

Evolutions Fitness & Wellness Center

Staff Report

Conversion of Pool to Saltwater Pool System

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How Does a Salt System Work?

Saltwater swimming pools draw on dissolved salt in the water to generate chlorine. The salt cell or generator utilizes a process called electrolysis to break down or separate the salt also known as sodium chloride or NaCl in the water.

The chemical reaction created by electrolysis produces chlorine in the form of sodium hypochlorite. These sanitizing/disinfecting / oxidizing agents are the same as chlorine commonly used in swimming pools in solid, liquid, or powdered form. This means a saltwater pool is not actually chlorine free. It simply utilizes a chlorine generator instead of being dependent on chlorine added in other forms.

A significant difference between a non-saltwater pool and a saltwater system is that saltwater pools have reduced amounts of chloramines. Chloramines are a by-product of oxidation or the breakdown of matter in the pool water and are the primary cause of eye irritation and a pungent “chlorine” smell. The reduced chloramines in a saltwater pool are one of the biggest advantages.

We had some concerns about converting our system to salt. In doing our research we got some information from the internet, but the most valuable information was talking to vendors and operators of the salt systems and our site visit to a facility in Modesto, CA that actually used a NEXTGEN system. The system there had been put in two months ago and already the Manager there said they were extremely pleased with the system. This facility had 5 bodies of water, three outside, and two inside. Less chemicals are being used, less labor. Unfortunately, the maintenance staff was out with COVID so we were unable to discuss the system with him, but we got a lot of information from the Manager. All our concerns (below) were addressed:

1. Cost / Volume of Salt / Comparison of Chemical Costs
 - a. Presently we go through about 400 gallons of chlorine every 3 months – at \$3.85 per gallon. Quarterly cost: \$1,540.00 ***
 - b. Per month estimated use of salt = 1 - 2 40 lb. bags = less than \$50.00.
 - c. We would use about ½ the acid we use now. We currently use 400 gallons per month at \$4.35 per gallon. Monthly cost: \$1,740.00
2. Daily Maintenance – How often do chemicals need to be checked? Do we need a full-time staff person just to take care of the pools?

- a. Pool is tested once a week. Salt is added only when necessary.
 - b. Actually, much less maintenance than we do now.
3. Is there corrosion / oxidation from the salt that damages metal and / or other surfaces?
 - a. No. There is a slight build up of calcium on the cells and they should be cleaned about every three months.
4. Bather Load – can the salt keep up with a high bather load?
 - a. Used in facilities of 3,000 people a day in pools with no problem. Evolutions probably has loads of 175 in lap pool, 125 in therapy pool, 250 in both spas per day. The facility we visited in Modesto's pools were very busy when we were there and the system kept up just fine.

CONCLUSION:

We all agree that it would be AMAZING to have a salt system here at Evolutions.

However, there are other things to consider:

1. With spending \$500,000 on a new water filtration system, how long will it take to get a return on that investment?
2. We all feel that \$500,000 would be much better spent fixing the pools we already have.
 - a. Both pools are leaking, which if we didn't fix would cause more chemical use.
 - b. The lane lines are almost gone and what is left of them peels off and is sometimes extremely uncomfortable for members to step on.
 - c. The seams of the liners have a substance on them we can't get rid of.
 - d. The gutters are cracking and breaking.
 - e. These changes would be noticeable and very much appreciated by our members, while they would not really notice a difference in a new filtration system.

We all agree that if we change the filtration system, we definitely need to fix our current pool liners. If we change the filtration system without fixing the pools, it is like the cart before the horse causing us to use more chemicals and realizing less savings.

*** NOTE - It came to my attention yesterday that Engie was not given correct information back in March regarding our chlorine use. I take full responsibility for that error. This is NOT the error of ENGIE. Instead of saving \$24,605 in chlorine use, we would only save \$6,345. However, as you can see there are other benefits to using the NEXTGEN system as I have explained in this report. I apologize for the misunderstanding to the Board and ENGIE.