



## Case Study – Silverlake Family Recreation Center Pool, Erlanger, Kentucky



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**Customer:** Silverlake Family Recreation Center Pool, Erlanger, Kentucky

**HydroFlow Dealer:** Savastat-USA, Antioch, Illinois

### Purpose:

In November, 2006 the Silverlake Family Recreation Center embarked on a test program to determine the savings that could be accrued by applying to Hydromax technology on their recreational pools. The purpose of the test was to improve the quality and clarity of the pool water so that the water would be more appealing for swimmers, to save costs by reducing water and chemical consumption, and operate in a more ecologically friendly manner. All Seasons Energy Group proposed using Hydromax technology that was supplied by Savastat-USA to accomplish these goals. A HydroFlow P100 unit was placed on the water line before the filters and a HydroFlow W63 placed at the waterslide inlet pipe.

### Product evaluation goals:

- Reduce maintenance costs.
- Reduce water consumption by reducing backwash frequency and duration.
- Improve water clarity in pool by enhancing filtration efficiency.
- Decrease the “chlorine smell” by reducing chloramines.
- Maintain or improve biological eradication while decreasing chemicals.
- Reduce scale on pool surface areas
- Reduce energy costs.

### Method

A baseline test was run from November 3-13, 2006. Data was collected for two weeks with the P100 and the W63 operating. The Silverlake Family Recreation Centers aquatic staff compiled all of the data.



**Data**

The data collected included the following: water usage during backwashing and make up water, chemical usage, and utility usage. Since the number of pool patrons for the baseline and implementation phases were typical of past years, no correction factor was necessary.

The data was average for one week and projected for a year by multiplying. It was then compared using percentages. The following are examples of applying the backwash data, which have the greatest costs other than the utilities:

Backwash gallons **before** Hydropath =  
 125 GPM X 5 minutes X 3 times per week X 2 filters X 52 weeks = **195,000** gallons per year

backwash gallons **with** Hydropath =  
 125 GPM X 1 minute X 3 times per week X 2 filters X 52 weeks = **39,000** gallons per year

**Before Hydropath** makeup water cost = 195,000 gallons X \$.017 per gallon = **\$3,015**

**Before Hydropath** backwash sewage cost = 195,000 gallons X \$.027 per gallon = **\$5,265**

The total equals **\$8,580** per year before installing a Hydropath

**With Hydropath** make up water cost equals 39,000 X \$.017 per gallon = **\$663**

**With Hydropath** backwash sewage cost equals 39,000 X \$.027 per gallon equals **\$1,053**

The total of **\$1,716** per year with Hydropath

**With Hydropath technology, makeup water and sewage costs per year decreased 80%**

**Results**

Below is a comparison of the cost **before** and **with** HydroFlow technology, using information compiled by the Silverlake Family Recreation Center aquatic staff:

	<u>Before</u>	<u>After</u>	<u>% Reduction</u>
Water	\$8580	\$1716	80%
Chlorine	\$1560	\$ 780	50%
Acid	\$1044	\$ 522	50%
Electric	\$1000	\$1000	0%
<u>Natural Gas</u>	<u>\$24,000</u>	<u>\$18,000</u>	25%
<b>Totals</b>	<b>\$36,184</b>	<b>\$22,018</b>	<b>39%</b>

An estimated savings of \$14,166 will accrue annually for the facility.



### **Benefits**

In addition to cost reductions for Water, Chlorine, Acid, Electricity and Natural Gas, the staff noticed an increase in the clarity of the pool water and a reduction in chlorine odor (chloramines). HydroFlow breaks up chloramines and liberates the chlorine (called Free Chlorine) that can be used on bacteria control.

### **Conclusion**

The recreational pool will maintain better quality water with the continued use of the HydroFlow units. The members would be more satisfied with the recreational swimming, and HydroFlow products more than pay for themselves within 15 months. The decrease costs are estimated to be a savings of about \$71,000 over a five-year period.