

## Think of trees as Carbon Sponges!



Hey, I'm Carbon! And I'm here to tell you that forests remove carbon from the air; soaking up greenhouse gases in a manner similar to how sponges soak up spills. Then, when trees are turned into lumber, engineered wood products, paper, industrial packaging and other forest products, those products continue to store the carbon for decades and even centuries!

That's just a short description of the role forests and products play related to climate change. For all the details, read further in this brochure to soak up all the information.



## ABOUT MFI

Minnesota Forest Industries (MFI) is an association representing the state's forest products companies. MFI members encourage conservation, proper forest management and industry development that foster sound environmental stewardship, multiple use of timber lands and sustainable long-term timber supply.

For additional information, please long on to [minnesotaforests.com](http://minnesotaforests.com).

### MFI Members

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## MINNESOTA FOREST FACTS CLIMATE CHANGE



## HOW FORESTS REDUCE CARBON IN THE AIR



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MINNESOTA FOREST INDUSTRIES

# Climate change and Minnesota's forests

While the term “climate change” is still fairly new (some are more familiar with the term “global warming”), it represents an important focus individuals and businesses will have for decades to come as the world addresses a buildup of greenhouse gases in the atmosphere.

In Minnesota, both the forest products industry *and the forests themselves* are doing much to help improve the atmosphere.

## What is carbon?

Carbon is a naturally occurring element. It is also part of carbon dioxide (CO<sub>2</sub>), an odorless gas that is produced in a variety of ways. We exhale carbon dioxide when we breathe. Carbon is emitted when fossil fuels are burned for energy. Vehicles and factories can also release it into the atmosphere.

While carbon dioxide is necessary for plants to generate oxygen, too much carbon dioxide in the air is believed to contribute to climate change.

## Trees absorb and store carbon.

The process of storing carbon, called sequestration, is a natural product of tree growth. Through photosynthesis, trees absorb carbon from the atmosphere

in their leaves, roots and wood fiber, and release oxygen in the same process. Trees also continue to store that carbon.

## Young trees absorb carbon faster than do older trees.

Because of their faster growth rate and higher overall “metabolism,” young trees soak up and store carbon quickly. As these young trees age and “get filled up” with carbon, they continue to absorb and store it, but at a slower rate.

## Forest fires and decayed trees release carbon back into the air.

All the good that comes from storing carbon in trees goes away if over-mature trees decay and die, or if they're burned in forest fires. In either case, the carbon that had been stored is released back into the atmosphere.

## When trees are harvested for forest products, the products continue to store carbon.

When a tree is harvested for use as a forest product, rather than decaying or burning, that table or fence or 2-by-4 continues to store carbon for decades and even centuries. Think of the framing inside

a house built in the 1800s – it's still storing carbon, even though the tree was harvested long ago. Forest products store more than 3 billion tons of carbon globally.

## Harvesting and regrowth start the process all over again.

When trees are harvested for use as forest products, they leave behind room for new trees to grow. Thus, this renewable resource begins again the process of absorbing carbon quickly in young trees.

## Forest products companies generate their own fuel.

Forest products industry facilities use high amounts of biomass for energy, displacing the use of fossil fuels. In fact, each year Minnesota's forest products facilities use 1.2 million tons of biomass – bark, wood residuals and other parts of trees not used in the making of products – to generate electricity, process heat and process steam.

Overall, 28% of the electricity used by the forest products industry is self-generated and renewable: 24% wood waste and 4% hydroelectricity.



**Trees absorb carbon. Forest products store it.**