Growing forests and using wood

CAN HELP FIGHT CLIMATE CHANGE

Oregon's forests provide a host of social, environmental and economic benefits, including clean air and water, wildlife habitat, recreation, and timber to make wood products. Another important benefit of the abundant forests that cover nearly half the state is their ability to store atmospheric carbon in growing trees and the wood they produce, which helps mitigate climate change.

Forests can absorb and reduce the presence of carbon dioxide, a greenhouse gas that's a major contributor to climate change. During photosynthesis trees turn carbon dioxide into wood, and they release oxygen as a byproduct.

As a result, forests absorb significant amounts of carbon, sequestering it from the atmosphere. It remains stored even after trees are harvested and made into wood products. In the U.S., carbon stores in forests and forest products are estimated to offset 10%-15% of total fossil fuel emissions.

WOOD PRODUCTS STORE CARBON LONG-TERM

The climate benefits of forests can live on in wood products. Half the dry weight of wood is carbon removed from the atmosphere by trees as they grow. This remains stored for the life of the wood product, whether it goes into housing, furniture, cabinetry or a host of other uses. Carbon can remain locked away for decades in wood products, especially when used in home and other building construction. Wood also requires less energy to produce and therefore results in fewer carbon dioxide emissions than steel, concrete or plastic.

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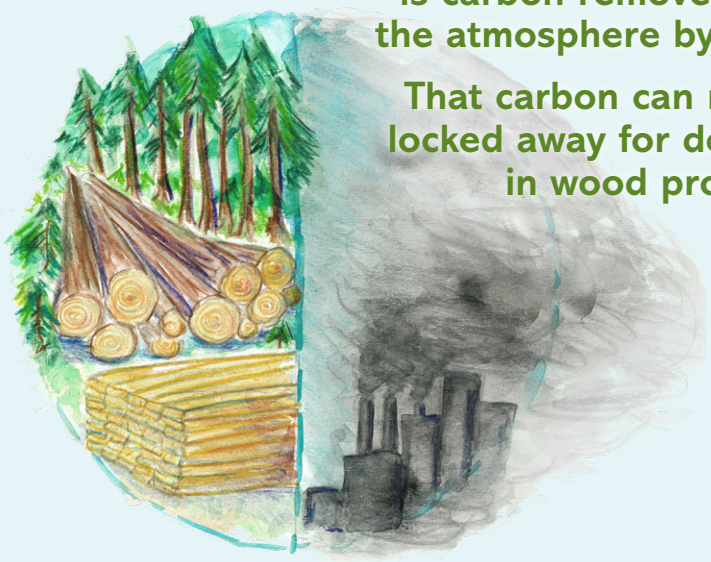

CARBON AND FORESTRY

CARBON IN OREGON'S FORESTS

Oregon's forests store an estimated 3.2 billion metric tons of carbon, according to an analysis by the U.S. Forest Service and the Oregon Department of Forestry. This carbon is stored throughout the forest in "carbon pools."

These include:

SUSTAINING FORESTS FOR FUTURE CARBON STORAGE

Oregon's land use and forest practice laws work together to help keep forests as forests. Requirements to replant trees after harvesting ensures forests are regenerated and continue to sequester carbon — a benefit that's lost when forestland is converted to other uses. The continued use of wood products also provides private landowners an economic incentive to maintain forestland for timber production rather than sell it for development.

Maximizing forest carbon-storing power

The science around the interactions between forests and carbon is complex, but what's clear is that there are a number of strategies that can work in tandem to help maximize the positive impacts forests and wood products can have on climate change mitigation.

These include:

- preventing the conversion of forests to other land uses, such as for residential or commercial development
- increasing forestland by converting non-forested areas back to forests
- allowing trees to grow to peak carbon-storage age before harvest
- reducing forests' vulnerability to threats that can cause mass tree mortality, such as drought, insects and wildfires, using methods such as thinning and prescribed burns
- storing carbon in durable, long-life wood products
- using wood instead of more emissions-intensive alternatives such as steel and concrete
- using mill waste and woody biomass to produce renewable domestic energy, or composite wood products such as particleboard

About the Oregon Forest Resources Institute

The Oregon Forest Resources Institute supports the forest sector and the stewardship of natural resources by advancing Oregonians' understanding of the social, environmental and economic benefits of our forests.

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