



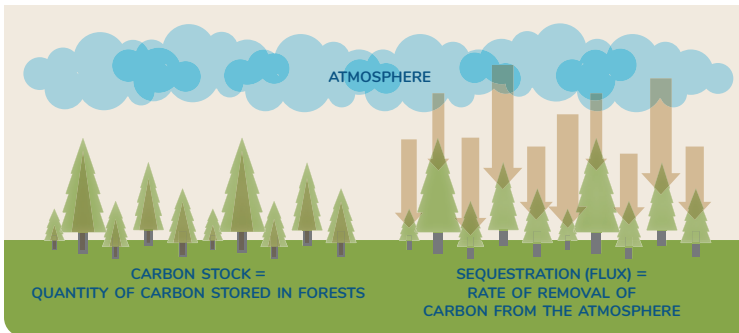
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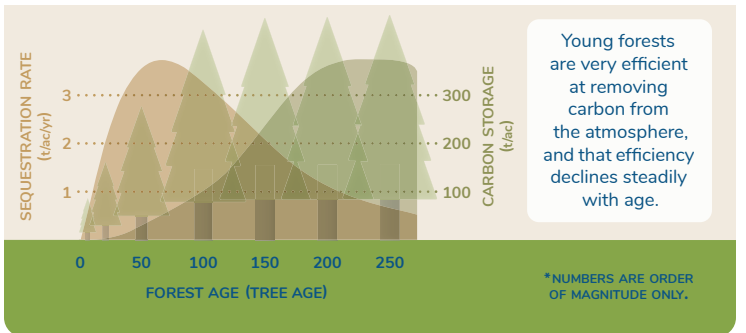
Forest Carbon from Young vs. Old Forests

Forests of different ages play different roles in removing carbon from the atmosphere and storing it in wood. Old forests have accumulated more carbon than younger forests; however, young forests grow rapidly, removing much more CO₂ each year from the atmosphere than an older forest covering the same area. Managing forests to avoid large emissions from the loss of old trees while rapidly removing CO₂ from the atmosphere through young forest growth can provide both storage and sequestration benefits. In addition, managed forests produce wood products that store carbon long after the trees are harvested. These products provide an added benefit when they are used in place of more energy-intensive ones that require more fossil fuel emissions.

STORING vs. SEQUESTERING CARBON



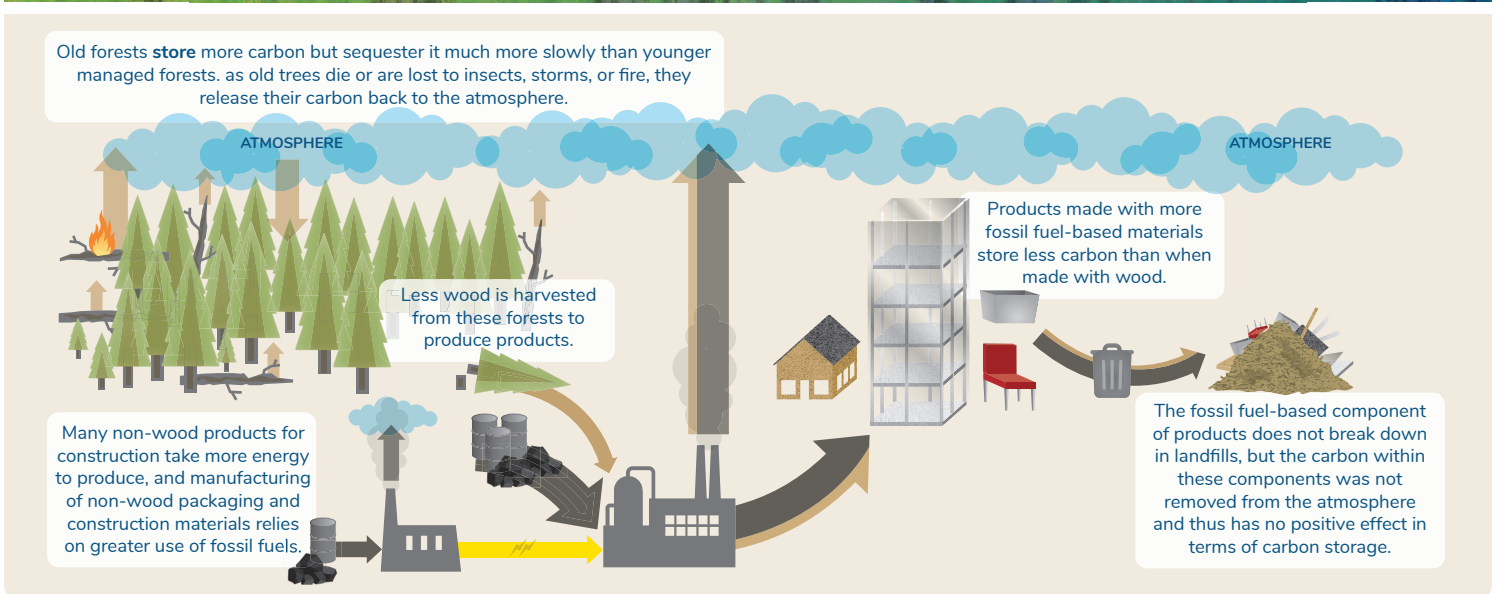
SEQUESTRATION RATE AND CARBON STORAGE OVER AGE*



CARBON CYCLE—FOREST AREA WITH MIXED TREE AGES



CARBON CYCLE—FOREST AREA DOMINATED BY OLD TREES



INFORMATION TAKEN FROM:

Kurz, W.A., Beukema, S.J., and Apps, M.J. 1997-1998. Carbon Budget Implications of the Transition to Managed Disturbance Regimes in Forest Landscapes. Mitigation and Adaptation Strategies for Global Change Vol. 2, 4:405-421.

McKinley, D.C., Ryan, M.G., Birdsey, R.A., Giardina, C.P., Harmon, M.E., Heath, L.S., Houghton, R.A., Jackson, R.B., Morrison, J.F., Murray, B.C., Pataki, D.E., and Skog, K.E. 2011. A synthesis of current knowledge on forests and carbon storage in the United States. Ecological Applications 21:1902-1924. <https://doi.org/10.1890/10-0697.1>.

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Wang, X., Padgett, J.M., De la Cruz, F.B., and Barlaz, M.A. 2011. Wood biodegradation in laboratory-scale landfills. Environmental Science & Technology 45:6864-6871. <https://dx.doi.org/10.1021/es201241g>.