Hutchinson's Urban Forest
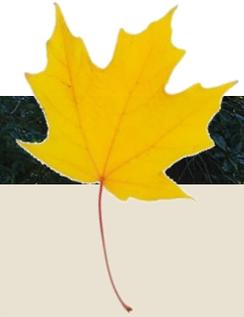
Street Tree[1] Benefits

Hutchinson's street trees – all trees within the right–of–way – are a vital part of our urban infrastructure, providing hundreds of thousands of dollars in environmental, economic and aesthetic value to our community. Over their lifetime, street tree benefits exceed the costs of planting and care, representing a 400 percent return on investment. Tree benefits increase over time highlighting the importance of not only planting trees, but providing ongoing maintenance and protection. These benefits are a reminder of the worthwhile investment in our community forestry program.

Trees:

- **Reduce stormwater runoff**
- **Lower summer air temperatures**
- **Reduce air pollution**
- **Reduce heating and cooling costs**
- **Reduce atmospheric carbon dioxide (CO_2)**
- **Enhance property values**
- **Provide wildlife habitat**
- **Improve health and wellbeing**
- **Improve learning and concentration**
- **Provide aesthetic benefits**

Annually **Hutchinson's** public street trees provide[2]...

STORMWATER RUNOFF REDUCTION
$221,504

PROPERTY VALUE INCREASE
$223,327

$710,327
per Year
TOTAL BENEFITS

CO_2 REDUCTION
$26,096

AIR QUALITY IMPROVEMENT
$33,282

ENERGY SAVINGS
$206,118

%	Species
17%	Green Ash
12%	Sugar Maple
10%	Hackberry
6%	Linden
5%	Silver Maple

Top 5 Street Tree Species
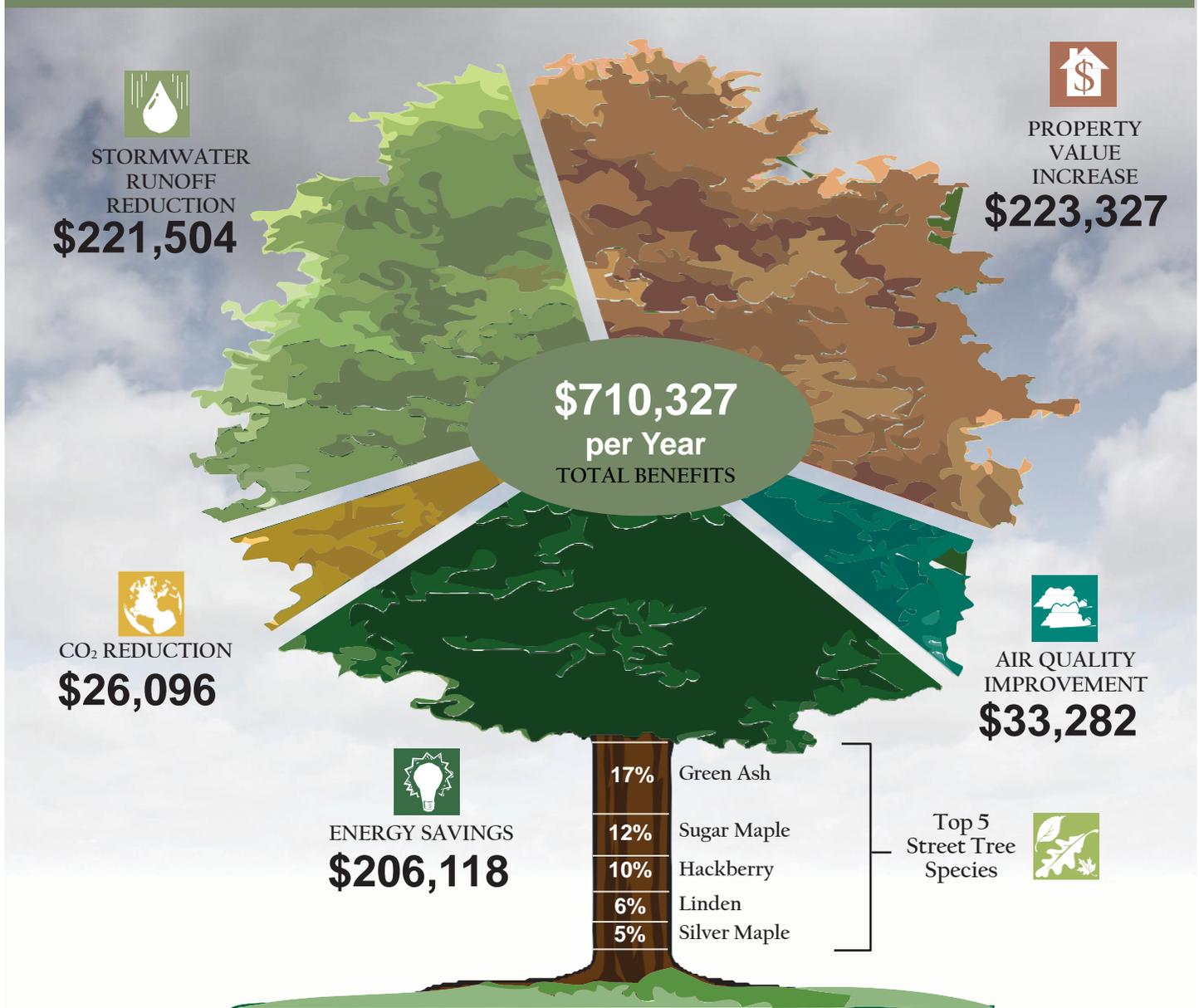
Trees Save Energy

Trees reduce the demand for energy to heat and cool buildings by providing shade, lowering summertime temperatures, and reducing windspeeds. Secondary benefits are reduced water consumption and pollutants emissions by local power plants.

Street trees in Hutchinson save nearly 1,000 MWH of electricity and 134,000 Therms of natural gas annually for a savings of $206,118.

Trees Reduce Atmospheric Carbon Dioxide

Trees reduce atmospheric carbon by capturing and storing CO_2 as they grow. By reducing demand for heating and cooling, trees indirectly reduce CO_2 by avoiding power plant emissions associated with energy production.

Street trees in Hutchinson capture 883 tons of atmospheric CO_2 per year. Annual savings including indirect costs are $26,096. Street trees also store approximately 10,915 tons of atmospheric CO_2 for a total savings of $180,455.

Trees Improve Air Quality

Trees improve air quality by trapping particulates, absorbing gaseous pollutants, and releasing oxygen. By cooling urban heat islands and shading parked cars, trees indirectly reduce ozone levels. The Environmental Protection Agency recognizes tree planting as an ozone reduction measure in state implementation plans.

Street trees in Hutchinson remove 520 lbs of particulate matter, 946 lbs of ozone, 45 lbs of sulfur dioxide and 158 lbs of nitrogen oxides annually. Total annual savings including indirect cost are $33,282.

Trees Reduce Stormwater Runoff and Improve Water Quality

Trees reduce peak stormwater runoff and associated pollutants entering local water bodies. Trees reduce stormwater volumes by intercepting a portion of rainfall, which evaporates and never reaches the ground. Tree roots also increase rainfall infiltration and storage in the soil. And tree canopies reduce soil erosion by diminishing the impact of raindrops on barren surfaces.

Street trees in Hutchinson intercept nearly 8.2 million gallons of water annually for a savings of $221,504.

Trees Improve Property Values and Beautify Our Community

Trees are the single strongest positive influence on scenic quality in our community! They increase the attractiveness of retail business areas. Studies found shoppers are willing to pay up to 11% more for goods and services in a well-landscaped business district. Trees increase property values. People will pay 3-7% more for properties with many trees. Trees foster safer and more sociable neighborhoods. Views of trees ease mental fatigue and stress, help concentration, reduce sickness, and provide settings for recreation and relaxation. Trees also help reduce noise, provide a refuge for wildlife, and help connect residents with their natural environment.

Street trees in Hutchinson increase property values annually by $223,327.

Diversity Improves Urban Forest Resilience

A diverse palette of trees helps guard against catastrophic loss to insects and diseases or environmental stresses. A general guideline for urban forest diversity is no more than 5% of any one species, 10% of any one genus.

Ash and maple are over-represented on Hutchinson's streets. This jeopardizes $444,797 of the city's urban forest's benefits from pests such as Emerald Ash Borer (EAB) and Asian Longhorn Beetle (ALB).

[1] In this study, the Hutchinson Urban Forest is comprised of all right-of-way (ROW) trees within the City of Hutchinson city limits. These ROW trees are also referred to as "Street Trees."

[2] Analysis was conducted using iTree Streets. iTree Streets is a street tree management and analysis tool for communities that uses tree inventory data to quantify the dollar value of annual environmental and aesthetic benefits. The iTree Suite is a free state-of- the-art, peer-reviewed software suite from the USDA Forest Service. www.itreetool.org.

Tree graphic concept courtesy of City of New York Department of Parks & Recreation.