

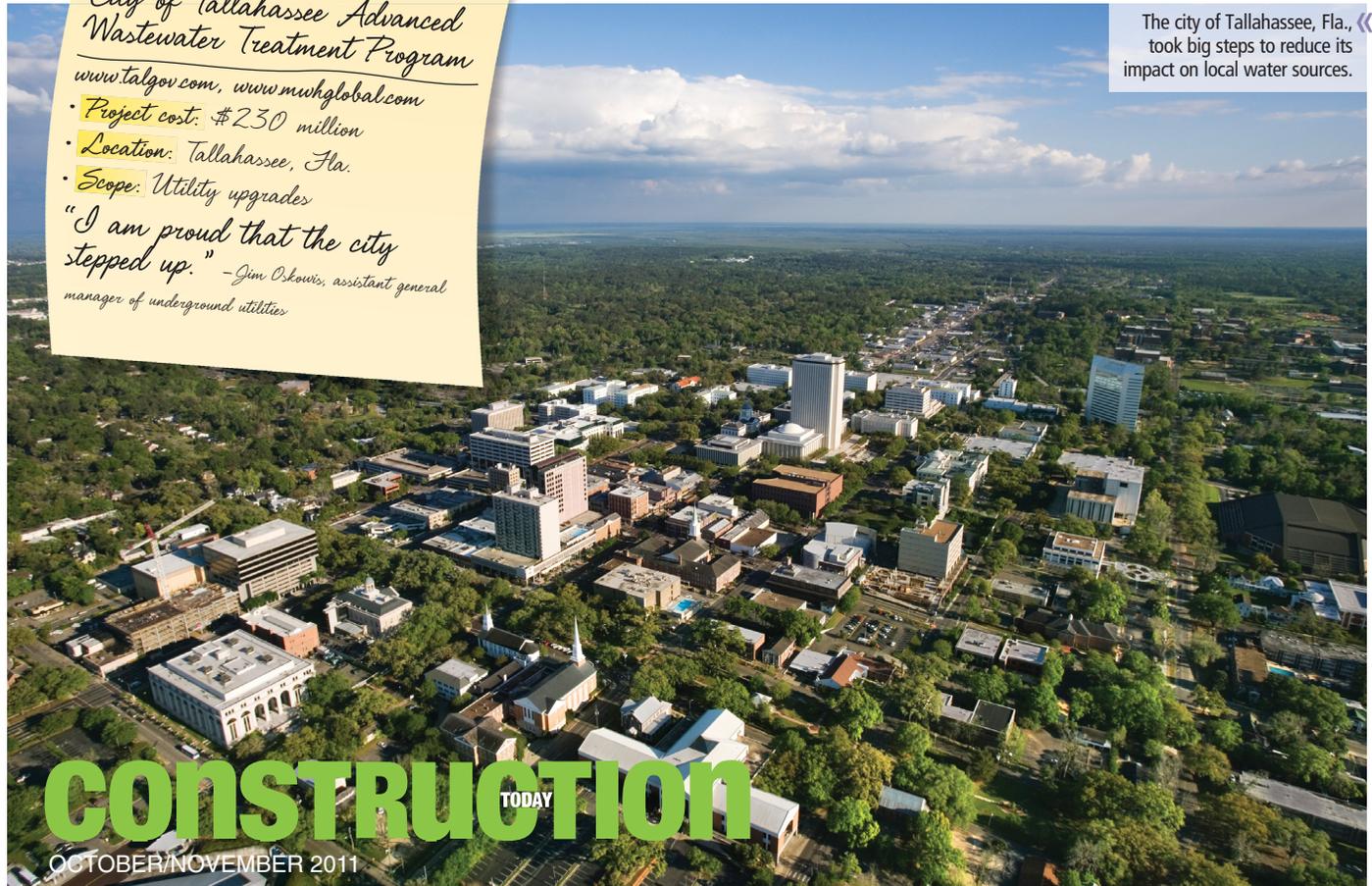
MWH Constructors Inc. –  
City of Tallahassee Advanced  
Wastewater Treatment Program

[www.talgov.com](http://www.talgov.com), [www.mwhglobal.com](http://www.mwhglobal.com)

- Project cost: \$230 million
- Location: Tallahassee, Fla.
- Scope: Utility upgrades

"I am proud that the city stepped up." – Jim Oskowis, assistant general manager of underground utilities

The city of Tallahassee, Fla., took big steps to reduce its impact on local water sources.



# Stepping Up Its Efforts

TALLHASSEE, FLA., UNDERTOOK ITS LARGEST CAPITAL PROJECT TO PROTECT ITS WATER. BY STACI DAVIDSON

In recent years, Tallahassee, Fla., has received the All-American City Award from the National Civic League, has been recognized as a Tree Line USA city by the National Arbor Day Foundation, awarded the Best in America Parks in Recreation by the National Recreation and Park Association, and ranked as a top college town by *Kiplinger's Personal Finance*. With a strong reputation to uphold, Tallahassee strives to ensure a high quality of life for its residents. At this time, a major part of that goal is improving its treatment of wastewater.

Since 2008, the city of Tallahassee has been working to improve its Advanced Wastewater Treatment (AWT) systems at the Thomas P. Smith (TPS) Wastewater Reclamation Facility, which is a \$230 million undertaking that is scheduled for completion in 2015. MWH Constructors Inc. of Colorado is providing construction management at-risk services, which include preconstruction, construction of new facilities, upgrades to existing facilities, commissioning and start up. The goal is for the new and upgraded facilities to produce a high-quality effluent with enhanced nutrient removal to further protect and preserve the region's valuable resources.

"We are constructing mostly new facilities and upgrading some facilities to reduce the nitrogen in treated wastewater and meet the state's limits," explains Jim Oskowis, assistant general manager of underground utilities for the city of Tallahassee. "This water is used to irrigate crops that are used for animal feed.

"As it's set up now, some of the water gets into the Floridan Aquifer, which discharges into the Wakulla Springs, one of the world's largest freshwater springs," he adds. "Due to excessive nutrient loads in the water that is discharged, the spring has excessive aquatic vegetation growth – it used to be clear. Our goal is to reduce our nitrogen levels by 80 percent, so every drop of water produced by this plant can be used for public access to water lawns and golf courses."

MWH and the city also are building a new facility to treat solids and turn them into Class AA biosolids, which can be recycled and turned into fertilizer. "We will sell that in bulk to golf courses, nurseries and farms," Oskowis says. "We want to be able to recycle 100 percent of our wastewater and wastewater solids."

## Meeting Milestones

Per the terms of the state permit for the AWT project, Tallahassee and MWH had to reach certain milestones – construction milestones and milestones in the city's nitrogen-reduction efforts. "We had to reduce our nitrogen levels as we went along, which makes the work more complex," Oskowis says.

At this time, MWH and the city are ahead of schedule on both fronts. In fact, in June, the city recorded a record low level of nitrogen in effluent from the TPS facility – just 3.49 milligrams/liter (m/L). The city's

monthly average is 7.5 mg/L of nitrogen, down from 8.8 mg/L last year. The goal is to reach a monthly average of 6.5 mg/L in January 2013 and 3 mg/L in January 2014. The state requires an annual average of 9 mg/L, which the city currently is meeting, Oskowis says.

Tallahassee and its contractors are closing out the first two major phases of work, and the city is finalizing its contract with MWH to complete the final phases of the project. The design of the project is "100 percent complete," according to Oskowis. He expects the construction of the solids facility to be completed by the end of 2012, and then the team will begin to upgrade the aeration basins to reduce the nitrogen levels, rather than using deep-bed filters. Of course, all of this work must be completed while the facility remains operational.

"The biggest challenge is the schedule," Oskowis admits. "It is an aggressive and tight construction schedule, which has taken detailed planning and oversight to meet the milestone dates. We also have to work hard to stay within budget. Luckily, we are working with an outstanding contractor, subs and electrical contractor, which makes the work easier to manage."

### Communication Commendation

The TPS facility originally was built in 1966, and it was expanded as Tallahassee's population grew. There were no records for many of the previous expansion projects, so there were a lot of "underground unknowns," Oskowis stresses. Additionally, there isn't a lot of room on the site for further expansion. "The design had to overcome all of these conflicts," he says.

Another conflict is that the project is situated next to the city's airport, and the main flight path goes right over TPS. As a result, Tallahassee had to get a permit from the Federal Aviation Administration (FAA) to complete the AWT project, and get permission from the airport – sometimes daily – to complete tasks such as using cranes or pouring concrete with pumper trucks.

"MWH has done an outstanding job communicating with the airport, and we have had no problem with them," Oskowis says. "In fact, the airport has commended us and MWH for our coordination with them – it's all about communication.

"The entire project has used a team approach," he adds. "MWH hired subs from the local area, and we worked as a team with MWH

to manage the project. This has helped us ensure quality and stay on schedule."

The city is subject to fines by the EPA if it doesn't meet its nitrogen reduction milestones, so Oskowis is happy the team is ahead of schedule on that goal. He notes the construction work also remained on schedule because the team has minimized change orders. Completing its goals on time will have environmental, economic and social impacts for Tallahassee and the region.

"This is the biggest capital project ever undertaken by the city of Tallahassee," according to Oskowis. "By reducing the level of nitrogen in our treated wastewater, we can minimize the city's contribution to Wakulla Spring, which is a major step in preserving the quality of the spring.

"At the end of this project, the city's contribution of nutrients to the spring will be much less than the contribution from septic tanks in the outlying areas. The next challenge is to figure out what to do with the septic tanks, and that will take decades to resolve. But I am proud that the city stepped up to address its impact and protect the environment. That is why I got into this business 40 years ago." ♦



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