6. Economic, Health & Psychological Benefits

- Studies from all across the nation show that residential home prices increase from 5% to 25% due to the presence of trees, depending on the type of trees, scarcity of treed lots, and the maturity of existing trees.

- One widely reported study shows viewing trees through a window during surgery recovery cut the average recovery time by almost one whole day compared to patients with a view of a blank wall.

- People turn to the urban forest, preserved by humans as parks, wilderness, or wildlife refuges, for something they cannot get in a built environment. The quality of human life depends on an ecologically sustainable and aesthetically pleasing physical environment. The surge of interest in conserving open spaces for people motivated by ecological and aesthetic concerns is growing.

- There is growing recognition that the key to curtailing health care costs lies in prevention of illness so it does not have to be treated by the expensive medical system. Trees contribute to this end by facilitating positive emotional, intellectual, and social experiences.

- Environmental stress may involve both psychological emotions, such as frustration, anger, fear and coping responses, and associated physiological responses that use energy and contribute to fatigue. Trees in an urban setting have therapeutic value of natural restorative effect that releases the tensions of modern life. The cost of environmental

stress in terms of work days lost and medical care is likely to be substantially greater than the cost of providing and maintaining trees, parks, and urban forestry programs.

7. Trees are a source of food for humans, i.e. Pecans, Walnuts, Almonds, etc.

8. On a large scale, trees require less fertilizer and keep the soil healthier than any other crop.

9. Trees can screen objectionable views, offer privacy, reduce glare and light reflection, offer a sound barrier (acoustical control), and help guide wind direction and speed.

10. Trees offer aesthetic functions such as creating a background, framing a view, complementing architecture, and bringing natural elements into urban surroundings.

11. Trees offer unlimited climbing challenges and good physical activities through tree swings and treehouses.

12. Bioremediation is the use of biological agents, such as bacteria or plants, to remove or neutralize contaminants in polluted soil or water.

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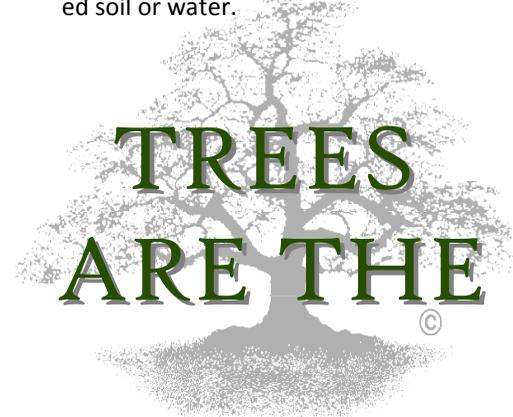
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The Many Benefits of Trees

The Many Benefits of Trees

Trees provide a multitude of benefits. By increasing the public's awareness of the many benefits of trees, we can utilize current scientific evidence to help resolve difficult problems and improve the livability of our cities. Proper tree care and sound forest management programs are crucial to the health, longevity, and sustainability of our urban forests, as well as being a wise investment in our future.

Did you know...

1. Air Temperature and Energy Consumption
   - Trees decrease air temperature and help offset the "heat island" effect.

- By properly selecting and planting trees, energy savings can exceed 40% by the shade they provide and through transpiration.
- A single large tree releases up to 400 gallons of water into the atmosphere each day. Water drawn up from roots evaporates. This conversion from water to gas absorbs huge amounts of heat, cooling hot city air.
- Dallas area neighborhoods with mature trees are up to 11 degrees cooler than neighborhoods without trees. A one-degree rise in temperature equals a 2% increase in peak electricity usage.
- Cities are 5 to 9 degrees warmer than rural areas and 3% to 8% of our summer electricity use is to compensate.

2. Air Quality
   - Trees trap pollutants, such as greenhouse gases, ozone, and particulate matter (dust, smoke, pollen, etc.). By storing these pollutants, and generating oxygen for our urban spaces, the American Forests organization's studies see the value to American cities at 10 billion dollars!

- Large trees remove 60-70 times more pollution than small trees. Most trees in Dallas do not exceed 24" in diameter.
- For every ton of wood a forest grows, it removes 1.47 tons of carbon dioxide and replaces it with 1.07 tons of oxygen.
- A typical tree removes 25-45 pounds of carbon from the air each year.
- An EPA study in Chicago showed that the 23.2% of canopy cover in the Lincoln Park neighborhood adjacent to downtown annually filters 43.9 tons of particulate matter, 14 tons of carbon dioxide and 12.4 tons of nitrogen oxides, giving the urban forest an estimated pollution abatement value of $625,000 per year.

3. Water/Soil
   - Planting trees along streams, wetlands, and lakes, helps control water and soil runoff, removes sediment, reduces flood damage, and increases water quality, by reducing the pollution of water runoff.
   - Healthy, vegetated stream buffer zones reduce the total suspended solids phosphorus, nitrogen and heavy metal transfer between urban areas and streams by 55% to 99%.

- Numerous studies have correlated the reduction of streamside trees and vegetation to the reduction of aquatic diversity, along with a decline in the total fish population of up to 86%.
- Tree canopies, in one study, reduced surface runoff from a one-inch rain over 12 hours by 17%.
- In natural watersheds with trees and vegetation, 5% to 15% of stream flow is delivered as surface storm runoff. In highly developed areas, over 50% of the stream flow is from surface runoff.
- As much as 50% of the sediment in some streams results from stream channel erosion attributable to streamside vegetation removal practices and channelization.

4. Trees attract wildlife and provide them food and shelter.

5. Trees are living witnesses to our history and evidence of our cultures. Without a cultural history, people are rootless. Preserving historical trees feeds our sense of history and purpose.