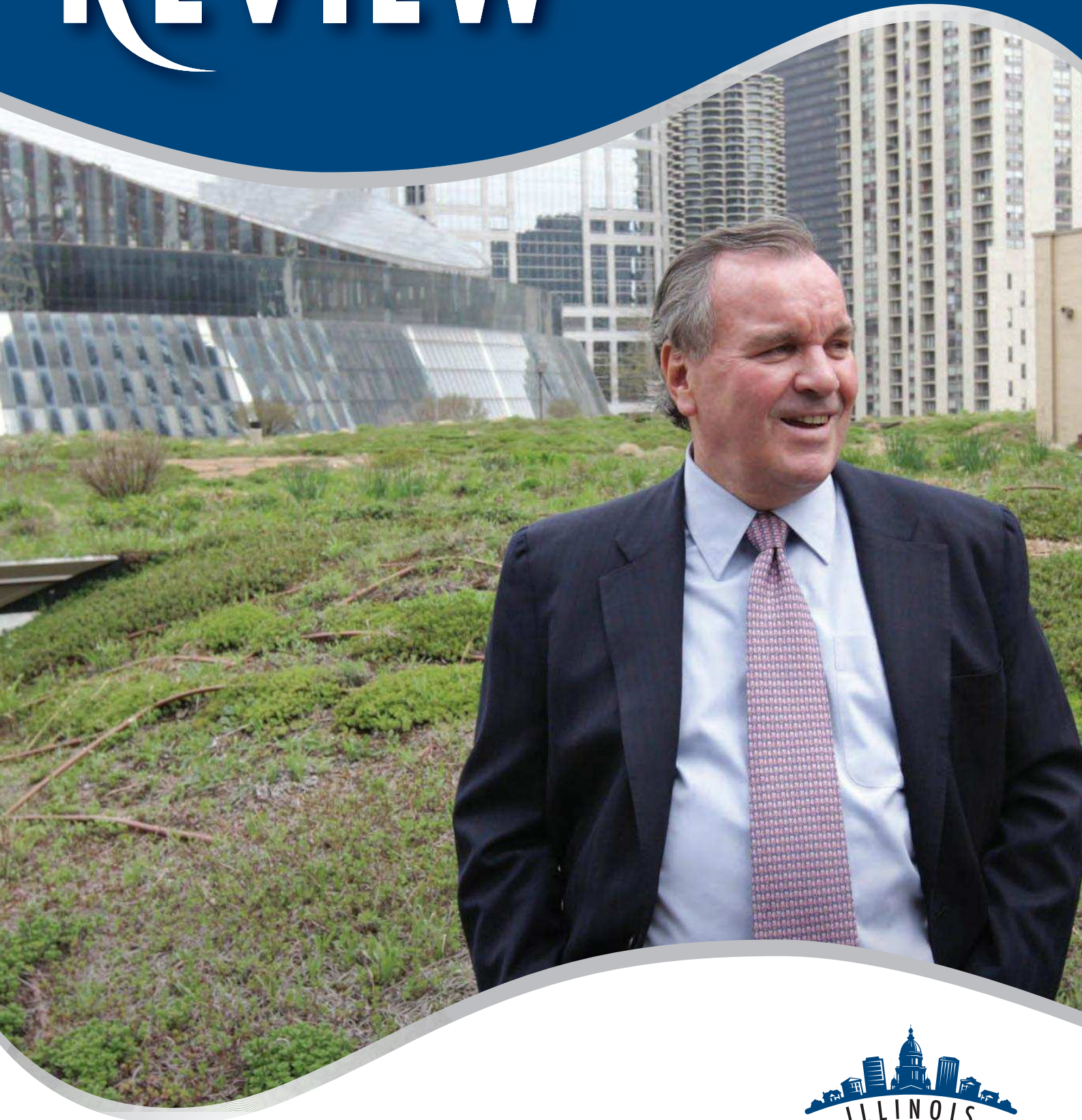


ILLINOIS MUNICIPAL

REVIEW

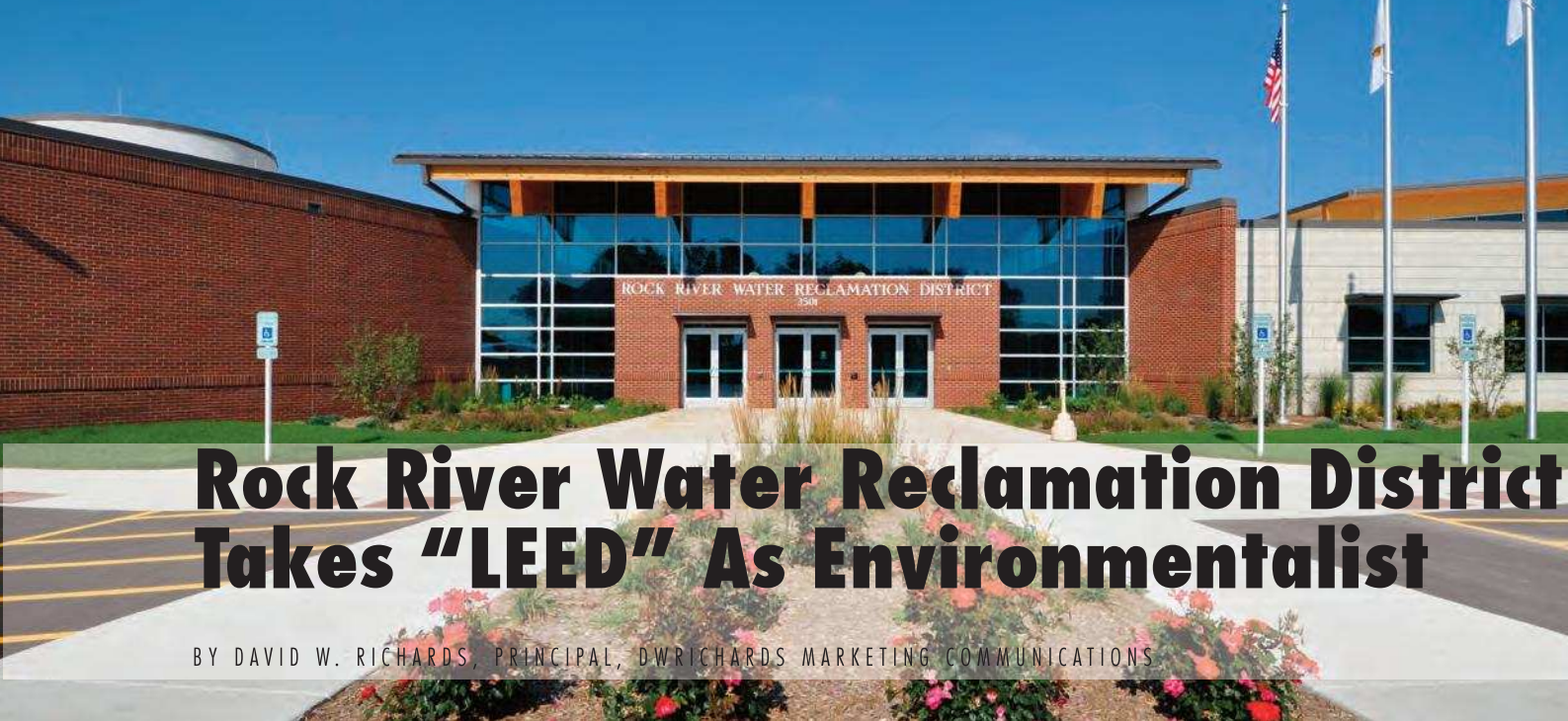
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Rock River Water Reclamation District Takes “LEED” As Environmentalist

BY DAVID W. RICHARDS, PRINCIPAL, DWRICHARDS MARKETING COMMUNICATIONS

“Reclamation of solid and liquid waste product is not a glamorous job, but it’s a necessary one,” states Steve Graceffa. As director of the Rock River Water Reclamation District in Rockford, it is a job that he and 111 employees take very seriously.

“We truly see ourselves as environmentalists, using today’s technology to enhance Nature’s own age-old natural water purification process of collection, treatment and purification.” Established in 1926, the district now encompasses 80 square miles, serves 77,000 customers and manages 35 million gallons each day. Since July 2009, Graceffa and his staff have overseen daily demands from a state-of-the-art ‘green’ administrative headquarters that has earned Silver LEED (Leadership in Energy and Environmental Design) certification. It even provides fiber optic capability, so staff can monitor and control the district’s 31 pumping stations from anywhere – even from home, if necessary – based on real-time data.

“We had been operating in a building that was constructed in 1931. It was obvious a few years ago that we needed to improve our capabilities,” Graceffa explains. “From a management perspective, it was difficult. Our personnel were located in multiple buildings and the physical plant needed upgrading. Simply put, it was time we took a fresh look at what was needed.

“Our Board encouraged us to ‘think differently,’” Graceffa points out. “Their position was that this building is a community investment in helping make the environment clean with a minimum use of energy. They encouraged us to pursue LEED certification, to set the standard, if you will, of what can be designed and engineered into a building to help maintain a clean environment.”

District management believed the new facility should also serve as a ‘community center,’ of sorts. Each year, more than

19,000 residents visit the facility to pay their bills, either inside the building or via the drive-thru. Such consistently high numbers of customers on-site was seen as an opportunity to educate them about water reclamation and what exactly was being done with their tax dollars.

The district partnered with the Larson & Darby Group, a Rockford-based architectural and engineering firm, for the project.

SHARED ECO-FRIENDLY PHILOSOPHY

“We begin each project with a blank slate,” says Dan Roszkowski, vice president of Larson & Darby Group. “This particular project presented a couple of new, interesting challenges, in that the facility not only had to be functional for staff and fulfill day-to-day operations, but also serve as an education tool for the community.”

The result is a stunning glass, masonry, block and stone building that easily meets the requirements for Silver LEED certification.

From its hill-top location overlooking seven acres of rain gardens, prairie grasses and natural landscaping, the nearly 40,000 square foot building incorporates today’s most effective energy-efficient design and engineering methods.

Its physical orientation makes the greatest use of natural sunlight to illuminate the interior work space, supporting a healthful work environment while also helping minimize electrical usage.

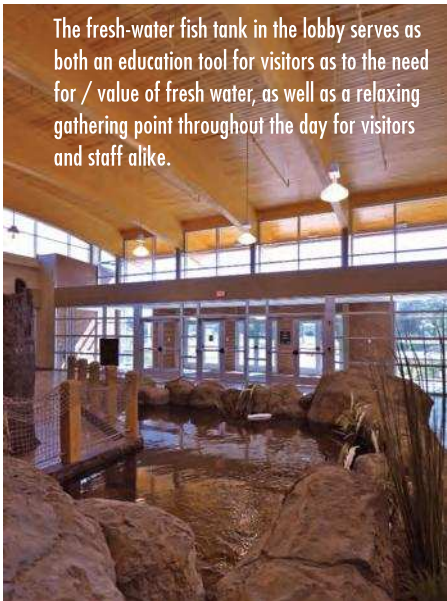
Effluent water from the treatment process, already at 55 degrees, is channeled to 27 heat pumps throughout the building.

ROCK RIVER WATER RECLAMATION DISTRICT CONTINUES ON PAGE 18

These pumps automatically adjust and control energy use in the facility. Minimal energy is needed to raise the heat level the additional 5 – 10 degrees that might be needed.

“Air quality and ventilation also was a concern,” Graceffa admits. “We have 45 people in the building, using all sorts of machines and technology. It’s amazing how much heat can be generated by the equipment used to generate 77,000 customer bills each quarter. That all takes electricity.”

Fortunately for Graceffa and district staff, they are able to convert the methane gas that is produced on-site into electricity for the entire plant. “It’s just one more way we can illustrate to our customers the power of energy re-use and adaptability.”



The fresh-water fish tank in the lobby serves as both an education tool for visitors as to the need for / value of fresh water, as well as a relaxing gathering point throughout the day for visitors and staff alike.

Another example of re-use and recycling of materials is the fact that 85% of waste materials from the construction project – including wood, plastic, paper and steel – were recycled.

In fact, Roszkowski points out that, in addition to the 85% recycling of construction materials, his firm also was able to

contract with vendors within a 500 mile radius for all needed materials. “That way, we also experience energy savings by reducing the need for long distance transport of the materials and cut down on emissions.”

Larson & Darby Group also found a laminated wood beam supplier that used glue with low VOCs (volatile organic compounds). “It wasn’t easy to do, but we found one, and we’ll include him in future specs. You learn something new from every customer and job.”

COMMUNITY EDUCATION TOOL

“We’ve long placed an emphasis on education,” Graceffa states. “The more people understand the need for and the process of water reclamation, the more supportive they are of the district and what we do.

“Schools from throughout the area schedule field trips to learn about the process and benefits of water reclamation,” he explains. “More than 2,500 students visit each year.”

What they see upon entering the U-shaped building is impressive: an 18,700 gallon fresh-water fish tank dominates the lobby. Behind it is a 10-foot long scale model showing the water reclamation process.

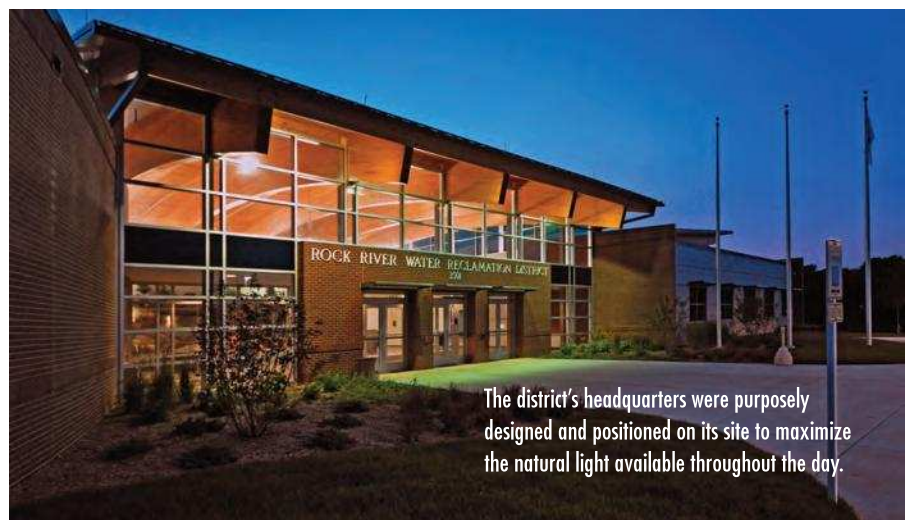
“The fish tank illustrates the need for fresh, clean water,” Graceffa explains, “and it’s a great gathering point for visitors. And of course, the scale model is used to explain and illustrate the process to students, so they have a better understanding of what is being done, and why.”

Graceffa adds that representatives from several water reclamation districts have visited the facility, to tour the complex and see first-hand what might be possible in their own districts.

Built for just under \$9 million, the district’s new administration building is one element of a much larger \$100 million capital improvement project. While the initial costs may have been a little more than a more traditional and less ‘green’ facility might have been, the long-term pay-back is more than worth it, he says.

“Our Board of Trustees sees the value in making this commitment and investment. They see that this is not just the ‘right’ thing to do in terms of cleaning up the environment, but it’s also a means for the district and its customers to realize long-term energy savings.

“It’s what we do. It may not be glamorous, but it’s necessary. And we believe in doing it the right way.”



The district’s headquarters were purposely designed and positioned on its site to maximize the natural light available throughout the day.