

Boerne ISD making water work

Web Posted: 04/21/2008 11:01 PM CDT

Zeke MacCormack Express-News

BOERNE — The metal cistern perched above the front door of Boerne-Samuel V. Champion High School looks big, but it's a mere hint of the vast water collection system at the new campus off Texas 46.

Below ground are the guts of what's being touted as the largest water capture and reuse system at any school in Texas — a pipe 5 feet in diameter to collect rain from roofs and parking lots, condensate from air conditioners and groundwater that flows into the deep, gravel-filled trench around it.

At the low end of the pitched 800-foot pipe, computer-controlled pumps and filters send the nonpotable water into irrigation pipes, sprinkling as needed and aerating it so it doesn't turn septic in storage.

School trustees spent \$265,000 on the modifications designed to conserve water, protect the environment and — in the long run — save money.

"We're very excited about the opportunity to be a school district that's leading the way in trying to conserve resources," said Lydia Beaver, a Boerne Independent School District trustee who heads a panel overseeing work on the \$45 million campus being built by Joeris Construction that will be done in May.

Given an average year's 31 inches of rain, the system is expected to capture 10.7 million gallons, officials said. A repeat of the drought of record would cut the total to 3.8 million gallons.

The district will still buy water for indoor uses, but officials say the system should allow it to buy 86 percent less water from the city of Boerne for the campus in a year of average rain, for an annual savings of \$35,000.

Despite the drop in sales to the city's largest water customer, Boerne Public Works Director Mike Mann applauded the project.

"I see it as conservation of the city's potable drinking water source," he said.

Beyond the financial savings, the system is expected to reduce the runoff of pollutants such as crankcase oil from the campus onto downstream properties that include the Cibolo Nature Center.

Architect Mark Oppelt said the original campus design included only collection of air-conditioning condensate and a 30-inch diameter pipe to get stormwater into Brown's Creek, a seasonal waterway that crosses the 100-acre campus.

"Once we started looking at the site design and all the underground piping we had to put in to take the runoff and dump it in Brown's Creek, we realized we could create this big underground storage system by expanding the diameter of the pipe," said Oppelt, of OCO Architects, which worked with Pfluger Associates.

The system, hailed as a model for other districts, will collect rain from the 214,000-square-foot roof on the main school, and from pitched eaves along a 15,000-square-foot vocational center.

Despite sparse rainfall of late, the 195,000-gallon pipe is full, thanks to a daily supply of 1,000 gallons of condensate.

The existing Boerne High School, which will be closed for renovation next fall, bought 7 million gallons of city water in 2006, a dry year, and 4 million in 2007, a wet one, mostly for irrigation.

"Water is no longer a natural resource. You can forget that. Water is a commodity," Jeff Haberstroh, the district's bond coordinator, told Kendall County commissioners during a briefing last week on the project.

He said the captured water can only be used outdoors unless the Legislature authorizes public buildings to use recaptured water for nonpotable indoor purposes such as flushing toilets.

Kendall County Judge Gaylan Schroeder commended the project and voiced support for lobbying Austin for such a bill.

Phillip Bell of the Kendall County Economic Development Corp. board said he hopes to see it replicated in the private sector.

"This is exactly what we're trying to help promote," he said.

The system also is generating excitement among faculty preparing to teach next fall at the new campus.

"We can use this to show kids that we do impact the ecosystem when we build buildings and parking lots, and we can reduce that impact by capturing the water to reduce runoff," said Chris Ormiston, the district's lead science teacher.

zeke@express-news.net