

Trees provide \$88.5 million in essential services

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Chronicle file photo/Marge

Beaver Although Muskegon boasts many wooded areas, the city annually cuts down between 100 and 150 trees.

What is the value of a community's trees — in monetary, not philosophical, terms?

That was the question facing researchers at Grand Valley State University's Annis Water Resources Institute, who assessed the value of ecological services provided by Muskegon's urban forest canopy.

Their conclusion: Muskegon's trees provide \$88.5 million in ecological services annually by absorbing air pollutants and large quantities of rainfall, which otherwise would cause more frequent flooding.

One-third of Muskegon, about 2,738 acres, is covered by tree canopy. Collectively, the trees remove 177,000 pounds of air pollutants each year and absorb millions of gallons of rainfall, according to the GVSU study.

"It's amazing how much money is saved by having such an extensive tree canopy, said Rod Denning, a GVSU research associate who authored the report. "The tree canopy provides valuable services besides reducing energy costs (by providing shade)."

TREE BENEFITS

Here is a numerical breakdown of Muskegon's urban forest canopy and the ecological benefits it provides:

30 Percent of land in the city covered by tree canopy.

2,738 Acres of land in city covered by tree canopy.

118,692 Metric tons of carbon that trees absorb annually.

177,691 Pounds of air pollutants that trees remove annually.

\$451,390 Amount of money saved by trees absorbing air pollutants.

\$706,656 Money saved annually by trees absorbing carbon.

15,884,398 Cubic feet of rainwater stored by the city's trees when 2.2 inches of rain falls in a 24-hour period.

\$88,522,236 Value of ecological services that Muskegon's urban tree canopy provides.

— *Source: Grand Valley State University*

The city's tree canopy saves about \$451,390 in pollution treatment costs.

The most valuable service trees provide is in the area of water absorption. The city's tree canopy can absorb roughly 16 million cubic feet of water during a storm that dumps 2.3 inches of rain in 24 hours. That service saves \$87.3 million annually, the study found.

Absent trees, the city of Muskegon would need to spend \$87 million on new storm sewers to handle all the rainwater that trees absorb, according to the GVSU report.

A similar study found that Grand Rapids' tree canopy covered 35 percent of the city and provided ecological services worth \$372 million annually.

Not surprisingly, the downtown areas of Muskegon and Grand Rapids had the lowest concentration of trees.

Larry DeCou, Muskegon's cemetery and forestry supervisor, said the city planted several trees along Western Avenue to increase the tree canopy as part of the downtown redevelopment effort.



Chronicle file photo/Marge Beaver Downtown Muskegon has fewer trees because of development.

DeCou said he knew Muskegon, as a whole, had extensive tree cover. But DeCou said he was surprised by the value of ecological services that Muskegon's urban tree canopy provides.

"I think most cities underestimate the value of tree canopy -- it's really worth a lot of money," DeCou said.

DeCou said studies have shown that trees can reduce cooling costs by 20 percent, increase property values and lower the crime rate.

DeCou said city officials are struggling to maintain Muskegon's existing tree canopy in the face of powerful factors, including:

- Age: Many city-owned trees, those adjacent to streets and on other public property, are nearing the end of their life spans.
- Insufficient replacements: Muskegon cuts down 100-150 trees annually on city property, primarily because of storm damage, but plants just 50-100 new trees.
- Fear: The 1998 windstorms, which knocked down hundreds of trees and caused millions of dollars in property damage, made more residents fearful of trees.



Chronicle file photo/Kendra

Stanley-MillsThe fear of falling trees -- such as this one last fall at 6051 Staple Road -- has prompted some homeowners to remove large, older trees.

"After those storms, a lot of people were terrified of trees falling down," DeCou said. He said the notion that trees are beautiful and an integral part of the community is not universally accepted.

"We have a lot of tree-lovers and tree-haters in this town. I'd say the numbers are split about 50-50," DeCou said. "We get a lot of requests to cut down trees that should not be cut down."

A city ordinance prohibits cutting down trees on city property. Trees on private property are fair game.

The city of Muskegon works with Michigan State University's Cooperative Extension Service to grow trees that replace those removed from city property. But in an era of tight finances, DeCou said the city is losing ground in its effort to maintain the existing tree canopy.

"We only seem to be able to afford buying and planting 50-100 trees each year," he said. "We're not keeping up with the number of trees we're removing."

E-mail Jeff Alexander at jalexander@muskegonchronicle.com

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