

# Trenchless TECHNOLOGY

## RootX:

Helping Municipalities  
Control Tree Roots



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# RootX:

## Helping Municipalities Control Tree Roots

By Sharon M. Bueno

If you ask public works officials what their primary concerns are regarding the health of their sewer pipelines, near the top of their list would be infiltration of tree roots and their dire effect on the condition of their sewer systems.

Each year, thousands of miles of sewer lines are being chemically treated to rid them of the tangled mess of tree roots that lies inside the pipe, creating havoc on a municipality's sewer system. Sanitary sewer overflows, structural deterioration and grease and debris buildups are just a few of the problems root intrusion causes. Some municipalities contract the work out, while others take on the job themselves.

Whichever route is taken, chemical root control is a segment of the trenchless marketplace that has garnered a lot of attention over the last 10 years — thanks primarily to the U.S. Environmental Protection Agency's (EPA) actions in recent years to force municipalities across the United States to address the condition of their sewer systems. One of the areas of concern for the EPA has been stopping or seriously reducing sanitary sewer overflows (SSOs), which are caused, in large part, by extensive root intrusion. In order to reduce SSOs, municipalities are implementing root control maintenance programs, clearing out root-infested pipes in order to combat infiltration and inflow and restore pipe flow capacity.

No one is more pleased with the growing awareness to address root control issues than the folks at Salem, Ore.-



RootX president and general manager Parke Raffensperger (left) says he and his staff take pride in educating municipalities on the benefits of chemical root control.

based RootX, a leading manufacturer in chemical root control. RootX manufactures a foaming root-killing compound that cities can apply to their sewer systems without hiring a root control contractor.

Established more than 12 years ago as a subsidiary of the successful Gelco Corp., RootX strives to do more than just manufacture and sell its root-killing product — the RootX team also wants to educate the public and municipalities across the United States on how imple-

menting a chemical root control maintenance program in their community will give them a better sewer system and save them money in the long-term.

### RootX History

Although RootX the company didn't come into existence until 1994, it has roots in the chemical root control market that date back to the 1970s. RootX is a subsidiary of the Gelco Corp., which, during the 1970s, was a leading pipe service company on the West Coast, that specialized in everything from cleaning and grouting to CCTV work and cured-in-place pipe (CIPP) rehabilitation. In fact, Gelco was one of the first Insituform installers on the West Coast. In recent years, Gelco has sold its pipe services division to the Michels Corp.

However, chemical root control served as just a small aspect of Gelco's business, described as just one part of Gelco's service division. The product it was using was similar to what others were using, which contained metam sodium, a restricted-use formula, which among other things, requires special training as far as handling the product and a special license to apply it.

“We utilized that product for several years but the company was unhappy with its effects on municipal treatment plants and was concerned about worker safety [and exposure to the chemicals]. So Gelco started looking for other options,” says Parke Raffensperger, RootX president and general manager.

Jim Monaghan, Gelco president and founder, began searching for a safer alternative and came upon a product being shopped around called Toby’s Foamy Root Killer D. The product was developed by Tim Tobiason in Nebraska, who was someone Monaghan became acquainted with while attending various industry tradeshows.

“Tim [Tobiason] came to Gelco to discuss selling the formula. [Monaghan] saw a real advantage to the product and Gelco purchased Tobiason’s formula in 1994 and eventually renamed it RootX,” says Raffensperger, noting that Monaghan’s next step was to hire him to turn Gelco’s new venture into a successful company and subsidiary — which he has done.

RootX now has an extensive database of municipalities and professional drain cleaning companies as its clients. The company currently employs 15 but Raffensperger says that there are plans to hire additional employees as the root control market continues to grow. “The market is increasing and we [recently] had to increase our personnel to better serve our customers,” he says. “Our market is nationwide and international. We have a distributor in Israel and have been providing RootX to Canada, Portugal, as well as some points in Europe. There are root problems everywhere.”

The RootX customer list is pretty much a 50-50 ratio between municipalities and professional drain cleaners, company officials say, but municipalities get a great deal of the attention in the company’s marketing efforts. “We market strongly to municipalities because our product is very simple and it’s so easy to handle that they can [use it] in-house,” Raffensperger says. “We feel that with the RootX product that we’ve taken away a lot of the mystery to chemical root control and set it up so it can be done in-house relatively cheaply, allowing them to utilize their dollars on other maintenance programs as well.”

## What Is the RootX Formula?

RootX boasts of being the first non-metam sodium foaming formula on the market. Raffensperger explains that the first foaming root control formula was developed by Vaporooter — described by Raffensperger as being the pioneer of chemical root control — utilizing metam sodium and dichlobenil and was a restricted-use formula.

“The active ingredient in RootX is the herbicide dichlobenil,” Raffensperger says. “Dichlobenil is non-sys-



RootX boasts of being the first non-metam-sodium foaming formula on the market.

temic. That means it will attack exposed roots, but it won’t get into the trees ‘bloodstream’ and endanger the whole tree.” The RootX product is considered a non-restricted-use formula and is considered for “general use” by the EPA, he adds.

Raffensperger explains that what makes the RootX product different from the others is that the municipalities can apply it themselves and don’t need a contractor to handle it. For smaller pipe diameters, all you need to do is: Pour the RootX dry powdered formula directly from the package into the upstream manhole. To activate the root-killing foaming agent, add water. The foam will move down the pipe by gravity and the existing flow will coat the roots and pipe walls. To enhance this application, Raffensperger says you can place a jetter nozzle in the downstream manhole to create a vacuum and draw the foam down the pipe.

Like most chemical root control products, municipalities should begin seeing differences in the roots in about eight weeks, with a full effect taking place within about six months. Pipes should be re-treated every two years or so to keep the roots from returning; smaller diameter pipes should be re-treated about every 12 months.

Other products manufactured by RootX are considered support equipment to the application process. The FDU100 is a foam dispersal unit, which is a hose with a nozzle on the end that can be attached to a municipality’s jetter truck to apply the product. RootX also has a tripod that aids in using the FDU100.



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— Parke Raffensperger

## The Market Today

Root control in the past — and to some extent today — is a hidden secret of the trenchless marketplace. It’s a necessary maintenance tool of the industry that isn’t

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written about as often as the more known trenchless methods such as cured-in-place lining. But compared to how root control was perceived 20 or 30 years ago, the root control market could be at its strongest these days. "Root control is part of the trenchless market," Raffensperger says. "It's always been put to the side because it doesn't have a lot of the tools to it...It doesn't have that new liner and all the equipment to apply the liner or the new camera. [With root control,] you spray your herbicide in the pipeline and then you wait six months to see what's happened. It's a lot of out of sight, out of mind."

The municipalities are much more knowledgeable about root control today than they were even 12 years ago when RootX came into being. "Cities are taking a more proactive approach in taking care of their root problems — because every city has root problems. I'm sure my competitors would agree that there are ways to eliminate root problems and the easiest and most common way is to do a regular maintenance program. Whether you use RootX or other products, as long as you do a regular maintenance program, [municipalities] are going to see a lot of their other problems in that pipeline disappear such as infiltration, breaking of pipes, etc."

Raffensperger credits Gelco for much of the success the company has achieved in a relatively short period of time. He says that drawing on Gelco's reputation as "one of the leading pipeline service companies on the West Coast," as well as the parent company's expertise helped RootX considerably in the early days. But he doesn't want to sell the root control process that RootX advocates short either.

He notes that RootX participates in various trade shows and conferences, such as WEFTEC and APWA, as well as gives presentations on root control and stays active in municipal wastewater organizations. Participating in these events aids in getting feedback on what is needed in the root control market. For example, one of the hot topics in the trenchless marketplace the last several years has been laterals. Raffensperger says RootX is currently working on methods to more efficiently take care of residential service lateral root problems, which not only affect the homeowner but also the municipal sewer departments.

"Our customers are telling us that a lot of root problems start in the residential service laterals and end up causing problems in the municipal mainlines," Raffensperger says. "As a result, we are working with our customers to develop a more efficient way to treat the service laterals that will help the homeowner and in turn reduce problems in the mainlines."

"We've been helping cities control sewer roots for 12 years now and if it didn't work, we wouldn't still be here," Raffensperger says. "Our goal is to restore pipe flow capacity with minimal training and cost. We feel we are accomplishing this through our continued growth in clientele and presentation of our technical knowledge."

Sharon M. Bueno is managing editor of *Trenchless Technology*.



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Roots can clog pipes, causing backups, overflows and service interruptions.

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