November 2023 Creation Care Green Tips

**Conserving and Restoring Healthy Forests: Using Nature Itself to Address the Climate Crisis While Protecting People and Wildlife**

1.  As climate-driven disasters have become daily news, we are also learning that **mature forests** provide unique, vital ecological services that may help us to slow the climate and biodiversity crises.  But **80% of America's old-growth forests are already gone,** and we are losing **three wild acres a minute** to development, logging, and climate change.  Only old-growth forests can **1)** remove and store large amounts of the carbon that heats the atmosphere; **2)** improve air and water quality by filtering pollutants; **3)** prevent rain and river erosion as well as soil loss.   Be an advocate for policies that protect priceless, old-growth forests, nature's best solution to the twin crises of **climate change and loss of living species.**

2.  America's **mature forests** will need us to do all we can to save them and stabilize the climate that has supported, for many thousands of years, life as we know it.  Trees grow by trapping and converting atmospheric carbon into biomass, and since hardwoods can grow for centuries, carbon is stored in their trunks and branches rather than reentering and heating the atmosphere.  The U.S. Department of Agriculture (USDA) states that just **100 trees can remove 53 tons of CO2 and 430 pounds of other air pollutants every year.**Forests also help keep soil moist and temperature down, and prevent pounding rain from washing the soil away, while the stabilizing effect of their underground roots prevents ground loss, erosion, and potential mudslides.  **Over half of U.S. drinking water** originates in forests that filter pollutants so effectively that a measurable increase in water quality is found when a dense surface forest grows above an underground water source.

3.  Joint conservation efforts by the U.S. Department of Agriculture (USDA) and the Department of the Interior (DOI) are aimed at enhancing **forest resilience to the climate crisis** by fostering long-term forest health.  Large-scale preservation and expansion of the healthy forests that remain on federal lands, managed by the U.S. Forest Service and the Bureau of Land Management (BLM), will involve **1)**a thorough inventory of America's remaining mature and old-growth forests (already **more than 80% depleted); 2)** setting aggressive reforestation goals on federally managed land; and **3)** analyzing reforestation opportunities on state, Tribal, and private lands.  The **Tongass National Forest in Alaska,** more than 17 million acres in size,is America's largest forest to constantly absorb and trap carbon on a huge scale, followed by **Chugach National Forest in Alaska**, home to the Glacier Ranger District that is fast melting, and **Humboldt-Toiyabe National Forest in Nevada and California,** composed of 23 separate wilderness areas.

4.  According to the U.S. Forest Service, up to **40% of Minnesota's forested acres** contained old-growth trees prior to European settlement, while today it's only about **2%.**Forests clean air, trap carbon, cool rivers and lakes, regulate the water cycle, control erosion, and provide habitat for hundreds of animal and insect species while supporting human health, according to the Minnesota Land Trust.  But Minnesota's forests are in danger, with **over 70% of Minnesota's northern forest tree species receding north into Canada due to climate change.**The primary threats include warming temperatures, land use change, invasive species, and long periods of fire suppression that amplify the effects of climate change and the resulting **wildfires, floods, and pest outbreaks.**The Minnesota Land Trust's forest restoration projects include **480 acres of northern forest** in which long-lived trees (lifespans of 200 to 800 years) like white pine, white cedar, and red pine are being established after disturbances such as clear-cutting, infestation, or fire.

5.  As a natural climate solution, forests have the potential to offset around **one-third of global emissions**, according to Haley Golz, Minnesota Land Trust Restoration Program Manager.  Yet Minnesota's**conifer forests,** which covered much of the northern half of the state in 1900, now occupy only the Arrowhead region.  With no emissions change, by 2070 there will be no conifer forests left in Minnesota, with a significant impact on Minnesota's wildlife, recreation, the health of lakes and rivers, and a way of life.  Researchers and volunteers at **Crosby Farm Regional Park,** overseen by the nonprofit Mississippi Park Connection (MPC) in partnership with local, state and federal agencies, have planted more than 1,000 trees across 24 plots to study which trees are able to remain healthy as Minnesota's State Tree, the Norway Pine, recedes north to Canada.  The goal is to maintain **forested ecosystems** with adaptable trees such as disease-resistant **American elm, swamp white oak, river birch, bitternut hickory, and bur oak.**If you want to volunteer for this project, sign up with the Crosby Crew at park [connection.org/volunteer](http://connection.org/volunteer).