

The Many Benefits of Trees

Presented to



2019 Tree Care Specialist Training

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Value of Trees

If Grandpa planted it when
he was young?



To wildlife and
their need for
shelter?



As well as their need for food?



Value of Trees



To a farmer??

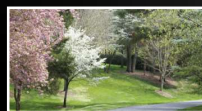


As a cash crop?



Value of Trees

- ❖ Trees are the very foundation of a healthy urban society
- ❖ They clean our air, water & soil
- ❖ They add greatly to our health, sense of well being, quality of life as well as our economic future in many ways



Trees and Air Quality

Trees not only provide clean oxygen, they also capture (or sequester) and store:

- ❖ carbon monoxide (CO)
- ❖ carbon dioxide (CO₂)
- ❖ ground level ozone (O₃)
- ❖ nitrogen oxides (NO_x)
- ❖ sulfur dioxide (SO₂)
- ❖ particulate matter



Trees and Air Quality

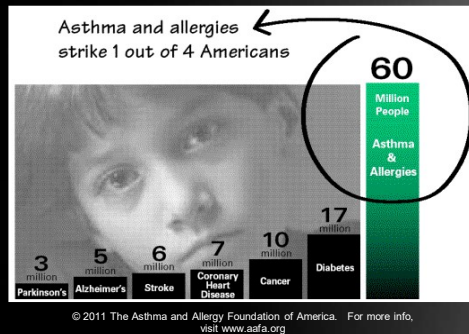
According to the USDA Forest Service, Pacific Southwest Research Station, each year 100 large mature trees will...

- ❖ Remove 17 tons of carbon dioxide (CO₂)
- ❖ Remove 137 pounds of other air pollutants



Trees and Air Quality

- Children who live on tree lined streets have lower rates of asthma
- Large trees remove 60-70 times more air pollution than smaller trees



Trees and Air Quality

- Trees reduce evaporative emissions from fuel tanks due to the cooling effects of shade



Trees and Water

- ❁ Trees reduce storm water runoff and flooding by slowly filtering and cleaning rainwater as it travels thru the leaves and limbs to the ground
- ❁ The water either evaporates or it is absorbed, cleaned and released through transpiration
- ❁ The canopy of a large tree can reduce surface runoff from a one-inch rain over 12 hours by 17%
- ❁ Planting trees along streams helps to control water flow and soil runoff



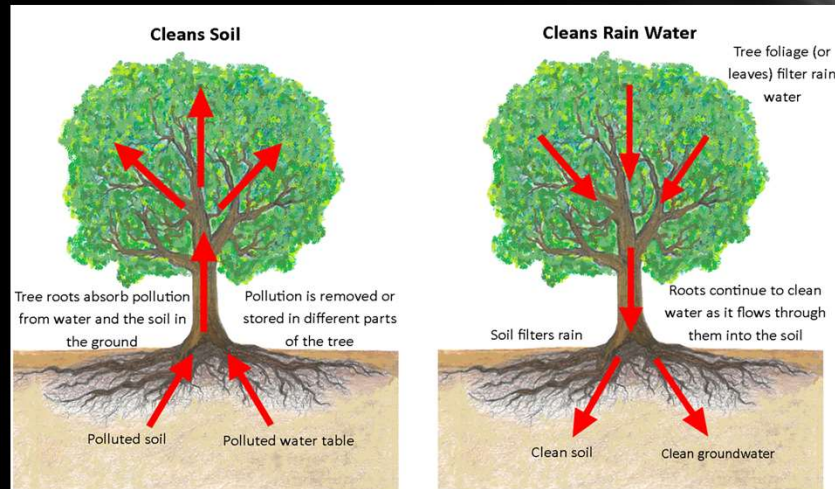
Trees and Water

- ❁ Like to fish?
- ❁ Trees help by stabilizing banks, reducing water temperatures due to the shade as well as trapping and filtering pollutants
- ❁ Limbs and trunks in the water also create habitat and protection from predators



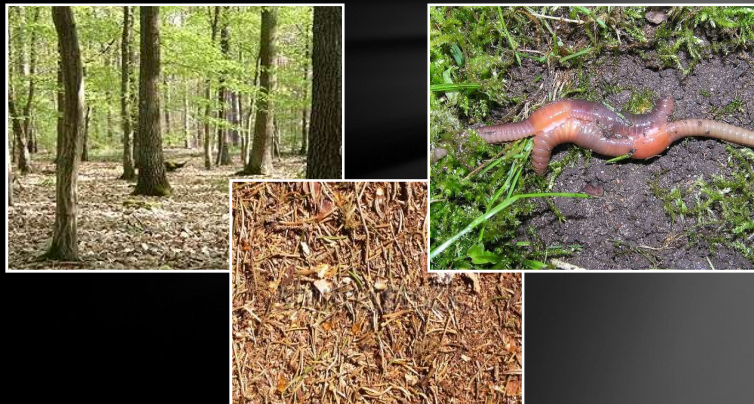
Trees and Soil

Numerous tree and plant species have proven to be useful in phytoremediation (the removal of toxic materials from the soil).



Trees and Soil

Leaves and limbs that fall to the ground, create mulch that conserves soil moisture and encourages microbial activity and earthworms.



Trees and Health



A view of trees and nature help hospital patients recover quicker and with fewer medications.



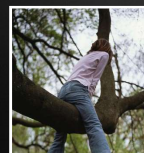
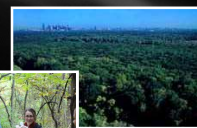
Being around trees and nature encourages physical activity and “walkable” communities.



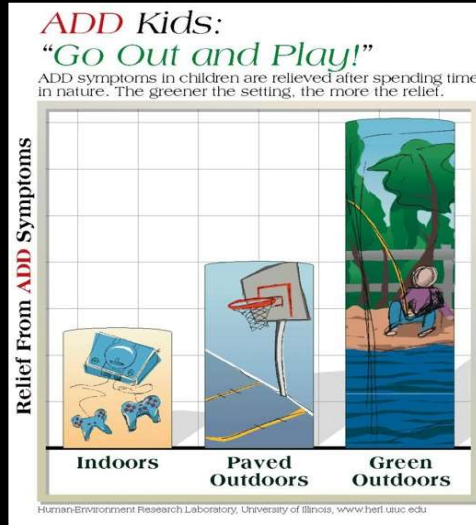
Trees and Mental Health

Being around trees and nature...

- ❖ Reduces the stress of living in the city
- ❖ Reduces domestic violence and levels of aggression and crime
- ❖ Increases social interaction
- ❖ Folks feel safer
- ❖ Reduces levels of ADD and ADHD (Attention Deficit Hyperactivity Disorder)

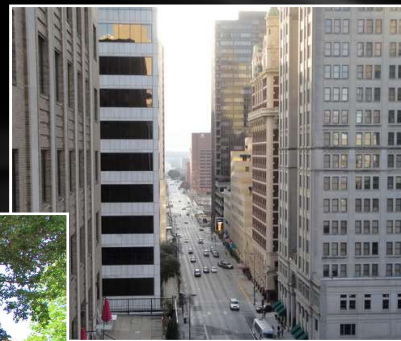


Trees and Mental Health



Trees and Mental Health

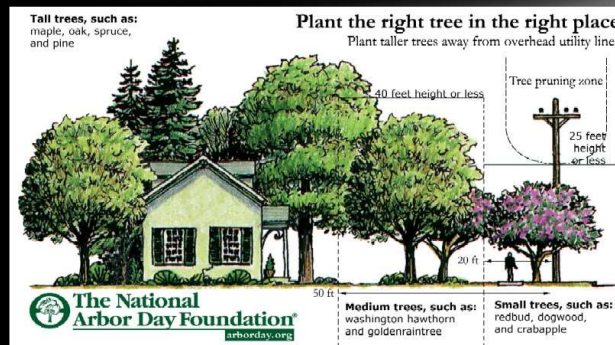
Would you rather
live here?



Or here?

Trees Save Energy

- When trees are properly placed, energy savings can be up to 30%
- Shading your air conditioner can provide an additional 10% savings on energy costs



Trees Reduce the Urban Heat Island Effect

Urban Heat Islands raise temperatures overall an average of 15 degrees.



A one degree increase in temperature equals a 2% increase in peak electricity consumption and an increase in emissions from a power plant.

Trees and Property Value

According to real estate agents, up to 37% of a home's value is in trees and landscape.



Trees Value for Business

Surveys found that 74% prefer to shop at businesses with trees and landscape.

They will also shop longer and were willing to pay more for products or services.



Picture courtesy of NorthPark Center Center, Dallas, Texas

**Before I go dormant...
are there any questions?**



Thank you!!
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