanning techniques and lifeguard stations are needed both to prevent incidents and locate people in trouble.

BENCHMARKS FOR LIFEGUARDS

Lifeguards should:
- Stay alert, attentive and focused.
- Maintain active posture and change body position regularly.
- Use tactics to deal with scanning challenges.
- Search, don't watch. Scan zones continuously, scanning from point to point thoroughly.
- Recognize and respond to victims in the water quickly, in 30 seconds or less.
- Follow posted rotation plans.

BENCHMARKS FOR LIFEGUARDING OPERATIONS

Managers should ensure that:

- The shape and size of the lifeguard zones and lifeguard stations are appropriate to provide for adequate patron surveillance and response time to victims in the water.

- Zones are clearly identified and posted for different staffing levels, as well as for different activities and different times of day or for other considerations, such as to account for glare.

- Drills are conducted to test zones:
  o Conduct Ask Drills.
  o Conduct Live Action Recognition Drills.
  o Conduct Lifeguard Station Response Time Testing.

- Lifeguards get regular breaks from surveillance duty to help stay alert and decrease fatigue. Rest and meal breaks should be factored into the rotation.

1. In general, there are three types of swimmers in distress or drowning victims. List each type with three observable characteristics for each.

1)

-
-
-

2)

-
-
-

3)

-
-
-

2. Match each station type with its general use:

_____ Roving Stations   A. Puts you close to the patrons to easily make assists

_____ Elevated Stations   B. Used in waterfront facilities to patrol the outer edge of a swimming area

_____ Ground-Level Stations

     C. Ideal for a single guard facility

_____ Floating Station

     D. Good to use with a crowded zone

3. A lifeguard on duty should be able to recognize and reach a drowning victim within:

_____

4. The size of a zone should allow for a lifeguard to recognize an emergency, reach the victim, extricate and provide ventilations within _____. Explain why.

5. What is the difference between total and zone coverage?

Total coverage:

Zone coverage:

6. Lifeguards should be actively _____ their zones.

A | Changing   C | Creating

B | Watching   D | Searching

Why? _____

_____

_____

7. You are guarding a lap swim with only two patrons. All of the following will help you deal with the monotony EXCEPT for which?

A | Stay fully engaged and do not let attention drift.

B | Change body position and posture periodically.

C | Swing your whistle lanyard.

D | Sit upright and slightly forward.

8. It is very hot in your facility and you are starting to doze on the stand. All of the following can help you stay alert EXECPT for which?

A | Stay in a cooler area during breaks.

B | Stay hydrated while drinking plenty of water.

C | Rotate more frequently.

D | Jump in the pool while on surveillance duty to cool off.

9. The glare of the lights on the water and the water movements are making it hard to see all areas of your zone. Circle all acceptable options.

A | Wear polarized sunglasses.

B | Adjust your body position; stand up to look around and through the glare spots.

C | Reposition the lifeguard station with the permission of your supervisor.

D | Be aware of the normal appearance of the bottom of the pool; know the appearance of drains, colored tiles or painted depth markings.

E | Do not change your position as the lifeguard stations are placed to be ascetically pleasing.

10. Why is it important for lifeguard managers to conduct drills to test zones?

11. Fill in the blank: _____ , which can be described as rapid, deep breathing, is a dangerous technique used by some swimmers to try to swim long distances underwater or to hold their breath for an extended period while submerged in one place. If you see these dangerous activities, you must intervene.

12. RID stands for

R: _____

I: _____

D: _____

13. During rotation, both lifeguards must ensure there is no lapse in patron surveillance, even for a brief moment. To ensure this, what should each lifeguard do?

The incoming lifeguard should:

The outgoing lifeguard should:

? QUESTION FOR FUTURE GUIDED DISCUSSION

What are some common injuries at at a pool? How can a lifeguard treat and prevent them?

Chapter 3 Review

1. Which scanning challenge often occurs at waterfronts but should not exist at pools?

A | Distractions

B | Heavy patron loads

C | Murky water

D | High air temperature

2. Who normally provides training for watercraft used at some waterfront facilities?

A | The lifeguard's training agency

B | The lifeguard figures it out

C | Facility management

D | The U.S. Coast Guard

1. In a waterpark setting, which type of lifeguard stations might you encounter in a rotation?

2. What are lifeguards guarding at dispatch stations responsible for?

3. What are some characteristics unique to waterpark features that may make it more difficult to see a drowning victim?

4. What are some scanning challenges that you may encounter when guarding a play structure? What tactics can you use to counteract them?

Ground-Level Station

1 Begin scanning your zone as you are walking toward your station. Note the swimmers, activities and the people on the deck. In a pool or waterpark setting where the water is clear, check the entire volume of water from the bottom of the pool to the surface of the water.

2 Walk to the side of the outgoing lifeguard and continue scanning the zone.

3 Exchange any important information needed without losing surveillance of the zone.

4 Confirm and signal that the zone is clear and transfer responsibility of the zone. The outgoing lifeguard can now begin to rotate. You now "own the zone."

5 The outgoing lifeguard continues searching the zone as they walk toward the next station.

Note: *Surveillance of the zone must not be lost at any time during the rotation. As the responsibility for searching the zone transfers, eye contact must remain on the water.*

Elevated Station

1 Begin scanning the zone as you are walking toward the lifeguard station. Search the entire zone and note the swimmers, activities and the people on the deck. In a pool or waterpark setting where the water is clear, check the entire volume of water from the bottom of the pool to the surface of the water.

2 Take a position next to the stand and begin searching the zone. After a few moments of scanning, signal the lifeguard in the stand to climb down.

3 Once on the deck, the outgoing lifeguard takes a position next to the stand and is responsible for surveillance of the zone. The incoming lifeguard climbs into the stand, makes any adjustments to equipment or personal items and begins scanning.

4 Exchange any important information as needed without losing surveillance of the zone.

5 Confirm and signal that the zone is clear and transfer responsibility for the zone. The outgoing lifeguard can now begin to rotate. You now "own the zone."

6 The outgoing lifeguard continues searching the zone as they walk toward the next station.

Note: Surveillance of the zone must not be lost at any time during the rotation. As the responsibility for searching the zone transfers, eye contact must remain on the water.

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