FACILITY PROFILE

SUSTAINABLE DESIGN

Green Team

SWEETWATER CREEK STATE PARK VISITORS CENTER

LITHIA SPRINGS, GA.

EMILY TIPPING

With solar panels, composting toilets, vegetated roof and much more, the new Visitors Center at Sweetwater Creek State Park shows how a team committed to sustainable design can create a building that goes beyond anyone's expectations. You see, the U.S. Green Building Council recently awarded the building Platinum-level LEED certification (its highest distinction). The Visitors Center is only the 20th building worldwide to achieve such a distinction and the first in the Southeast.

Sweetwater Creek is a State Conservation Park, offering more than 2,500 acres dedicated to preservation and protection of natural and cultural resources. Site visitors can hike to the ruins of a textile mill burned during the civil war. The park also offers other day-use activities like picnicking, canoeing, fishing and more.

"Any time we're going to build in a conservation park, we have to be consistent with the mandate of the park to preserve the natural environment," said David Freedman, P.E., chief engineer for the Georgia Department of Natural Resources (DNR). "The building had to be environmentally friendly, so it was a natural fit that we applied the LEED criteria to this project."

At approximately 8,743 square feet, the building was constructed for around $173 per square foot, a cost Freedman feels is reasonable, given the ongoing savings associated with operating a building that saves so much energy and water.

It was the integrated team of savvy professionals who collaborated to make the Visitors Center worthy of the platinum certification, Freedman explained. "Any time you do a green building, you do an integrated design process, where you get all the parties together numerous times during the design to bounce off ideas," he said. "Just for example, we had a 2-inch water line that served the building, so we were faced with installing a bigger mile-long line. But when we realized we could use the composting toilets and reuse water, we were able to serve the building through the 2-inch line. Those things don't come out without this integrated design process."

Ultimately, that process paid off in the huge savings of energy and water at Sweetwater Creek. Freedman explained that a combi-

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nation of composting toilets, which require no water to flush, and a creative rainwater capture-and-reuse plan, help reduce the Visitors Center's usage of potable water by 77 percent compared to a conventional building.

Solar panels, a vegetated roof, high-efficiency HVAC and more help reduce the energy consumption of the building by 51 percent, reducing by 27 tons the amount of carbon emitted into the air.

Even the construction process itself focused on sustainability, with a waste management plan that led to 80 percent of construction waste being diverted from a landfill—through the use of mostly salvaged and recycled materials, many manufactured within 500 miles of the site.

"We had a lot of partners on the project," Freedman said. "Some of the solar panels were donated by BP. Another company donated exhibits. Since we were able to do such a high-performance, sustainable-model building, that excited our partners as well, so we had several people come forward with donations just to be a part of the project."

In addition to the platinum-level LEED certification, the building was a winner in the 2007 Engineering Excellence Awards from the Georgia Engineering Alliance.

"A lot of people are reluctant because of their perception of the cost [of building green], but I think we're an example that it doesn't cost too much. With a commitment to doing the right thing, we're a testament to the ability to get this done," Freedman said. "From the big-picture level, look at what we've done. You can do the same thing. We're getting better buildings. They're going to cost less to operate, and they'll have less impact on the environment." **RM**

FOR MORE INFORMATION

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