

[PIPE REHAB]

# Keeping Up with maintenance

A flourishing Georgia county streamlines storm water repair requests with a full-service CIPP contract

By Mikah Williams

Gwinnett County, Ga., has been one of the fastest-growing counties in the nation for many years. Located just northeast of Atlanta, it is home to more than 700,000 people. As the growth of subdivisions has taken off, so has the number of repair requests surrounding the storm water system.

The county had always utilized traditional open-cut methods to complete these repairs. It saw, however, the need to move to alternative, more trenchless methods. Inliner Technologies, through its largest licensee, Reynolds Inliner LLC, helped to change the landscape of Gwinnett County's repair program.

In 2003, with the number of projects under consideration growing more quickly than repairs could be made, Gwinnett County sought alternatives to reduce the cost of repairs and increase the number of projects that could be completed within the same budget. Storm water management opened the

door to cured-in-place pipe (CIPP) utilization in the system. Gwinnett County already had a CIPP annual contract for use on sanitary sewers, so the change seemed natural. Piggybacking off the sanitary contract, the county storm water division used Reynolds Inliner to install several CIPP liners in storm water applications and start up the trenchless rehabilitation program.

The county realized savings immediately, with reduced disruption to existing landscaping, roads and drainage structures, shorter construction times and ultimately, the ability to meet its goal of completing more projects at a lower cost.

## A New Contract

Gwinnett County already had a storm water fee in the works; funds were to be used to make needed repairs on aging storm water infrastructure. With the passing of this fee, the budget for repairs was secured, and it will grow each year as residential and commercial growth continue.



With this funding in place, the storm water division set out to procure a contract separate from that of the sanitary sewers—a three-year contract for CIPP installations in strictly storm water applications. Reynolds Inliner was the successful respondent. Although the contract focused on CIPP, the contract items were broad in scope, thereby creating a stand-alone contract that had the flexibility for Reynolds to perform virtually every aspect of rehabilitation and repair.

The contract is managed by Gwinnett County Construction Manager Frank Maticola. Within the contract, he has access to Reynolds Inliner to complete the CIPP installations as well as investigative functions such as TV inspection and cleaning, open-cut point repairs and rebuilding of storm system structures. This minimizes the management to the one contract and maximizes efficiency in rehabilitative measure implementation. The close working relationship with the contractor, combined with the proactive nature of Maticola's management and sensitivity to system customers, has greatly enhanced the project.

Great consideration was given to the discharge of water used for the inversion and curing process. When discharge of this water into the sanitary system was determined to be less feasible than originally thought, research was done and alternatives and protective measures introduced.

Water temperatures for release into the storm system were lowered to less than 90°F rather than the generally accepted 100°F. Lubricants used in the inversion process were changed to solely biodegradable materials. Reynolds also agreed to limit the rate of the discharge water so that all of it could be filtered through a medium to capture any residual lubricant.

### Fine Tuning & Benefits

Continuing to look for environmentally friendly ways to improve the contract, Maticola worked with Reynolds and researched nonstyrenated resins for use in CIPP. Successful installations have been documented, and future consideration will be given to expanding this and

other types of alternative materials.

To verify the effectiveness of the environmental protection efforts, third-party testing was conducted on the water used during the inversion process and discharged into the storm water system. This was done to prove that harmful levels of contaminants did not exist or pose danger to the environment and public.

Because one of the main components in traditional CIPP is

styrene, which releases an odd odor detectable at incredibly low limits, the testing was expanded to verify the absence of contaminants in the air surrounding the installation areas. This testing proved that even the workers who were exposed to the liners for prolonged periods during the installation process were not in any danger from the air quality.

Gwinnett County continued to work hard to make its program a success by



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The county converted from open-cut methods, piggybacking on an existing CIPP contract.

utilizing the inspection items in the contract to help further evaluate and recommend repair of other portions of the storm water system. Reynolds completed the efforts and turned them over to the county for review.

The county then used numerous considerations in the process to determine what needed to be done. These considerations included the cost of CIPP as compared to open-cut methods of construction, location, environmental impact, resident impact, traffic control and system capacity needs, to name some. Depending on the outcome of this analysis, projects were directed to either the CIPP or the open-cut contracts and scheduled based on repair priority.

A key to the success of this project has been the continual involvement of homeowners affected by the efforts. Once a particular project has been selected, county representatives visit each affected homeowner, explaining what is going to happen and securing a right of entry. When the project is released for construction to the contractor, everything is in place to go to work, again leading to improved efficiency and reduced cost.

The benefits of utilizing CIPP to repair storm water systems continue to be evident. There have been hundreds of successful installations, ranging from 15 to 72 in. in diameter. These installations have been made in class-I dams, under multiple-lane roads and highways, through beautifully landscaped home sites, under golf courses and along residential streets.

Gwinnett County has benefited from completing more



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projects within its budget. This is all possible though the innovative use of a full-service contract and the utilization of CIPP to minimize repair time, costs, required post-construction restoration and disruption to residents and the environment.

**Author's note:** For more information, contact Frank Matticola, construction manager for the Gwinnett County Department of Water Resources, Storm Water Management. Matticola can be reached at 678.376.7130 or by e-mail at frank.matticola@gwinnettcountry.com. [SWS](#)

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*County officials consider factors including cost and resident impact when assigning projects to CIPP or open-cut contracts.*

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