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Crews rescue rivers, poisoning one weed at a time

Injections may protect Clackamas and Sandy riparian areas from intrusive knotweed, flourishing since 1996 floods

The day Jonathan Soll started his job at The Nature Conservancy, his predecessor escorted him to a patch of green, bamboo-like stalks along the Sandy River.

Crews probably needed to whack away a few plots of the plant, known as knotweed, Soll was told. He didn't expect the project to monopolize his time.

Four years later, the organization is at the height of a battle against the invasive plant, which has aggressively spread along the Sandy and Clackamas rivers, threatening to force out native plants and animals.

Teaming up with Metro, the Portland area's regional government, Nature Conservancy workers have stepped up efforts to knock out knotweed before it knocks out important habitat. Most recently, work groups tried an unconventional treatment: injecting herbicide into plants one by one with syringes.

All methods of fighting the plant hinge on cooperation from private landowners along the rivers, work teams say.

"We know how to kill knotweed -- we think," Soll said. "We have the money and the energy. It's just a question of really getting through to a high enough percentage of landowners."

Experts think knotweed probably made its way to Oregon as early as the 1950s, when homeowners bought the Japanese plant to spruce up their yards. But knotweed didn't spread dramatically along the Sandy and Clackamas until a major flood in the Portland area in 1996.

The plant is now listed as a noxious weed and cannot legally be sold in Oregon. It has taken root along rivers in the Willamette Valley, and until recently many property owners assumed it was a harmless and reasonably attractive plant.

Nature Conservancy crews started fighting knotweed in 2000 and later paired with Metro, which owns property along the Clackamas River. The organizations have assigned the project to a combination of staff members and AmeriCorps volunteers.

Last year's five-person Metro knotweed team gathered about 7 a.m. on summer days. They spent the first two or three hours organizing gear and reaching their destination -- a feat accomplished by car, foot, inflatable kayak, inflatable canoe or some combination.

Walking across the parking lot of a recreational area with sharp, gleaming machetes often attracted a lot of attention, the group said. It also provided the perfect opening to explain their project.

They targeted a different area each day, working their way along the river over several months. The crew sprayed some areas, injected others and recorded data with a Palm Pilot program customized by The Nature Conservancy.

Knotweed teams have learned the river and its habitat well, but the Metro gang started with just maps and aerial photographs. The team -- mostly people in their 20s with backgrounds in environmental science or related fields -- picked up the rest on the job.

"Some days you feel like, 'I'm getting paid for this job?' " Metro employee Cassie Mellon said one day last fall, checking knotweed with cohorts Andrew Zachary, Greg Ciannella and Andrea Thury. "Then, on other days, I feel like I'm not getting paid nearly enough."

Poking a syringe into hollow, water-filled stalks of knotweed takes the most time, but it also offers the best hope for doing away with the plant in a single treatment.

Last year, workers infused plants with a higher dose of herbicide than the Environmental Protection Agency typically permitted, which required a special-use permit. The EPA later agreed to change its guidelines for treating knotweed.

Because winter weather reduces knotweed to a wispy, reed-like state, Metro and The Nature Conservancy won't know until next summer how well their injections worked. But they expect their new method to be the most successful one tried.

"Injecting it is doing it once, walking away and not having to come back," said Zachary, an AmeriCorps volunteer with the Metro team. "You'd have to spray it again and again."

During the winter, Metro and The Nature Conservancy focus on the hands-off aspects of knotweed treatment. Workers apply for grants, track data and educate property owners.

Both organizations say cooperation from landowners is essential. Their understanding -- and permission to work on their land -- has allowed Nature Conservancy crews to treat more than 90 percent of the knotweed along the Sandy River, from Welches to the Columbia River.

Mitch Williams, for one, was thrilled when The Nature Conservancy contacted him a few years ago. Starting in the late '90s, Williams whacked down knotweed on his property each year only to see it return more aggressively the following summer.

Nowadays, Williams helps the official knotweed team by identifying patches when he kayaks on the Sandy.

"Next season will be telling," Williams said. "It can lay dormant for a while, but all it takes is one plant to survive."

Soll sees the next two years as critical. If the project goes as planned, the Sandy and Clackamas can be preserved for plants and animals that have always called the rivers home. The worst-case scenario, knotweed combatants say, would be letting the plant spread so aggressively that it becomes a permanent fixture.

"It wouldn't be an interesting place to recreate," Soll said. "It's kind of boring to go along the river and see the same plant mile after mile."