BENEFITS OF WOODED AREAS AND TREES

Wooded areas have unique compositions, structures, and functions. They provide a wide range of economic, social, and environmental benefits.

Economic benefits

Wooded areas and trees provide both tangible and nontangible economic benefits. These include:

■ Economic stability

The beautifying and peaceful effect of healthy tree cover enhances land value, business development, and employment opportunities. Wooded areas and trees are considered part of the community's infrastructure and assets.

■ Increased property values

Wooded areas and trees increase property value and marketability because they enhance appearance and other values. Properties with trees usually sell faster and at a higher price than treeless properties (Figure 4, page 10). Market evidence indicates that:

- Mature landscaping (lawn, flowers, shrubs, and trees) can add up to 20 percent to the value of an improved residential property.
- "Good tree cover" or "well-spaced" mature trees (trees planted or preserved for aesthetics, shade, energy

conservation, and screening purposes) can increase the value of a developed property by 6 percent to 15 percent, or add 20 percent to 30 percent to the value of an undeveloped property (Source: Minnesota Society of Arboriculture, 1996).

Figure 4. Properties surrounded with trees have higher market value than treeless properties because trees are part of the property infrastructure. In addition, trees provide a healthier and a more pleasant living environment.

■ Tax revenue

Property taxes provide government with revenue to fund public services. Trees increase appraisal and sale price, and so generate higher property and sales tax revenues.

Energy savings

Trees are living infrastructures. Shade trees can reduce the cost of cooling by up to 25 percent during hot summer months. They also reduce the impact of urban heat islands caused by the concentration of pavement, buildings, air conditioners, and engines in urban areas. Tree windbreaks can reduce the cost of heating during cold and windy winter months by as much as 20 percent (Figure 5). Living snow fences can provide a low-cost solution to problems from drifting snow.

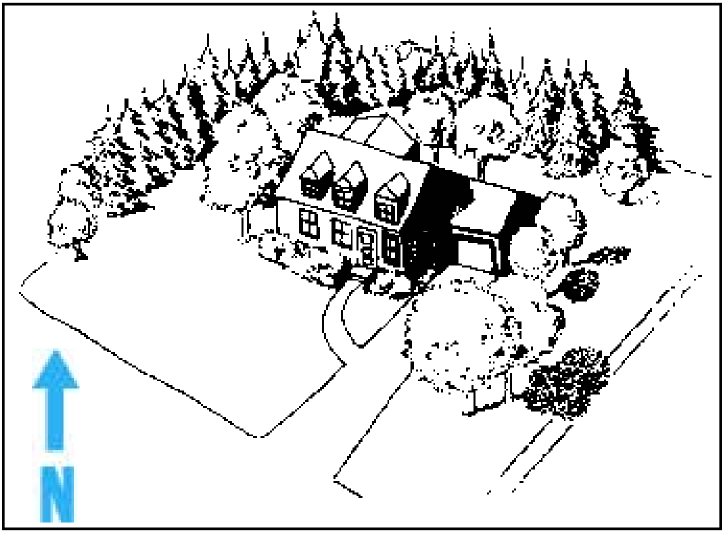

Figure 5. A windbreak on the west and north of the building and shade trees on the east and west of the building significantly reduce the cost of heating and cooling.

Social benefits

The social benefits of trees include health benefits, aesthetic values, recreational and educational opportunities, and screening and privacy.

■ Health benefits

Wooded areas provide a place for mental and physical contentment. Research has shown that a walk in wooded areas can relieve psychological and emotional stress. Medical studies indicate that patients recover faster in facilities surrounded with trees and rooms offering views to wooded areas because they feel serene, peaceful, and restful. Wooded areas and trees provide mental comfort and relaxation.

■ Aesthetic values

Wooded areas and trees add beauty and character to the landscape, neighborhoods, and properties and enhance quality of life.

■ Recreational and educational opportunities

Wooded areas provide recreational activities and educational opportunities. These include hiking, walking, watching birds and other wildlife, nature study, photography, picnicking, and camping.

■ Screening and privacy

Wooded areas and trees provide screening and privacy. Screening is the blocking out of an objectionable view while privacy is the seclusion of an area from its surroundings (Minnesota Society of Arboriculture, 1996).

■ Noise and glare reduction

Wooded areas may reflect and absorb sound energy, and block and reflect light scattering.

Environmental benefits

Wooded areas and trees provide a number of environmental benefits including:

■ Clean air

Trees play an important role in cleaning air. They trap dust, reducing the need to clean doors, windows, decks, patios, and exterior walls. They also remove chemical pollutants, including carbon, nitrogen, and sulfur compounds, from the atmosphere and release oxygen (Figure 6, page 14). By trapping carbon compounds, they reduce the level of greenhouse gases in the atmosphere.

■ Clean water

Wooded areas and trees influence water flow, filtration, runoff, soil erosion, and sediment control, and provide clean water. According to studies by the U.S. Department of Agriculture (1975), wooded areas reduce runoff by 5 percent to 35 percent. This reduction is less than mowed grass and pastured areas depending on soil types. They also increase water percolation and infiltration. This function is of great importance to communities that depend essentially on ground water.

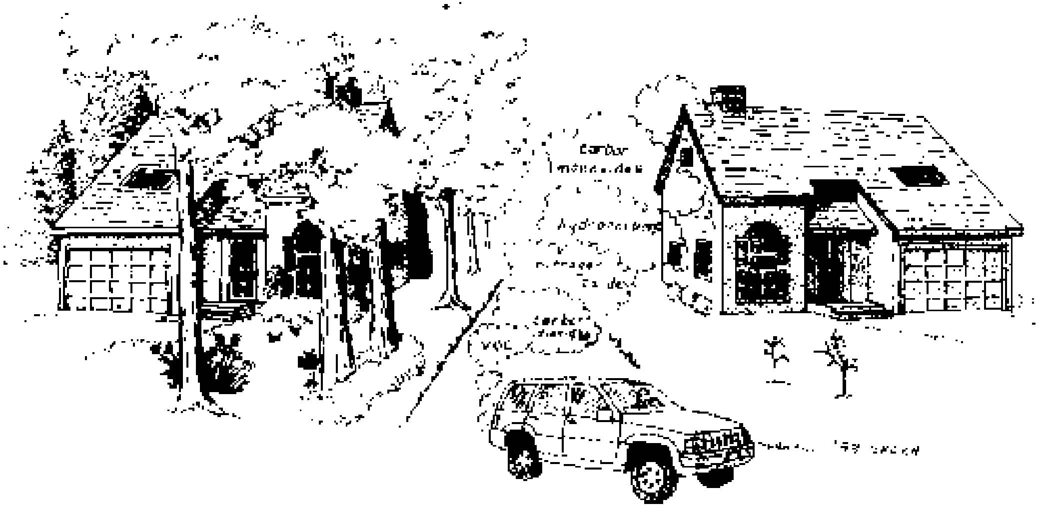

Figure 6. Trees clean the air by filtering dust particles, absorbing gases including carbon and nitrogen compounds, and releasing oxygen into the atmosphere.

■ Wildlife habitat

Birds, mammals, fish, and other wild animals are a valuable resource. For many, their survival depends on the presence, structure, composition, and distribution of wooded areas across the landscape (Figure 7). Habitat requirements (shelter, food, water, diversity) vary among species. For example, squirrels may require only a few trees, while chipmunks require a small wood lot and other wildlife species may require much larger areas. Habitat requirements for a greater number of wildlife species can be met in urban wooded areas by conserving a network of connected green corridors and natural wooded open spaces across the landscape.

Figure 7. A community forest provides recreational and educational opportunities as well as environmental benefits and wildlife habitat.