



## Memorandum

**Memorandum No: 11-322**

**Date:** October 14, 2011

**To:** Honorable Mayor and Commissioners

**From:** Lee R. Feldman, ICMA-CM, City Manager

**Re:** 48-inch Wastewater Pipe Failure at the GT Lohmeyer Wastewater Treatment Plant

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This memorandum provides the Commission with information regarding the recent failure of a 48-inch wastewater pipe within the GT Lohmeyer Wastewater Treatment Plant (WWTP), and plans for its replacement on an emergency basis.

### Failure

On Tuesday, September 27, 2011 at approximately 3 pm a 48-inch pre-stressed concrete cylinder pipe (PCCP) failed within the G.T. Lohmeyer WWTP. The pipe was constructed approximately 30 years ago, had been leaking, and failed during excavation to expose the leak. PCCP from the early 80's is known to be prone to failure. The failure of the pipe occurred in the crown (top) of the pipe, likely due to corrosion of the steel cylinder and pre-stressing wires. In preparation for the excavation to expose the leak, flow in the pipe had been reduced, and following the failure, rerouting of remaining flows was accomplished quickly. Berms were constructed in an effort to contain the spill within the WWTP. Approximately 225,000 gallons of pre-treated (screened, de-gritted) wastewater leaked on to the plant grounds and approximately 5,000 gallons of the spill entered area storm drains which discharge to the Seminole Canal.

### Environmental Response

The City proceeded with normal protocol contacting the following regulatory agencies:

- 1) Broward County Environmental Protection and Growth Management, Department, Florida,
- 2) Department of Environmental Protection (FDEP), and
- 3) State Warning Point.

A Code Red was also utilized to notify the surrounding businesses and property owners adjacent to the Seminole Canal about the spill. A Public Safety Advisory was released to all media outlets simultaneously as a proactive measure. Environmental sampling of

Seminole Canal and the Intracoastal Waterway occurred on September 28, 2011. The results were all within the regulatory standards and therefore the advisories were lifted soon after.

## **Future**

City Utility Engineering and Operations staff, together with the City's wastewater consultant, Camp, Dresser, and McGee, Inc., have initiated the emergency replacement of the failed pipe – which is approximately 440 feet in length between the Pretreatment Building and Primary Treatment Reactor 2. The line will be replaced rather than repaired due to:

- The nature of the failure,
- The known deficiencies associated with this pipe, and
- The critical nature of the pipe to continued transport and treatment of wastewater within the WWTP.

The replacement pipe will be constructed above ground in order to avoid further disruption to other critical pipes in the vicinity of the failed pipe during excavation.

City staff has initiated the procurement of replacement pipe and the engagement of a contractor for construction of the replacement pipe. Combined material and construction costs are expected to be approximately \$750,000. Further information on the status of both procurement processes and project costs will be reported at a later date.

A project will also be initiated to further analyze other PCCP within the WWTP, and to replace additional pipe if necessary. These efforts will take place using the City's standard (non-emergency) procurement processes.

cc: Stanley Hawthorne, Assistant City Manager  
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