

POOL MAINTENANCE AND SAFETY

A GUIDE FROM:



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INTRODUCTION

Having a pool on your property is a great selling point and an awesome luxury for your tenants. However, it does add some extra upkeep and maintenance to your already long list. Not only that, but it also adds an extra safety liability, as pools do present a unique set of dangers.

Is it worth it? We think so, and we're sure your tenants do as well. As pool season begins, we want to make this easier on you by putting together a list of maintenance and safety items that you should pay attention to for your public pool in one place.

Pool maintenance and safety does not have to be hard if you have a game plan and remain proactive and diligent.

BUILDING OWNER SAFETY TIPS

Within our pool maintenance tips later on, we will cover some safety guidelines for the building owner to follow, as cleanliness and proper care are essential to protecting pool occupants from diseases, reactions, etc. This section provides additional safety tips outside of regular maintenance that will allow you to keep your pool safe for its occupants.

BEST PRACTICES

Here are some general safety guidelines for building owners to make sure they are doing everything they can to keep tenants safe at the pool:

- All ladders, diving boards and the pool deck itself should be covered and/or coated with non-slip, gripped materials. These should be regularly replaced from time to time when worn down.
- First aid kits and rescue devices should be easily visible and accessible to pool occupants.
- The pool's drain should be code compliant. Any broken, flat or missing drain covers are huge safety hazards, break code and cause your pool to be a huge safety liability.
- Make sure to clearly mark any changes in the depth of water. If possible, it is recommended that in addition to signage that marks water depth, a safety float line be added to separate shallow water from deep water.
- Place fences around your pool in order to prevent children falling in and other various accidents (required by law in most states).
- All stair and deck rails should be checked periodically to ensure stability has not been affected by occupants who have grabbed or leaned on them.

BUILDING OWNER SAFETY TIPS

BEST PRACTICES (CONT.)

- Regularly check the pool for safety hazards, such as anything that is sharp or protrudes from the pool and cover them accordingly.
- Any cloudiness in the pool signifies a huge problem- if the pool is cloudy or it is difficult to see its bottom, urgently close the pool and work toward solving the issue.
- Provide an emergency help phone within the pool area for easy access to emergency services, pool related or otherwise (required by law in many states).
- Be sure to abide by all of your state's public pool laws.

YOU CAN FIND A FULL LIST OF
ALL POOL LAWS STATE BY STATE

BUILDING OWNER SAFETY TIPS

WHY YOU NEED A POOL PHONE REGARDLESS OF STATE LAWS

Pool phones are required by law in many states, but even if this isn't the case where you live, that doesn't mean your public pool shouldn't have one. Pool phones can function as an essential life-saving tool year-round, whether required by law or not.

Many people assume that when calling 911, their cell phone will give police an exact location of where they can find them, which is simply not the case. **Limited technology** allows dispatchers only to find out what city that a person is calling from. Even then, sometimes the city is inaccurate due to the placement of a closer cellphone tower. Emergency pool phones' exact locations are documented and recorded ahead of time, leaving out any guess work for dispatchers who must send help.

Additionally, **young children do not own cell phones**. Although children are not supposed to be left unsupervised in pool settings, the harsh reality is that they are in many instances. As children are some of the most susceptible people to pool dangers, it is simply unacceptable to not provide them with a way to get help should disaster strike.



Already have a pool phone on your property?

Make sure that it is working properly and effectively for the season

TENANT SAFETY TIPS

While the previous section mentioned tips that you could implement as a building owner in order to keep your pool occupants safe, in order to do everything that you can to ensure tenant life safety, it's your responsibility to provide them with precautions that they should be taking. Make sure your residents know and practice the following:

POOL RULES

1. PERSONS UNDER THE AGE OF 14 MUST NOT BE IN THE POOL WITHOUT ADULT SUPERVISION.
2. GLASS ITEMS ARE NOT ALLOWED IN THE POOL YARD.
3. EXTENDED BREATH HOLDING ACTIVITIES ARE DANGEROUS AND PROHIBITED.
4. DO NOT SWIM IF YOU HAVE BEEN ILL WITH DIARRHEA WITHIN THE PAST 2 WEEKS.
5. PETS IN THE POOL ARE PROHIBITED.
6. HOURS OF OPERATION: ___ AM TO ___ PM.

Drains are required by law to be covered, but breaks, cracks and other issues keep them from being completely safe. Hair, swimsuits, jewelry and even limbs can get caught in drains. In extreme scenarios this can cause drowning.

- Never swim alone.
- Children should never be unsupervised.
- Splashing can cause drowning- never purposefully splash someone else.
- Do not bring any electronics (i.e. bluetooth players) in or near the pool to avoid electrical shock.
- Never run on the sides of the pool. Walk cautiously to avoid slips and falls.
- Do not prop pool fences or gates open. These are used to keep unattended children out from the pool and away from any immediate danger.
- Be aware of pool drains.
- Do not dive in shallow water or areas where you are uncertain of the water's depth.

These guidelines, while simple, can be the difference between a life or death situation. Make sure pool occupants are aware of and follow all of these guidelines to severely reduce the chance of danger.

SAFETY ONCE LEAVING THE POOL

Many people mistakenly assume that once they are out of pool waters, they no longer run the risk of drowning. **Unfortunately, this is simply not the case.** Inform your tenants about the risks of dry and secondary drowning so that they can be aware of and mitigate the issues before problems worsen.

DRY DROWNING

A person experiences dry drowning when they breathe in small droplets of water during a struggle. This can make their airway spasm and close, prohibiting ease of breath.

SECONDARY DROWNING

A person experiences secondary drowning after near drowning experiences while swimming. Their lungs fill up with water, making breathing a struggle.

The symptoms for both of these phenomena are similar. They include:

- ✓ Chest pain
- ✓ Sudden changes in behavior, such as irritability
- ✓ Gasping for air
- ✓ Wheezing
- ✓ Coughing
- ✓ Extreme fatigue

Make sure tenants know to look out for the previous symptoms. If someone is worried that they may be experiencing dry or secondary drowning, they should be taken to the emergency room urgently.

POOL MAINTENANCE



As you probably already know, pools require a lot of maintenance. Many building managers hire a pool maintenance company to handle many non-day to day maintenance upkeep responsibilities, but here are some tips that you should ensure someone is taking care of.

WHEN OPENING THE POOL

- If there is a pool cover on your pool, take it off. Make sure to clean it and place it in storage.
- Do a deep and thorough clean of the pool, including vacuuming.
- Fill the pool to the appropriate height.
- Test the following:
 - ✓ pH
 - ✓ Cyanuric Acid
 - ✓ Calcium Hardness
 - ✓ Total Alkalinity Levels
- Closely audit the following for shortcomings:
 - ✓ Drains
 - ✓ Gauges
 - ✓ Plugs
 - ✓ Tile and grout installations
 - ✓ Filters
 - ✓ Skimmers
 - ✓ Diving boards
 - ✓ Ladders
 - ✓ Skimmers
 - ✓ Pool deck
 - ✓ Electrical service

POOL MAINTENANCE

WHEN OPENING THE POOL (CONT.)

- Clean your pool tiles; skimmer them with cleanser.
- Have an expert analyze a water sample from your pool.
- If needed, backwash the filter.
- Lubricate all o-rings, plugs, valves and fittings.
- Shock the water in your pool until all levels are breakpoint.
- If algae is visible, add algaecide to the pool.



If you haven't already, you should take time while opening the pool to establish your maintenance routine for the next couple months while the pool is open. Schedule out when to do what activities. Additionally, you should think preventatively: included in your maintenance plan should be pool parts, such as sensor probes, pump tubing and injectors. Make sure to account for replacing these pool parts before they get the chance to fail on their own unexpectedly. Finally, lay out standards for how the pool will be disinfected in the instance of any sort of body fluid spill or fecal accident.

POOL MAINTENANCE

DAY-TO-DAY POOL UPKEEP

Depending on the environment and number of guests that occupy your pool, this may need to be done several times a day and even hourly during heavy usage season.

Make sure to keep track of sanitizer and pH levels for referral in your records.

- Enforce the maximum occupants limit of your pool in order to maintain safety and cleanliness.
- Run your pool's filter between 10 and 12 hours.
- Test the following and adjust as needed:
 - Sanitizer level-Chlorine levels should constantly be maintained between one and three parts per million (ppm).
 - pH- Level should be maintained between 7.2 and 7.8.
 - Calcium Hardness
 - Total Alkalinity Levels
- Scan the pool visually. Check for any cloudiness or pollutants/debris within the pool. Pay attention to the color of the pool, as this can give indications of both the cleanliness and chemical levels within the pool.
- Clean all bathroom, diaper change and shower areas and check for any safety hazards.
- Use a biocidal shock treatment to disinfect the pool.

May only need to be done weekly depending on how often your pool water is replaced and the water quality of your pool.

POOL MAINTENANCE

WEEKLY POOL UPKEEP

- Empty and clean your pool's pump basket and skimmer around two to three times a week.
- Vacuum and brush your pool's walls and floor.
- Check the following and adjust as needed:
 - ✓ Stabilizer levels
 - ✓ Oxidizer levels
 - ✓ Filter pressure
 - ✓ Alkalinity
 - Water level
- Check for leaves and remove.
- Add algaecide doses preventatively.

Depending on the quality of the water and how often the pool is used, frequency of this can vary from weekly to monthly. It is recommended to adjust water at around one inch per hour.



POOL MAINTENANCE

MONTHLY POOL UPKEEP

- Test the following and adjust as needed:
 - ✓ For Metals
 - ✓ For Total Dissolved Solids
 - ✓ Calcium Hardness
(Do this bi-weekly)
 - ✓ Cyanuric Acid Levels
(Do this bi weekly if using stabilized chlorine)

- Scan exposed metal elements of your pool (sealant, tile, grout, etc.) for any maintenance needs.

- Clean the pool filter using chemicals.

- Use the formula: **LSI= pH + TF + AF + CF - 12.1**
(Langelier Saturation Index) to determine your pool's saturation.

Temperature		Total Alkalinity		Calcium Hardness	
°F	TF	ppm	AF	ppm	CF
32	0.0	25	1.4	25	1.0
37	0.1	50	1.7	50	1.3
46	0.2	75	1.9	75	1.5
53	0.3	100	2.0	100	1.6
60	0.4	125	2.1	125	1.7
66	0.5	150	2.2	150	1.8
76	0.6	200	2.3	200	1.9
84	0.7	250	2.4	250	2.0
94	0.8	300	2.5	300	2.1
105	0.9	400	2.6	400	2.2
		800	2.9	800	2.5

USE THE FORMULA TO MAKE ADJUSTMENTS USING THIS TABLE

NOTE: This table counts Total Alkalinity as the total of bicarbonate and carbonate alkalinity. See your local water specialist for the correction factor to be used if using cyanuric acid.

[Source](#)

POOL MAINTENANCE

WHEN CLOSING THE POOL

- ☑ Run the pool's filter without halt for an entire one to two day(s).
- ☑ Lubricate all o-rings, plugs, valves and fittings. This will make reopening the pool an easier process.
- ☑ Remove the following objects from the pool:
 - ✓ Cleaners
 - ✓ Wall fittings
 - ✓ Ladders
 - ✓ Solar blankets
 - ✓ Skimmer baskets
- ☑ At around an inch per hour, lower the pool water level. At finality, the level should be around six inches below the skimmer.
- ☑ To prepare for cold weather and fight freezing temperature-caused damage, add winterizing algaecide to the pool and drain the following equipment:
 - ✓ Sanitizing
 - ✓ Pumping
 - ✓ Heating
 - ✓ Filtering

POOL MAINTENANCE

WHEN CLOSING THE POOL (CONT.)

- ✓ Do a deep and thorough clean of the pool, including vacuuuming.
- ✓ Check on the water's chemistry and balance it. Commonly, the standard levels should be as follows:
 - ✓ Total Alkalinity: 80-120 parts per million
 - ✓ pH: 7.2-7.6
 - ✓ Calcium Hardness: 180-220 parts per million

CHEMICAL	MINIMUM	IDEAL	MAXIMUM
Chlorine	1 ppm (0.001 mL/L)	2 - 3 ppm (0.002 – 0.003 mL/L)	4.0 ppm (0.004 mL/L)
Cyanuric Acid	25 ppm (0.025 mL/L)	30 - 80 ppm (0.03 – 0.08 mL/L)	100 ppm (0.1 mL/L)
Bromine	2 ppm (0.0002 mL/L)	2.5 - 4 ppm (0.0025 – 0.004 mL/L)	5 ppm (0.005 mL/L)
Total Alkalinity	60 ppm (0.06 mL/L)	80 - 120 ppm (0.08 – 0.12 mL/L)	180 ppm (0.18 mL/L)
Calcium Hardness	150 ppm (0.15 mL/L)	200 - 400 ppm (0.25 – 0.4 mL/L)	1000 ppm (1.0 mL/L)
Total Dissolved Solids	NA	NA	Shall not exceed 1500 ppm*
Cyanuric Acid	0 ppm (0 mL/L)	0 ppm (0 mL/L)	0.1 ppm (0.0001 mL/L)
pH	7.2	7.4 - 7.6	7.8

[Source](#)

By regularly performing these tasks, you can ensure that your pool is a well-kept, safe and enjoyable place for your residents to be. It is important to note that the previous tips are best practices/guidelines from [LATICRETE](#). For more exact specifications regarding your pool and its unique requirements, we recommend consulting with a pool water specialist near you.

WHO WE ARE

Kings III Emergency Communications has been providing complete, compliant and affordable emergency phone solutions for elevators, poolside, stairwells, parking areas, and more for over 30 years. As leaders in elevator code compliance and on-site life safety, our customers and partners confidently lean on us for our emergency communications expertise.

We help replace costly and poorly serviced landlines with our cellular technology, providing cost savings all while helping customers mitigate risk and liability via enhanced operator training and digital recording and storing of all calls.

Our all-inclusive solution includes equipment, installation, maintenance, and 24/7 monitoring at our very own Emergency Dispatch Center for one low price. We are designed, assembled and supported in the USA.

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