

## CLIMATE CHANGE

# Can our trees withstand the extreme weather events of the future?

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VANCOUVER SUN

Metro Vancouver is taking measures to protect its urban forests from the effects of climate change, including a summer drought and the recent windstorm that toppled trees and snapped power lines, leaving

thousands in the dark.

The regional district has commissioned a report looking at 40 species of trees across the region to determine whether they are resilient enough to withstand issues such as pests and droughts.

The move follows two windstorms, one on Tuesday and another in August, which saw

trees falling on BC Hydro transmission wires, plunging thousands of homes into darkness, some of them for days.

On Tuesday, electricity was cut to about 110,000 B.C. homes after winds gusting up to 70 km/h toppled trees and snapped power lines. A tree broke the top off a BC Hydro transmission structure in the Capilano

substation, sending flashes of blue light streaking across the skies, while several elementary and secondary schools in North Vancouver and Maple Ridge cancelled classes Wednesday as the power failures persisted.

"Those were certainly significant," said Marcin Pachcinski, Metro's division manager for electoral area and environment.

"We can expect more of these extreme weather events in the future and we should be prepared for them."

BC Hydro maintains more than half of all power failures in B.C. are caused by trees or branches falling on power lines.

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Spokeswoman Moira Scott said the power utility spends about \$50 million each year on "vegetation management," which includes identifying tall, diseased or flawed trees that could be blown down in a windstorm.

BC Hydro works with individual municipalities or Metro Vancouver depending on where the trees are located.

Scott noted B.C. is unique in that there are three times more trees along the power lines here than along any other utility in North America and "we can't predict every tree will handle every weather condition."

The Metro study, slated to be completed by the end of the year, is expected to shed more light on what trees should be planted — and where — when developing new building sites and infrastructure to provide more resiliency in the face of climate change.

The study will analyze 40 tree species for suitability under the current climate by contrasting its temperature and precipitation requirements with the conditions existing in the Metro Vancouver area.

Both native and non-native trees will be included in the study, which will also look at maximizing shade and moisture absorption and how to manage other risks such as western red cedar decline, mountain pine beetle and the length of the fire



JENELLE SCHNEIDER/PNG

The windstorm at the end of August downed more than 500 street trees in Vancouver and knocked out power to nearly half of BC Hydro's 1.4 million customers in the Lower Mainland and on Vancouver Island.

season. The move follows on the heels of a similar climate adaptation strategy in the City of Vancouver, which in 2012 began planting different types of drought-tolerant trees to deal with extreme weather events.

"We want to know what types of species will do well under certain conditions," Pachinski said. "We're looking long-term at how climate change is impacting our urban forest and getting guidance on which trees will thrive."

Urban forests are broadly defined as public property, parks and greenways.

Pachinski didn't know what type of tree fell on the transmission structure in North Vancouver, but noted many trees can

be strengthened by giving them more room to grow, or ensuring they have the right soil mix, to build stronger roots and resist potential blowdowns.

Burnaby Mayor Derek Corrigan, chairman of Metro's climate action committee, said Metro is looking into whether climate change was a factor in Tuesday's windstorm.

In the August windstorm, the City of Vancouver lost more than 500 street trees, many of which were weakened by the drought.

The BC Hydro website at 5:30 p.m. Wednesday showed more than 8,500 homes remained without power on the Lower Mainland and Sunshine Coast, with about 500 on Southern Vancouver Island.

Crews worked Wednesday to replace the three high-voltage transmission wires and rebuild the top of the broken transmission structure.

Crews from the Interior have been moved to the Lower Mainland to bolster roughly 50 teams repairing all the damage.

In August, the windstorm took out power to nearly half of Hydro's 1.4 million customers in the Lower Mainland and on Vancouver Island. It was the single largest power failure in Hydro's history.

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