

## **ENVIRONMENT: (ANSWERS)**

**A30:** *Probably the most valuable asset of all plants/trees is their ability to convert water & carbon dioxide to sugar and oxygen using light energy; a process known as photosynthesis.*

**A31:** *Although the overall leaf/blade surface area of an acre of grass is greater than an acre of trees, the acre of trees produces more net oxygen.*

**A32:** *An acre of trees can remove ~4 metric tons of CO<sub>2</sub> from the atmosphere each year.*

**A33:** *A single mature tree can absorb carbon dioxide at a rate of 48 lbs/year, releasing enough oxygen back into the atmosphere to support 2 people; an entire acre consumes the amount of carbon dioxide equivalent to that produced by a car driven 26,000 miles, while producing enough oxygen for 18 people to breathe for a year.*

**A34:** *Besides removal of carbon dioxide from the atmosphere and production of oxygen, healthy trees/shrubs also do the following:*

- *Prevent soil erosion*
- *They are the ultimate filtration devices, absorbing contaminants and purifying water*
- *By locking away carbon dioxide they limit the trapping of reflective atmospheric radiation (Greenhouse Effect), thus lowering worldwide air temperatures.*
- *They provide shelter and sustenance for wildlife*
- *They produce positive physiological benefits to humans. Both blood pressure and muscle tension drop when people are shown or placed in a tree environment.*
- *Sales prices of homes with trees are 3.5-4.5% greater than those without*
- *Strategically placed mature trees can reduce heating and cooling costs of a home by 10-20%*

**A35:** *Because of pressures inherent in urban settings (pollution, salt, soil compaction, nutrient deficiencies, construction, etc.) the average lifespan of trees in a downtown area is less than 10 years. The average lifespan of their rural counterparts is 150 years.*

**A36:** *Ten trees need to be planted for every mature tree removed in order to offset the loss of benefits (carbon sequestration, water purification, oxygen generation, etc) provided by that one tree.*

**A37:** *There are 11 areas in Northampton Park designated as fresh-water wetlands by the Federal government; 4 are located East and the remainder West of Hubbell Rd. Several of the wetland areas are associated with Spring and Salmon Creeks, however there are a number with no apparent surface water connection including one ~500ft from the recent 'improved' area of the Park.*