Scientists tell us that we have already put more carbon dioxide in the atmosphere than is safe. Scientists estimate we have 5 years to curb the worst effects of climate change. Moving to 100% clean energy is critical for keeping the carbon dioxide levels from rising further but will not remove existing carbon dioxide from the atmosphere.

Forests, ocean algae, and other plants naturally absorb carbon dioxide and sequester carbon through photosynthesis. All we have to do is change our behavior to maximize what nature does naturally. However, California forests are under attack from widespread clearcutting, drought, fire, pests and climate change. We must adopt forest practices and regulations now that safeguard resilience and improve health so they can sequester large amounts of carbon.

**HOW TREES SEQUESTER CARBON**

Through the process of photosynthesis, plants use the energy of sunlight to convert water and carbon dioxide into carbon. Carbon is the building block used to create and maintain leaves, branches, and the trunk. Half of the carbon is stored in the roots and the soil.
California legislators and agencies are creating policies and regulation with the goal of utilizing our forests to address climate change. We must ensure that their actions follow the best science and have the intended consequences.

**IMPLEMENT FOREST PRACTICES THAT INCREASE CARBON STORAGE**

• Larger trees absorb more carbon than smaller trees.
• Redwood forests capture and store more carbon dioxide than any other trees, including tropical rain forests.
• Diverse forests are more resilient and capture more carbon.
• Logging must minimize disturbance to the forests and soil. Selective logging, which removes some trees, allows the remaining large and small and varied trees to continue to sequester carbon.

**MYTH**

The forestry industry would have you believe that they can preserve forest carbon nearly indefinitely in wood products such as building materials and fences. Actually, less than 20% of carbon previously stored in forest trees and soil is contained in wood products.

**TRUTH**

The truth is that the best place to store carbon is in living trees, which maintain all previously stored carbon and continue to sequester more at faster and faster rates.

**BAN CLEARCUT LOGGING THAT SQUANDERS STORED CARBON AND EMITS CARBON DIOXIDE**

• Clearcut logging releases more sequestered carbon than other forms of logging, even more than a forest fire.
• A clearcut site takes as long as 20-40 years to sequester more carbon dioxide than it emits.
• Young conifer seedlings planted after a site is clearcut grow and sequester carbon at a slow rate.
• Once a site is clearcut and then replanted, it is typically harvested again in 50-60 years, long before any of the trees become large.

To fight climate change, improve water security, and reduce forest fire risk, California must ban clearcutting on state and private lands.

For more information, see StopClearcuttingCA.org, Sierraclub.org/clearcutting, Facebook.com/StopClearcuttingCA or contact forests@lomaprieta.sierraclub.org.