

Interurban Trail Tree Preservation Society

14810 Linden Ave N; Shoreline, WA 98133

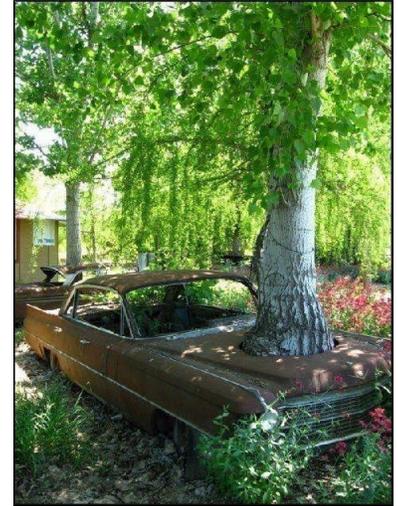
BENEFITS OF CITY/all TREES:

Trees Produce oxygen

- * Trees produce about ½ of the O₂ we breath here on earth, other major source is algae in sea water.
- * David Turner (Forestry Professor OSU, ~2010) Found that “Oregon forests balance almost half of their carbon emissions from fossil fuel consumption”
- * Ocean water is also an important carbon sink but as it warms up it fizzes (like soda pop) releasing CO₂

Trees Clean air by absorbing pollution, and mitigate climate change by capturing and storing CO₂

- * A typical adult consumes about 386 lb. of oxygen per year, a single small 32’ tree produces ~ 260 lbs. in that same time. (Professor Wolf UW)



Trees Enhance property values and make street level businesses more attractive to shoppers

- * In hot southern US climates up to %74 of retail customers preferred shopping where buildings and parking were shaded by trees.
- * For unimproved property, studies showed a ~30% increased value for nicely tree covered parcels.
- * Homes with trees in the yard show a 3.5-6% increased resale value, so a \$500k house would be worth \$25,000 more with trees in the yard. (professor Wolf, Center for Urban Horticulture)
- * One study looking at 30 variables affecting commercial occupancy rates, found that landscape amenities have the highest correlation with full occupancy, greater even than direct access to arterial transportation.(pHD Wolf)

Trees Mitigate storm water runoff and soil erosion

- * Most municipalities restrict tree removal from steep slopes because of their ability to absorb surface water and prevent land slides.
- * Large trees provide exponentially more storm water abatement than smaller trees. A 25’ diameter canopy can manage 1” of rainfall from 2,400 sq.ft of imperious surface. (EPA 2016)

Trees Provide protection against cancer causing UV rays and cool the environment

- * Street tree or park canopy can absorb over 60% of incident solar light/radiation (converting the energy to evapotranspiration).
- * A single small 15’ Callery Pear tree (common in Europe) can provide 6kW of cooling, about equivalent to two small air conditioning unites. (Biomechanics Professor Roland Ennos, U of Hull)

Trees Cure Cancer

Not really, but many medications are derived from trees like Aspirin (from willow bark). The dogwood and Cinchona trees are used to treat malaria (quinine). The Japanese Camphor tree is used in muscle relaxants...

Trees Absorb noise and dust

- * A mature tree absorbs from 120 to 240 lbs of small particulates and gases of air pollution in a year, evergreens are typically more effective than deciduous. (Professor Wolf UW)

Trees Reduce stormwater water runoff and increase atmospheric moisture

- * Approximately ½ of the storm water falling on a typical Puget Sound evergreen forest is directly intercepted by the foliage (never touching the ground) then re-evaporated, purifying the air and water through distillation. The remainder is absorbed by roots or filtered by the soil (non hardscape). (Bower & Mastin 1997)

Trees Improve soil by providing organic matter from dropped leaves

* By example Acer Macrophyllum (Big Leaf Maples), are particularly good for soils, insulating roots and plant beds during the winter, then gather rain and compost in place for spring nutrients.

Trees Produce a sense of rootedness, connectedness and community

Trees Reduce property and violent crime

- * Public housing residents with nearby trees report less graffiti and 25% fewer acts of domestic violence.
- * Public Housing with greater vegetation had 52% fewer total crimes, 48% fewer property crimes, and 56% fewer violent crimes. (Wolf, K.L. 2010 Crime and Fear)
- * Residential Neighborhoods saw fewer property crimes with right-of-way trees and landscaping (see Crime Prevention Through Environmental Design (CPTED), by College of the Environment, UW)

Trees Provide relief from concrete, asphalt, glass and brick

Trees Slow traffic down

Trees Provide homes and flyways for resident and migrating birds and wildlife

Trees Moderate temperatures - cool in the summer and block cold winds in the winter /Conserve energy

- * A single 25' tree reduces annual residential heating and cooling costs by 8-12% (Professor Wolf UW) providing building shading during the summer heat, and preventing convective heat loss in winter.
- * Even a small (4m high) Callery pear tree – a commonly planted species in Northern Europe – can provide around 6kW of cooling: the equivalent of two small air-conditioning units (Prof. Roland Ennos UKU+0029)

Trees Connect us to nature

- * Japanese have used “forest bathing” to recharge their bodies and still their minds for decades (Women’s Health Magazine November 2016)

Economic Benefits of Trees

* The 2015 Washington Recreation and Conservation Office study found that 90% of Washington residents spent time outdoors in our parks forests and natural areas, and this recreation contributed \$20.5 Billion dollars to the state economy each year, more revenue than is generated by Boeing, Microsoft, or even Google. The overall economic benefit to the economy is second only to the entire tech sector of the economy combined.

* The Trust for Public Land’s 2011 report found that Seattle’s city parks produce significant value to the city from seven evaluated factors: increased property value, tourism, direct use, health, community cohesion, clean water and clean air. They estimated our parks produce \$111 million in revenue for the cities residents (\$81 in additional property value due to park proximity and \$30 million from tourism), and provide an additional \$512 million in direct use value and health benefits. Direct value for the city government included \$19 million in revenue, and \$12 million in cost savings (from tourism, storm-water and air pollution mitigation etc.)

Trees accelerate growth and economic benefits as they get older

* The findings, reported by an international team of 38 researchers in the journal Nature (Jan 15, 2014), overturn the assumption that old trees are less productive. The study was lead by Nate Stephenson PhD of the US Geological Survey, and found that a single big tree can add the same amount of carbon to the forest in a year as is contained in an entire mid sized tree.

It is important on our small planet to conserve our natural environment on which all life depends. In addition to reducing CO² production we need to increase its absorption back out of the atmosphere, and one of the few ways this can be done economically by individuals is by planting and preserving trees & vegetation. Please continue supporting your community environmental groups and initiatives.