



Better Cities – A Better Life

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# Public Works Department Newsletter

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## Trenchless Technology Used To Ensure Longevity of Sewer Rehabilitation Project in San Diego

*By: John Pomer, Southwest Pipeline and Trenchless Corp.*

By continually cleaning the sewer lines of roots, the City of San Diego was stressing their sewer maintenance department to the limit. They decided to seek a long-term solution and hired Earth Tech, a global water management-engineering firm, to help tackle the problem. It was determined that the lateral lines and the lateral connections were causing most of the root intrusion problems. Lining the main lines and lateral lines with Cured In Place Pipe (CIPP) creates pipes without any joints for roots to penetrate. However, roots will enter the gap between the lined main line and the lined lateral line. This lateral connection has to be sealed in order to keep roots out of the system.

San Diego found that Southwest Pipeline and Trenchless Corporation had the solution, Top Hat. Top Hat permanently seals the lateral connection to keep roots out. It also stops infiltration of ground water, which can cause overloading of treatment plants and ex-filtration of sewer water into the ground, contamination the drinking supply, causing health and environmental issues. The Top Hat is a fiberglass laminate fully impregnated with an ultra violet curing resin. The laminate looks like a wide brimmed hat with the very top removed. The laminate is placed on an inflatable applicator attached to a robotic crawler. Then the applicator and crawler are lowered down a manhole and driven upstream or downstream to the lateral connection.

Once the applicator is in place, it is inflated, pushing part of the Top Hat up the lateral about six to eight inches while the brim to the Top Hat stays in the main line. Once satisfied with the placement of the Top Hat the operator turns on the UV light and in seven minutes the Top Hat is cured. Currently, San Diego is having a total of 2,600 Top Hats installed throughout the year of 2003. So far, 600 have already been completed.

For more information regarding San Diego's project call Doug Cook, Project Manager at Earth Tech at 858-614-5552 or Chris Scarratt, President of Southwest Pipeline and Trenchless at 310-329-8717.