AQUATIC DESIGN & ENGINEERING
Pool, Waterpark, & Natatorium Systems Design
A division of
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Pool Operations During the Covid-19 Crisis

What to do with the pool(s) to save money during this time?

Ensure your pool/spa are truly chemically balanced out. It is suggested that a shock or super chlorination is done first to ensure any bacteria in the system are removed. Return your system to normal and fully balanced out with a pH of approximately 7.2 to ensure residual chlorine is effective with any lingering bacteria in the circulation system. If able to lower your set point on the chemical controller, lower it to 1 ppm to maintain sufficient / stable chlorine levels.

If you have a pool cover, use it, covering the pool will aid in reducing the evaporation of water to the air. For indoor systems, within your HVAC system you should have a low occupancy mode / night mode or vacation mode. This will slow down the system while maintaining air circulation and dehumidification. You can also turn down the heater systems to the pool(s)/spa(s) as well as lower the HVAC operational temperature. Matching the water temperature to be the same temperature as the air, this will reduce the humidity in the pool area.

Should I drain my pool?

If you are considering draining your pool or you have already done so you should review the following, regardless if it's an indoor or outdoor pool. Within your main drains a hydrostatic relief valve or a drain plug should be removed to permit ground water, if ground water is present to release the upwards hydrostatic pressure on the pool tank to be released into the pool This will prevent structural damage to your pool due to the upwards pressure of the ground water.

A plaster or marbilte type finish within your pool requires to remain submerged and saturated otherwise you risk the finishes of the pool drying out an cracking. It is recommended these pools should not be drained.

If you have a tile pool and the finish is older and your grout is questionable, you may have water behind the tile finish. With the removal of water from the pool, these areas may begin to dry out causing tiles to pop off.

With an emptied system ensure you are removing water from your filter system as bacterial will multiply quickly within the filter. Ensure an air vent is also opened to prevent a vacuum condition on the filter and system

Be cautions while draining your pool and while the pool is empty. Gaskets, expansion joints, pump seals, etc may dry out and cause future problems down the road upon start-up. Chemical probes, (PPM, ORP, pH) need to stay saturated. Isolation valves on these systems are provided and these probes should remain wet.

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When refilling your system, no fill should exceed 1" per hour to prevent thermal shock of the incoming water to the pool tank.

Should I leave my system running?

If you have a Variable Frequency Drive (VFD) motor it could be turned down or programmed to go off and on based to provide some circulation. Slower moving water in sand filters and cartridge filters will maintain filtration. However, DE or Perlite filters may not function correctly at slower rates as the media required a steady pressure from the velocity of water across the element to keep the medial (Perlite) in place.

Slowing the flow rates may cause the chemical controller to enter into an alarm / no flow condition. By-passing this system is permitted, however manual monitoring of the chemical balance of the water may be required to ensure pH and residual chlorine stays constant within the system. If the chemical control system is by-passed or flow rate is too low to maintain proper operation, it is recommended that the chemical lines be flushed out with water to eliminate potential blockage within the chemical tubing and injectors. If a CO2 system is used, the system can also be isolated based on the chemical controller not being on-line.

Where you have a stand-alone system with no VFD. Recommendation would be to shock the pool and adjust your pH balance to 7.2. Allow the system to circulate for a little while, including the filter system before turning the system off. Drain filters

Keep your automated water fill system on to prevent accidental drainage of your pool(s)/spa(s).

All peripheral equipment, UV's, Ozone units, heaters, etc, should all be turned off minimum 20 minutes prior to making any other adjustments to permit cooling of the elements to reduce or eliminate overheating. Follow manufactures recommendation on all equipment for shut-down or non-use time period.

Turn down or off system boilers maintain heat to the pools, as noted above.

Please do not hesitate to contact us if additional information or if clarification is required.

Sincerely,

Jamie Lopes, Senior Project Manager – Recreation Division
Aquatic Design - Covid and Pools