Title: Stopping Water Infiltration in Sewer System

Location: Sewer System, Fort Myers, Florida, USA
Owner: City of Fort Myers
Grouting Contractor: The Penetryn System, Inc.

PROBLEM:
Pipe and joint deterioration in the city’s 50-year-old sewer system had led to heavy infiltration. The high water table produced sufficient head to force tons of fine sand and silt into manholes and lines leading to the lift station and plant. Maintenance crews were kept busy handling emergencies rather than correcting causes. Estimated flow often exceeded 6 million gallons per day. Based on population and industry, the flow should have been about 2.5 million gallons per day.

SOLUTION:
Consulting engineers were called upon to study the situation. They recommended a complete rehabilitation, plus secondary treatment at the plant. A major part of the rehabilitation program involved television inspection of the sewers. The engineers also recommended that whenever feasible, sewers would be repaired from the inside with AM-9 Chemical Grout.

APPLICATION:
Grouting contractors first cleaned approximately 28 miles of sewer line. A TV camera was then pulled through each sewer line, while a company operator and engineer monitored the screen. Leaks, breaks, etc. were recorded and studied to decide which sections needed replacing and which could be repaired using AM-9. An internal packer was inflated at each location, and then AM-9 was injected to seal the leaks. Gel times averaged considerably less than one minute. The packer was then deflated and the leak re-inspected. If necessary, the process was repeated.

RESULTS:
To date, 17 miles of sewer lines have been inspected and repaired. Infiltration has been successfully reduced by 3 million gallons per day. Capacity of the rehabilitated sewers has been increased, permitting the deferral of construction of new plant facilities. The city estimates its savings at $100,000 per year for 20 years.