

### Combination Machine Gets to the Root of the Problem

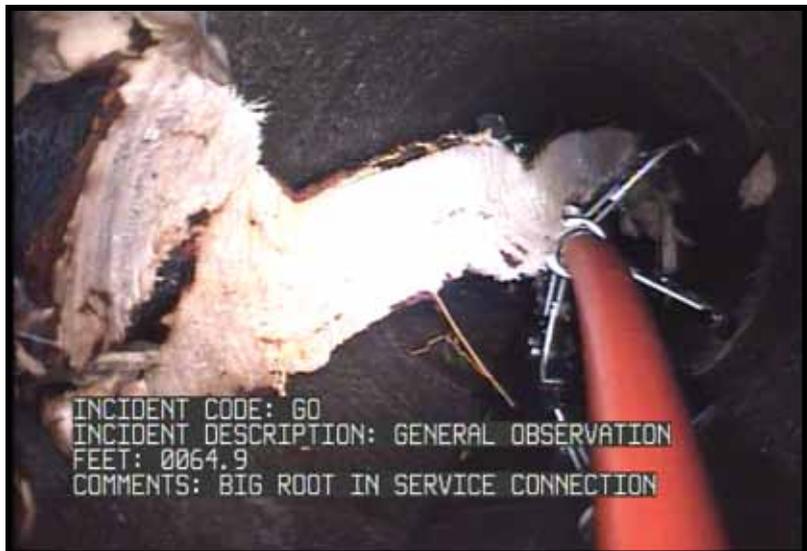
The Buckhardt Drain services approximately 280 acres of land and affects approximately 340 parcels of mostly residential property in Bridgeport Township, Saginaw County, Mich. The Saginaw County Drain Commission is responsible for this 24-in. line, which runs nearly 500 ft through a heavily wooded residential area.

Root incursion is fairly common in drains running through wooded areas, but this line was almost 75% full of roots, which seriously affected the ability of the drain to handle outflows from the area. Because of its location, it would have been nearly impossible to replace the drain, and certainly not without significant physical and financial impact on the community.

In search of a simpler solution, the Saginaw County Public Works Commission contacted R.B. Satkowiak's City Sewer Cleaners to ask if it could work out a solution to this problem without requiring a major construction project. In just two days, Satkowiak's crew used a Vac-Con Combination machine combined with a special KEG root cutter attachment to cut and remove the root growth from the line.

The root cutter uses high-pressure water from the combination machine to rotate the cutting blades and propel the cutter through the pipe. The high-pressure water flow also flushes the cuttings from the line, or pulls them back to a catch basin or access point, where the vacuum system, also on the machine, can recover the material. After completion, a camera system is inserted in the line to confirm that all of the roots have been successfully removed. Although not an inexpensive or simple project, the process is significantly less costly and has far less impact than excavation and replacement.

"I could not believe the amount of roots Satkowiak's



crew was able to remove from this storm sewer," said Matt Rappley, public works commissioner for Saginaw County. "I was already preparing myself for a major replacement project that would have involved the removal of many trees from a very nice wooded area, and would have changed the landscape for several homeowners, at a hefty expense to the county. Satkowiak's crew saved us a ton of money and hassle." [SWS]

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