



## Why should I lower my water for winter?

Before getting into why it's a good idea to lower your water, we need to point out that inground pools are meant to have water in them at all times. Lowering the water increases the potential of hydrostatic pressure in the ground causing structural issues with your pool. In some cases, lowering the water only inches in a vinyl pool can allow its liner to float. In one piece fiberglass as well as concrete pools, it can cause the pool to move, cracking it, or worse, popping the pool out of the ground. So always be careful that you only lower the water as much as is needed, and then as soon as you're able, fill it back up to normal operating level. **DON'T** wait for Mother Nature to refill your pool!

## Ok, so back to the why

A significant reason to drain the pool is that it gives the technicians who are closing your pool all of their senses to ensure that all of the water is out of your piping. With the water below your pool returns (Jets), not only can they see the water as it is being evacuated, but they can also hear water gurgling within the underground piping.

In recent years, specialized plugs have been sold that, when used in conjunction with high volume specialized blowers, allow for some pool returns/jets to be efficiently evacuated of water without draining the pool water below them. There's no need for all of our senses! Wow, that's great, no more draining pools – hooray!

## But...

There's always a "but", isn't there? Pools often have a need for draining on a chemical level. The annual draining of a small portion of water, followed by immediately refilling with fresh water, helps to dilute levels that can and will cause water quality issues otherwise.

## Total Dissolved Solids

Everything we add to a pool, from chlorine to specialty and balancing chemicals, even the water from your hose, adds to a level called total dissolved solids, or TDS. TDS is the total weight of all soluble matter in the water. Total dissolved solids can reduce the ability of your pool chemicals to do their jobs, resulting in poor quality, unsanitary water. There is only one way to reduce high levels of TDS, through dilution - draining a portion of the water and filling it back up with water of a lower TDS level. Indoor pools that are used year round are often in need of draining to reduce TDS levels annually. By draining our outdoor pools for winterizing, we're keeping TDS levels under control.



## Cyanuric Acid

Those of us who use chlorine in tablet, stick and even granular or powder form are almost certainly adding cyanuric acid to our pools slowly. Cyanuric acid, or stabilizer, is present in most all 1", 3", sticks, capsules as well as granular chlorine. It's added to help prevent the sun's ultraviolet rays from burning off the chlorine before it can be used to sanitize the water. This is a very good thing, because who wants to spend more money on chlorine just because of the sun, right? Right! That is until that same stabilizer level builds up so high that it actually locks up the chlorine, preventing it from being able to effectively sanitize. Most pools want a stabilizer level of 30ppm – 50ppm. When stabilizer levels approach 100ppm, the ability of chlorine to disinfect can be greatly reduced. Just like TDS, the only way to reduce the stabilizer level is through dilution.

## Give it to me straight Pool Doc, How long have I got?

That's a tough one... we've seen pools in *as little as two years* of not draining for winterizing start to have water quality issues because these levels are too high.

The math of how much you would need to drain to correct high levels is very direct. If you're stabilizer is at 100ppm, draining half of the water and refilling with water that has no stabilizer will result in a new level of 50ppm – still at the high end of acceptable for most pools. If you're at 100ppm, you'll likely end up draining 65-70% of your pool. If your pool is concrete, shotcrete or gunite, with the help of a professional swimming pool company, you might opt to drain the pool entirely, maybe give the interior a chemical wash, and refill it. If your pool is fiberglass or vinyl lined, this isn't usually an option or you'll end up damaging your pool. In these pools, it usually means that you'll drain about a foot of water, refill it, then do it again, and again, and again, slowly reducing these levels.

## The Bottom Line

Drain your pool every year for winterizing, and once the pool is winterized, immediately fill it back up to normal operating level. This will keep your pool water refreshed and these levels under control.

## One Last Thought

Many people who use mesh winter covers become concerned that over the off season, water from rain and melting snow and ice will overflow their pool and flood their yard. This isn't something that you need to worry about. Most pools won't hold water above the top of the skimmer opening, as the skimmer lid is set into a collar in the deck that is separate from the skimmer itself. This separation allows water from the pool to seep out under the decking where it eventually joins the natural ground water, draining into retention ponds, storm sewers, etc.