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NORTH SHORE GUIDE TO HOME AND GARDEN

NEWS photo Mike Wakefield

ARNOLD Beaumont (left) and Jeff Keast put together one of the rain collectors the District of North Vancouver will use as part of a study to determine the role of trees in managing rain water. Participants from ARC Woodworking built the wooden L-shaped collectors that will be strapped to trees.

Project studies role of rain water

Caroline Skelton

cskelton@nsnews.com

THE region's water systems have been working overtime this season, with stormy December rains pouring through pipes, then gushing into local streams.

Now, due to an initiative by the District of North Vancouver — and some hard work by a local woodworking shop — a two-year study launched this month will look at another hard worker in the region's water system: trees.

"When we build our roads or build our buildings and high-rises, we alter the landscape," explained Richard Boase, environmental protection officer for the district. "And when it rains and the rain hits the pavement, the rain is quickly funneled into the pipes, and then it is all discharged immediately into the streams."

This, he said, causes damage to local streams, including erosion and pollution from materials washed off the roads. These days, district staff hope to encourage more sustainable building that allows water to seep naturally into the ground, and in doing so, they're hoping to determine what kind of role trees can play in managing the wet stuff.

"We all know that trees will intercept and store water when it rains, but what we don't know is how much," said Boase. "We don't know what the differences (are) between cedar trees, fir trees (and) maple trees that lose their leaves in the winter."

The study, which is funded by a grant from the Real Estate Foundation of B.C. and developed in partnership with UBC, will set up 60 gauges on various species of trees. These gages will measure the amount of water that drips through the canopy of the trees, comparing that against water collected at nearby unsheltered locations, applying formulas to determine how many litres of water are actually retained by the tree.

The study is expected to yield a formula for the amount of water stored by several varieties of trees and shrubs. That formula can then be used in planning and development in rainy regions.

But the study's preparations did hit a hiccup when district staff was too busy — due to December's wild weather — to build the wooden platforms for the rain-catching devices.

"We just didn't have time to get these things built," said Boase.

As a result, he looked around for an alternative, calling on ARC woodworking, a training facility for adults with developmental disabilities run by the North Shore Association for the Mentally Handicapped. The workshop took on the project, building the wooden L-shaped contraptions that will be strapped onto trees around the region.

"It's kind of a weird-looking contraption," said Boase of the platforms. But two program participants took the project in hand and, according to ARC program manager Derek Pace, thoroughly enjoyed the work — part of the project's grant

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money went towards compensating them through honorarias.

"I think it's a good partnership," said Pace.

Once the study is complete, Boase is hoping that the new information it gathers will present a more natural option for landscapers concerned about water management.

"Right now, the way we tend to approach this situation is by building very expensive engineering types of structures," he said. An example would be the Canadian Tire building on Marine Drive, which has a roof that catches and slowly drains off rainwater, he added.

But in North Vancouver, where much of the land is devoted to single-family housing, Boase said these pricier and more complex options may be impractical. Planting a particular number of trees on the property, however, may be a more realistic goal.

Hence, the study will look at both larger trees like fir, cedar and maple, and smaller shrubs and ornamental trees more likely to be found on the average single-family property.

Finding another way to get the region's rainfall seeping slowly into the soil, rather than becoming run-off gushing into the region's storm drains "provides a benefit to the streams in the district and the community by preventing that water from hitting the pavement, becoming run-off, where we know it impacts the streams," said Boase.