

A man in a dark coat and light-colored trousers stands on a concrete ledge in front of a large, active water fountain. The water is spraying upwards and outwards, creating a misty atmosphere. The man is looking directly at the camera with a neutral expression. The background shows a body of water and some distant structures.

# Water, Water, Everywhere

Leon Staab's Focus on Water is More Than a Workday Obsession

## As the chief stormwater engineer for Burns & McDonnell, Leon Staab never quite dries off.

He thinks about water all day at work, and often even after he leaves the office. After a downpour, he likes to visit his projects to check how they're working. His wife, Pam, gives him trouble for pointing out watercourses during family driving vacations, but he contends that such curiosity goes with the turf.

"I tell the younger staff, 'If you're going to be good engineers, you have to pay attention to where water goes when it rains, and how water moves on the streets.'"

Staab remembers becoming aware of water as a boy growing up in Great Bend, Kan., and visiting his grandfather's farm near Hays, Kan.

"The amount of water available was always on my grandfather's and uncles' minds," he says. They drank from a well and were quite conscious of the runoff from a nearby cattle ranch.

A few years later at the University of Kansas, he initially majored in aerospace engineering, but then shifted to civil engineering, which introduced him to the dynamics of water. A different medium, he notes, but one with the same emphasis on how things flow.

Although stormwater engineering typically focuses on controlling the amount and movement of water, the issue of water quality has gained importance.

"People want clean water," Staab says. And that desire has nudged many local governments to adopt measures requiring developers to minimize runoff and other potentially damaging consequences of excavation and construction.

### Nothing New

Many of Staab's clients have been looking at water for a long time. Since 1997, he's been the district engineer for the North Kansas City, Mo., Levee District. Burns & McDonnell has served the district in that role since 1969.

He's working on the eight miles of levees that help protect North Kansas City and the Charles B. Wheeler Downtown Airport from flooding on the Missouri River. Staab must sign off on any proposed development within 500 feet of the levee.

Richard Lanning, president of the district's Board of Supervisors, lauded Staab "first and foremost for his technical background. I rely on him heavily. Leon is a good communicator and works well with people."

### The Next Phase

Staab is also supervising the design of a new storm sewer interceptor to carry rainwater from the flood-prone Brookside neighborhood in Kansas City, Mo. The plan should be completed in 2009 and is part of a major watershed improvement plan designed by the Watershed Services Group at Burns & McDonnell.



Staab and his colleagues have designed and implemented engineering solutions that optimize water quality at the company headquarters campus in Kansas City. A series of bioretention ponds and swales, planted with water-loving species, collect polluted runoff from company parking lots and part of the roof. The water is filtered naturally before being discharged into the stormwater system.

Some of those features likely will be incorporated into the Brookside project.

He's also developed about 20 stormwater management plans for municipalities around the region, examining how existing systems are working and how they might be improved.

Andy Haney, public works director for Ottawa, Kan., says the study Staab completed for the city in 2007 provided hard data on which his department can base development decisions.

"We always talked about stormwater impacts," Haney says, "but we had nothing quantitative we could rely on." Staab put an end to the guesswork.

### The Big Picture

Twenty years on the job have enhanced Staab's awareness of his impact on the world.

"The older I get, the more I become an environmental steward and worry about water quality and conservation. As the population grows, one of the biggest problems is that we will run out of clean water sources. We are using water at a tremendous rate, and it's not inexhaustible."

Leon Staab and his colleagues designed a series of stormwater solutions at the Burns & McDonnell world headquarters campus that will serve as a pilot program for client initiatives.

