

CYPRESS

American, Sustainable, Carbon-Neutral

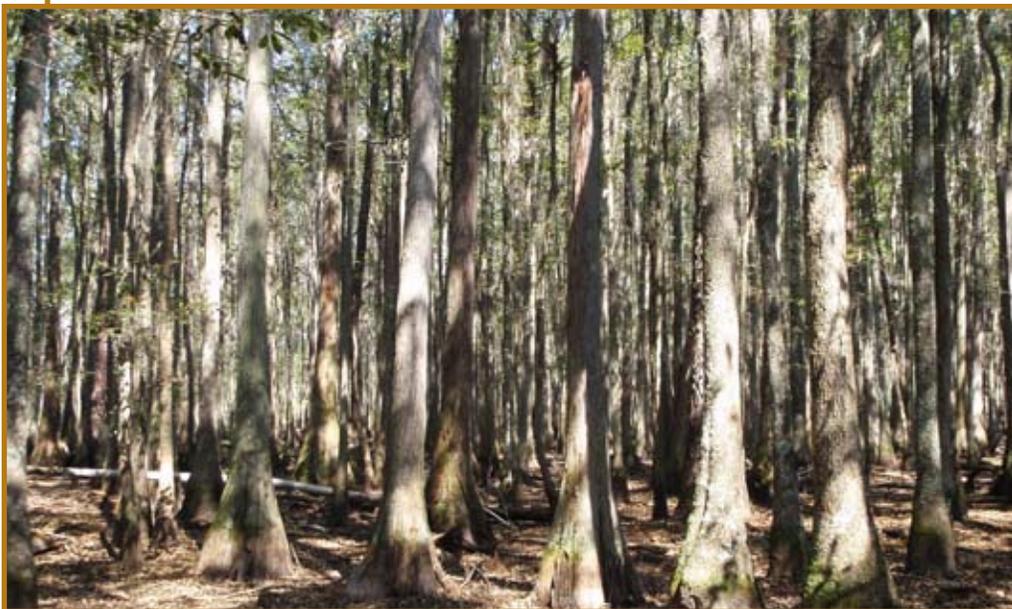
As architects build toward the 2030 challenge of net-zero energy construction, sustainable, carbon-neutral building materials, such as cypress, are of increased importance. Carbon neutrality refers to any building or material that generates no carbon emissions, or whose net carbon emissions are offset by a countervailing environmental action. For a natural carbon-neutral material, look no further than the nearest cypress stand.

Cypress grows in the Atlantic and Gulf coastal plains from Delaware to Texas and also in the Mississippi Valley north to southern Illinois. The species offers legendary durability and a naturally occurring preservative known as *cypressene* helps protect it from insects, decay, and other damaging elements. It's exceptionally versatile and equally suited for interior and exterior applications ranging from flooring and paneling to siding and decking, and everything in between.

Virtually all building materials have a carbon footprint. Science proves that wood products are unique in that they have no carbon footprint, which means more carbon is sequestered by a tree than is emitted over its entire lifecycle—through growth, manufacture, and disposal.

Cypress is naturally carbon-neutral because of photosynthesis. While growing, trees absorb carbon dioxide from the atmosphere. The carbon used for wood fiber production is sequestered and stored while the oxygen is released back into the atmosphere. Carbon accounts for nearly 50 percent of the dry weight of a tree, and since cypress trees can grow to be 150 feet tall and 12 feet in diameter, the wood can lock in substantial amounts of carbon. In 2002, U.S. Forest Service researcher Dave Nowak and information technology specialist Daniel Crane co-authored a study that listed cypress as one of the best species for absorbing and storing carbon.

In addition to being carbon-neutral, studies have shown that wood takes less energy to manufacture products





from than other materials. Building materials such as aluminum, glass, plastic, cement and brick can require 126 times more energy to process into finished goods.

Furthermore, virtually every part of a log is used as lumber or a wood by-product. At the end of their useful life, wood products are re-usable, recyclable, and biodegradable. When these products are returned to the earth or burned for fuel, the stored carbon is released and absorbed by growing trees—and the cycle is renewed again.

Tree harvesting is necessary for overall forest health. A reality of sustainable forest management is that growing trees need sunlight, soil and nutrients, and they grow more rapidly when older, larger, and more mature trees do not crowd them. Harvesting also helps prevent the spread of disease, pests, and wildfires which disrupt the natural role trees play in carbon capture. As U.S. Forest Service Chief Tom Tidwell explains, “disturbances such as fire, insects, and disease could dramatically change the role of forests, thereby emitting more carbon than currently sequestered.”

Responsible forestry practices not only ensure that wood remains

a sustainable resource, but also promote timber production and allow young trees to grow and store carbon.

The design community is beginning to recognize and appreciate the environmental attributes of wood. During a focus group at the 2008 U.S. Green Building Council's Greenbuild Expo, eight green architects were asked which materials they consider to be green among wood, aluminum, fiberglass, glass, plastic, steel, and vinyl. Wood was the only unanimous choice. Building professionals and the public at large are gaining a greater understanding of how sustainable forest management is good for the economic and environmental health of the U.S.

When these virtues are viewed in total, it's clear that American cypress—not to be confused with imported wood or heavily-glued wood substitutes—is one of the most sustainable and carbon-neutral building materials available.

The Southern Cypress Manufacturers Association and its members are committed to sustainable forestry practices. To learn how cypress can reduce your project or home's carbon footprint, visit www.cypressinfo.org.



Front Image (top) used under Flickr Creative Commons from Bill Swindaman
Front Image (bottom) used under Flickr Creative Commons from Faul
Back Image (top) courtesy Josh Wynne Construction
Back Image (bottom) courtesy Acadian Cypress & Hardwoods



**SOUTHERN
CYPRESS**
MANUFACTURERS
ASSOCIATION

www.cypressinfo.org