Climate change is affecting people, plants, and wildlife. Carbon dioxide released by humans’ burning of fossil fuels is the key “greenhouse gas” driving climate change.

Forests are a crucial resource for limiting this process. Through photosynthesis, trees remove, or sequester, carbon from the air. The trees store the carbon in their wood. Much of the Northeast is forested: around 72 percent in the six New England states plus New York. Young, quickly growing trees sequester and store carbon at a rapid rate. Older, slower-growing trees sequester carbon more slowly but have the capacity to store more carbon.

Forests are also important for many other reasons, including keeping our air and water clean, providing habitat for wildlife, and letting us enjoy healthy outdoor recreation and the beauty of nature.

Diversity is Key

As we work to sustain our forests’ health, we must keep in mind animals’ habitat needs. Good habitat provides wildlife with food, water, and hiding cover. Having diverse wildlife— insects, amphibians, reptiles, birds, and mammals—requires diverse habitats, including forests of differing ages made up of different kinds of trees.

Areas of trees and shrubs that are 1 to 20 years of age are young forest. In times past, there was more young forest on the land. Today, only around 3.3 percent of Northeastern woodlands are classified as “young.” As our woodlands have grown older, some kinds of trees have become scarce. When trees are all the same age and the same few species, there’s less diversity in our forests, which causes the populations of certain kinds of wildlife to fall.
Forests Need Disturbances

Human activities, such as cutting trees to make charcoal, historically played an important role in creating young forest. Nature also helped provide a patchwork of this habitat: In times past, disturbances like wildfires and floods killed many trees, yielding an ongoing supply of young forest. Beavers’ tree cutting and dam building turned areas of older woods into openings that, after the beavers moved on, grew up with small trees and shrubs. Today, to prevent damage to our developments and protect lives, we have dammed rivers, suppressed wildfires, and limited beaver activity, halting those natural disturbance processes.

Fortunately, we can help wildlife by creating disturbances in a controlled, scientific way by carefully cutting trees in strategic places. Harvesting timber (logging) can lock up carbon when the wood is used for buildings, furniture, flooring, and other long-lasting products. Heating our homes and other structures with wood reduces the amount of oil and natural gas that we would otherwise burn in our furnaces, limiting the amount of carbon released into the atmosphere. Since harvested wood from managed forests is replaced through ongoing tree growth, these approaches offer a sustainable source of timber products, heat energy, and, in many cases, revenue for landowners.

Logging can boost forest diversity by opening up spaces for different kinds of trees, including those that need more sunlight than what’s available in the shade of older forests. A mix of tree species and ages is good for a forest’s health, strengthening its ability to resist diseases, insect pests, invasive plants, and extreme climate events such as droughts, storms, and excessive rainfall. And the resulting diversity—of tree size, density, and type—leads to having diverse wildlife.

Young forest is an “ephemeral habitat,” which means it doesn’t last a long time, usually growing back into older forest in about 20 years. Conducting periodic timber harvests is one way that conservationists and landowners can keep some young forest on the land for the animals that need it. Young forest is an “ephemeral habitat,” which means it doesn’t last a long time, usually growing back into older forest in about 20 years.

A Complex Issue

A growing number of concerned citizens believe that the most important thing trees and forests can do is to sequester and store carbon to limit climate change. Creating young forest that rapidly captures carbon can contribute to that goal while also helping to fulfill the habitat needs of both common and rare wildlife.

Foresters and wildlife scientists agree that managing forests to increase habitat diversity does not significantly harm the forests’ overall ability to absorb carbon and slow down climate change. And such management actions are necessary to keep many kinds of wildlife alive. (For a more technical explanation of forest carbon and the effects of forest management, see the publications in the Resources section.)

Making a Balanced Decision

The most important thing we can do to address climate change is to protect forests. Turning a woodland into a development—whether a tract of houses or a solar collection field—causes an immediate carbon release, as well as ending the woodland’s potential for sequestering and storing carbon in the future.

As a landowner, you want to take care of your woods. You may also want to make your forest a welcoming habitat for a variety of wildlife. Look beyond the borders of your property. If ample older forests already exist, you may decide to conduct a timber harvest to add some young forest to your land and neighborhood.