

Trees offer benefits to:

Air Quality:

- Trees sometimes called the lungs of our cities are important because of their ability to remove contaminants from the air.
- Trees absorb gaseous pollutants (such as ozone, nitrogen oxides, and sulfur dioxide) through leaf surfaces.
- Trees intercept particulate matter (such as dust, ash, pollen, and smoke) on plant surfaces.
- Trees release oxygen through photosynthesis.
- Trees transpire water and shade building surfaces and paving, which lowers local air temperatures, thereby reducing ozone levels, power plant emissions and power plant water consumption.
- Trees reduce evaporative hydro-carbon emissions from parked vehicles.
- Trees directly sequester (store) carbon dioxide in their woody and foliar biomass while they grow.
- Trees near buildings can reduce the demand for heating and air conditioning, thereby reducing emissions associated with electric power production.

Soil

- A tree's falling leaves and needles decompose. This decomposing material provides rich nutrients for the soil.
- A tree's roots help to anchor the soil, thus preventing valuable topsoil from being blown away by the wind or washed away by the rain.
- A tree's roots and canopy reduce flooding by allowing rain to percolate into the ground, which reduces rainfall run-off.

Water

- A tree, in addition to reducing topsoil erosion, also helps prevent harmful land pollutants, contained in the soil, from getting into our waterways.
- Urban storm water runoff is a major source of pollution entering wetlands, streams, lakes, and oceans. Healthy trees can reduce the amount of runoff and pollutant loading in receiving waters. Trees are mini-reservoirs, controlling run-off at the source from non point source pollution, such as from pavements, buildings and landscapes.
- Trees intercept a portion of rainfall that evaporates and never reaches the ground. Saturation generally occurs after 1 to 2 inches of rain fall on tree leaves, branches,

stems, and bark. Rainfall is stored thereby reducing runoff volumes and delaying the onset of peak flows.

- A tree in addition to slowing down water run-off, ensures that the ground water supplies are continually being replenished.

Noise Levels

- A tree's various parts absorb sound waves, deflect the waves in different directions, and thereby reduce the sound's intensity. Each 100 foot width of trees can absorb about 6 to 12 decibels of noise. Since a busy highway can generate as much as 72 decibels of sound, trees can make a significant and welcome reduction in noise levels.

Utility Costs & Energy Benefits

- Energy fuels economic growth and is an essential ingredient for quality of life. Conserving energy by greening our cities is important because it is often more cost effective than building new power plants.
- Trees modify climate and conserve building energy by shading which reduces the amount of radiant energy absorbed and stored by building surfaces. A tree especially a deciduous, if strategically placed to provide shade for your home's roof and outside walls, can help reduce air conditioning costs in the summer.
- Trees modify climate and conserve building energy by transpiration which converts liquid water to water vapour and thus cools by using solar energy that would otherwise result in heating of the air.
- Trees modify climate and conserve building energy by wind speed reduction which reduces the infiltration of outside air into interior spaces and conductive heat loss from windows. A tree such as an evergreen, if properly placed in your yard, can act as a windbreak and an insulator. In the winter, this can translate into lower home heating costs.
- Trees lower concentrations of ozone. Ozone concentrations increase as air temperature increases. By cooling air and shading impervious surfaces (pavement and roof tops) trees can reduce ozone concentrations. Temperature differences of more than 12.8 degrees Celsius have been observed between city centers and more vegetated suburban areas (Akban et al. 1992).
- Paved patios and driveways can become heat sinks that warm a house during the day. Shade trees can make them cooler and more comfortable spaces.

Property Values

- A tree adds to the beauty and charm of the landscape and can therefore increase the property's value.
- A tree breaks up the monotony of masonry, cement, metal, and glass along city streets and sidewalks. Areas with trees often attract more people (e.g. tourists, customers).

Recreational Places

- A tree provides valuable play areas where children can climb, make a swing, and build a tree house. In urban areas, trees help children to see and appreciate nature.
- A tree is often used by birds and small animals for shelter, nesting, and for the storage of food. Again, this enables all of us to have some contact with nature.
- A number of trees can help hide unsightly areas such as garbage dumps, highways, scrap yards, mine sites, etc.
- Nature is not for us, it is a part of us. We have to pay closer attention to nature, try to understand it, learn from it and above all protect it as it protects us.

'Drink in the sight of a tree and it will quench your thirst'.
(Author unknown)

Memorial Tree

- Helping families cope with loss.
- Trees planted are used as a memorial to symbolize life. It keeps growing in memory of your loved one who can't grow anymore.
- To plant a tree is to make sure the cycle of life will go on.

