



# Keeping an aquatic center afloat.

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Nick Bacon, Facility Director  
Asotin County Family Aquatic Center



Programmable variable frequency drives (VFDs) control pool pumps more efficiently. The pumps no longer have to run at 100 percent all of the time.

As Nick Bacon can attest, operating a pool is no day at the beach. For one thing, there’s the water, which has to be circulated, heated, disinfected and filtered 24 hours a day, seven days a week. And that takes energy—a lot of it. Because as Nick says, “a pool that isn’t recirculated is a pond, and ponds become stagnant.”

Nick runs the Asotin County Family Aquatic Center. Most of the funding for the voter-approved public facility comes from user and gate fees, from the folks who come to do laps, take swim lessons or simply float on the lazy river. Another stream of cash comes from a sales tax passed in 2007 expressly to help with the park’s shortfall. Nick must make every dollar count and so controlling energy costs is one area where he has worked with Avista to do just that.

Maintaining the facility at quality standards the public wants is Nick’s primary goal. As the facility’s director, he’s had to make some tough choices to keep the pool financially operational. Operating hours have been reduced with the facility

open only before and after school, and closed on Sundays and during the hottest times of the day. Staff hours also have been cut, and Nick eliminated some positions and got smarter with how he uses his full-timers.

But to effectively control his budget, Nick decided to use some of his limited budget to reduce the facility’s energy usage. He came to Avista to see how they could help, and Avista offered rebates and incentives on energy-saving upgrades.

The changes have helped tremendously.

One of the biggest cost-savings measures came when Nick installed variable frequency drives (VFDs) on three indoor circulation pumps in May of 2012. Before then, the drives were always running at 100 percent, whether the pool needed it or not.

“Old-school style pools would have pumps spinning at 100 percent output, and you would close valves partially to restrict the water and slow the flow,” Nick says.

## Keeping an aquatic center afloat.*continued*

“So you wasted energy. With the VFD you tell it what you need and that’s what it spins at.”

You don’t want the pool to “turnover,” or get completely filtered, too quickly, Nick says, but you also don’t want to lose clarity in the water. Nick now has the VFDs running between 80 and 90 percent on the three indoor pools during operating hours. At night, the filters are programmed to drop down to 70 percent.

With this simple upgrade, Nick’s saved big.

“As of the end of April this year, we’ve spent \$11,000 less on gas and electricity than we did in 2012,” he says. “We’ve spent 30 percent less on electrical...that’s pretty significant over four months period of time.”

Avista gave Nick incentives for this project. All he had to do was apply for them.

More savings were realized when Nick upgraded to LED lighting from metal halides for the indoor pool and parking lot, a project that finished early in 2013.

“Before, the lights were twitchy, and ballasts and bulbs would blow out. We were constantly replacing bulbs,” Nick says of the halides. “It was an unpleasant experience for our patrons, too, because the color of the light would change as the lights aged. If a ballast began to go, lights would hum, buzz and flicker, and it would get darker and darker until we would finally change them out—which was very expensive.”

Once or twice a year, an electrician would replace the halides as needed over the pool. At 18 feet above open water, however, this was no easy—or cheap—task.

“Switching to LEDs fixed all of that,” Nick says. “The light is steady. The ballasts aren’t blowing out or degrading. Additionally, the lights come on instantaneously as opposed to the old metal halides.”

The bulbs cost about the same at \$65, but the required amperage went from the low 200s to the low 30s. Also, an electrician



The pool covers help save energy, as well as prevent water and chemicals from evaporating.

was no longer required to come twice a year, but maybe once every four years, considering that LEDs can last up to six.

Again, Avista played a collaborative role in switching to LED by offering Nick an incentive on the lighting upgrade.

Another project of Nick’s that saved energy was the simple installation of pool covers to conserve heat and prevent water evaporation. The cover’s effects on Nick’s operations were even greater, however.

“Besides saving water, covers keep pool chemicals from evaporating,” he says. “Swimming pools off-gas chlorine, which isn’t good to inhale. With less evaporation, we no longer have to continually run a HVAC system to exhaust and recirculate the air.”

While Nick has done much to curtail costs, problems persist. Nick’s slice of the budgetary pie continues to shrink, and last year he started running in the red, despite the money-saving upgrades.

Currently, the county has formed a public facilities district with the provision that the new district would then ask for voter

approval of up to two-tenths of a cent county-wide optional sales tax, which would be 100 percent dedicated to the public facilities district. This means that the funds cannot be diverted to any other political entity and would go directly to the maintenance and operation of the aquatic center.

Nick hopes his actions with upgrading the pool shows voters that he is a good steward of public funds.

As a case in point, the money Nick used to upgrade the facility came from leftover bond funding. It was very restricted public money that could only be used once. When he received approval from county commissioners to use it on these energy-saving upgrades, he told them his philosophy on how it should be spent.

“I told the board I thought it would be wiser to use the funds to create new long-term savings instead of using it to make money in the short term,” he says.

If the new funding is approved, first on Nick’s list is expanding the park’s hours, so people can swim on Sundays.