

Attachments: Trees accelerate growth as they get olderHighlighted.pdf ;

From: [Lance Young](#)

Sent: Sunday, January 5, 2020 9:10:35 PM

To: [City Council](#); [Park Board](#)

Subject: [EXTERNAL] Please save the trees along Dayton Ave N

Sensitivity: Normal

Archived: Monday, January 6, 2020 8:57:05 AM

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Subject: Please save the trees along Dayton Ave N 1/5/2020

To: Shoreline City Council council@shorelinewa.gov
Shoreline Parks & Tree Board parkboard@shorelinewa.gov

From: Interurban Trail Tree Preservation Society

I am not able to attend the City Council meeting this monday 1/6/2020 to speak for the preservation of the Dayton Avenue trees so I wanted to send this email proxy in my absence.

We now know that trees accelerate their growth rate and their benefit to the environment as they get older and bigger. The US Geological Survey (USGS) lead study found that "A single big tree can add the same amount of carbon to the forest in a single year as is contained in an entire mid-sized (say 30 year old) tree". This is contrary to the timber industry belief from not many years ago that forests and tree farms should be cut at about 60 years old (after this they thought growth slows). Please see the attached Guardian News article.

Because of these findings, tree preservation should be job one, planting new replacement trees for tree removals should be viewed as a distant second choice, a choice which will likely never replace the ecological values of the originals.

Shoreline City policy evidently requires construction projects of a certain size to build street improvements whether they are wanted or not. Along Dayton Avenue between 150th and 160th the WA-DOT reconstruction project would be required to build eight foot wide sidewalks that are not needed, and street parking that would go unused for the foreseeable future. Neither are desired by the neighborhood. All this would require removal of over a hundred trees. This

seems like an ill conceived city policy with negative side effects to the quality of life here in our city. I would like to suggest that the street improvement requirements placed by Shoreline on the WA-DOT project be waived so that the community can retain these trees.

I would also like to request that the Council evaluate the master policy to see if it could not be better tailored to preserve our beloved trees, and the desires of the local/proximal neighborhood.

Please consider preserving this grove of mature conifer and deciduous trees for the benefit of Shoreline's future generations!

Thank you for continuing to look out for our future.

Lance Young

The Guardian



Trees accelerate growth as they get older and bigger, study finds

Findings contradict assumption that old trees are less productive and could have important implications for carbon absorption

John Vidal

Wed 15 Jan 2014 13.00 EST

Most living things reach a certain age and then stop growing, but trees accelerate their growth as they get older and bigger, a global study has found.

The findings, reported by an international team of 38 researchers in the journal *Nature*, overturn the assumption that old trees are less productive. It could have important implications for the way that forests are managed to absorb carbon from the atmosphere.

"This finding contradicts the usual assumption that tree growth eventually declines as trees get older and bigger," said Nate Stephenson, the study's lead author and a forest ecologist with the US Geological Survey (USGS). "It also means that big, old trees are better at absorbing carbon from the atmosphere than has been commonly assumed."

The scientists from 16 countries studied measurements of 673,046 trees of more than 400 species growing on six continents, and found that large, old trees actively fix large amounts of carbon compared to smaller trees. A single big tree can add the same amount of carbon to the forest in a year as is contained in an entire mid-sized tree, they found.

"In human terms, it is as if our growth just keeps accelerating after adolescence, instead of slowing down. By that measure, humans could weigh half a tonne by middle age, and well over a tonne at retirement," said Stephenson.

"In absolute terms, trees 100cm in trunk diameter typically add from 10-200 kg dry mass each year averaging 103kg per year. This is nearly three times the rate for trees of the same species at 50cm in diameter, and is the mass equivalent to adding an entirely new tree of 10-20cm in diameter to the forest each year," said the report.

The findings back up a 2010 study which showed that some of the largest trees in the world, like eucalyptus and sequoia, put on extraordinary growth as they get older.

"Rapid growth in giant trees is the global norm, and can exceed 600kg per year in the largest individuals," say the authors.

The study also shows old trees play a disproportionately important role in forest growth. Trees of 100cm in diameter in old-growth western US forests comprised just 6% of trees, yet contributed 33% of the annual forest mass growth.

But the researchers said that the rapid carbon absorption rate of individual trees did not necessarily translate into a net increase in carbon storage for an entire forest. "Old trees can die and lose carbon back into the atmosphere as they decompose," says Adrian Das, another USGS co-author. "But our findings do suggest that while they are alive, large old trees play a disproportionately important role in a forest's carbon dynamics. It is as if the star players on your favourite sports team were a bunch of 90-year-olds."

"It tells us that large old trees are very important, not just as carbon reservoirs. Old trees are even more important than we thought," said University College London researcher Emily Lines, another co-author of the paper.

Understanding of the role of big trees in a forest is developing rapidly even as they come under increasing threat from the fragmentation of forests, severe drought and new pests and diseases. Research in 2012 showed that big trees may comprise less than 2% of the trees in any forest but they can contain 25% of the total biomass and are vital for the health of whole forests because they seed large areas.