



**TREES.
WATER.
SOIL.**



THE VALUE OF NATURAL CLIMATE SOLUTIONS IN MINNESOTA

Protecting and restoring our forests not only sequester carbon, they also provide numerous co-benefits including clean air and water, jobs, and opportunities for outdoor recreation.

VITAL TO CLIMATE

Climate change is a dire threat to our natural environment and human well-being. But we can help fight climate change with natural climate solutions.

Examples include restoring wild lands, and protecting forests, grasslands, and wetlands from being converted to farmland or urban development in the first place.

By conserving, restoring, and better managing land, we can increase carbon storage and avoid greenhouse gas emissions. Natural climate solutions can offset emissions equal to nearly 26 million metric tons a year, or 15% of Minnesota’s annual carbon emissions. Natural climate solutions can get us a third of the way toward Minnesota’s goal of cutting emissions in half by 2030.

VITAL TO ECONOMY AND SOCIETY

A new study completed by Earth Economics for The Nature Conservancy in Minnesota shows how investing in natural climate solutions pays big economic benefits in addition to producing valuable ecosystem services—such as building rich soil, filtering and storing water and providing habitat for fish and wildlife—that support our society and are vital to life.

In fact, natural climate solutions often produce a better return on investment than so-called built, or gray, infrastructure. On average, natural climate solutions are half as expensive as built infrastructure, but provide more value due to the additional benefits they produce.

Economic Benefits through 2050

Natural climate solutions are a great economic investment. When fully implemented on viable lands, they support:



Excellent Return on Investment



Ecosystem Services

Billions of dollars in ecosystem services would flow from abundant, well-managed forests, grasslands and wetlands—including the valuable benefits of clean water and air, flood control and wildlife habitat.



WATER QUALITY, STORAGE and SUPPLY

\$3.54 B in benefits



HABITAT VALUE

\$73.1 M in benefits



DISASTER RISK REDUCTION

\$291 M in benefits



RECREATION

\$370 M in benefits



AIR QUALITY IMPROVEMENTS

\$4.6 M in benefits

Statewide Gains

No matter the land type or location, protection and restoration of native landscapes will help the climate by storing carbon in plants and soil. Other valuable ecosystem services include protecting clean water, providing fish and wildlife habitat, and enhancing outdoor recreation.

VALUE OF ECOSYSTEM SERVICES BY LAND TYPE



FORESTS

\$4.5B in ecosystem services preserved by avoided conversion
\$32 B in ecosystem services generated by reforestation



GRASSLANDS

\$3.8 M in ecosystem services preserved by avoided conversion
\$65 M in ecosystem services generated by restoration



WETLANDS AND PEATLANDS

\$114 M in ecosystem services preserved by avoided conversion
\$210M in ecosystem services generated by restoration

ALL MINNESOTANS BENEFIT

Protection of existing natural lands, restoration, and similar natural climate solutions will benefit all Minnesotans, whether they live in urban, suburban, or rural areas.

Each year, \$425 million in benefits could be realized in environmental justice areas, where most residents are people of color and at least 40 percent of people reported income less than \$22,000. That includes \$146 million in water quality benefits.

Using cover crops and reducing tillage can increase profits, adding up to \$278 million in net income for Minnesota's farmers. If implemented to their full potential, soil health practices and nutrient management can provide more than \$600 million per year in ecosystem service benefits to Minnesota.

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Natural climate solutions above, left to right: No-till farming helps soil hold onto carbon; wild rice performs a critical role in water quality; selective tree harvests counteract climate change.