

East Portland's new pools easy on eyes, environment

by Abby Haight, The Oregonian



Brent Wojahn/The Oregonian

The new community aquatic center in East Portland is loaded with environmentally friendly features, but designers also installed fun. The 4,500-square-foot leisure pool includes a 17-foot-tall water slide, a "shark" slide for youngsters, a current channel, a sprayer and other toys.

A new aquatic center in East Portland is an \$11 million showcase of energy efficiency and conservancy -- with a wicked spiral of a water slide.

The East Portland Community Center natatorium, which opens at 5:30 a.m. today, will serve neighborhoods filled with young families and older residents. A grand opening celebration is planned March 14.

The center's two pools got positive reviews after an informal aqua-aerobics class earlier this month.

"I absolutely love it," said Sue Cox, district aquatic coordinator. "It's bright. It's enticing. I can't wait to get people into it."

The aquatic center boasts environmentally friendly features such as a water system that will save about 1.5 million gallons annually, special panels that absorb noise, and constantly freshened air. Almost all of its construction debris was recycled, and an outdoor system of bioswales will retain and treat all stormwater runoff.

When an 87-kilowatt solar electric system is installed and running this summer, the center at 740 S.E. 106th Ave. in the Gateway District is expected to become the first public swim center in the nation to achieve the highest certification of the Green Building Rating System -- platinum. Yet it also is an example of how once-cutting edge sustainable design and construction have become status quo for public buildings.

"This is a happy confluence of energy efficiency and design," said Lisa Petterson, project architect for SERA Architects, the Portland firm that designed the center. "But let's face it, it's what the community has been waiting for for ages."

The community center, opened in 1998, always was meant to have water features. The pool project was funded through a parks levy voters passed in 2002 and by additional funding in the city budget in 2006-07. Three years ago, city leaders ordered that new public buildings would have to meet the Leadership in Energy and Environmental Design rating system's gold certification.

The pool design does that and more. By adding the solar electric system, which should power about 15 percent of the center's needs, the project is eligible for the toughest and highest certification.

Monitor adjusts light

The first impression walking into the airy, 150,000-square-foot natatorium is a sense of space. Tall windows and skylights provide most of the daytime lighting. A monitor checks the amount of natural light on the water and adjusts if artificial light is needed.

The air is fresh, changed entirely eight times hourly. It moves slowly and constantly, so no breeze chills swimmers. To compensate for the extra energy the air freshening requires, its waste heat is recovered to heat the water.

The 4,500-square-foot leisure pool includes a current channel and a three-lane lap-swimming section. It is warmed to 86 degrees, and will be heavily used by the center's older population and children. The lap pool is about three degrees cooler. The pools can hold as many as 14 swimming classes simultaneously.

The water is constantly cycled through a four-step treatment, flowing past an ultraviolet tube that kills impurities, then through a filter. Chlorine cleans the water before it is heated again and returned to the pool.

The more heavily used leisure pool flushes through the treatment system every two hours, while the lap pool goes through every four. The special treatment system saves water and reduces the amount of chlorine needed to keep the water clean.

First of its kind?

Even before the solar panels are added, the center is 60 percent more energy efficient than required by Oregon's building code, said Richard Bosch, architect and project manager for the Bureau of Parks & Recreation. As far as officials can find, the aquatic center is the first of its kind.

"This thing was less predicated on having a prototype," Bosch said. "It's more predicated on going step by step. It was looking at all the opportunities."

Among those opportunities was teaming with Energy Trust of Oregon and Portland General Electric to install the solar electric array on the south-facing roof. The \$1 million cost will be picked up by a third party through Commercial Solar Ventures, which links nontaxed organizations with corporations that can take advantage of state and federal tax credits.

The city also will install a small solar thermal system to heat water for the center's showers.

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Center's green features

- 30 percent savings on potable water because of low-flow shower heads with metered controls and low-flow faucets.
- Structural materials double as finish materials throughout the building, with a 25 percent savings compared with a typical new building.
- Locally produced building materials, including recycled blocks and a 110-foot, 14-ton steel truss.
- Lockers and benches constructed of recycled materials.
- 95 percent of construction waste was diverted from the landfill.