

Eagle Project – Ecological Benefits of Newton Trees Zac Lobel

Thank you for helping with my Eagle Project!
Questions? Ask Zac - zaclobel@gmail.com

The project goal is to document trees located on private property in Newton and to calculate the ecological benefits of these trees. This information supports two of the City of Newton, Urban Forestry Department goals. 1) Maintain an inventory of City trees and, 2) raise awareness regarding the importance of and benefits provided by City trees.

Instructions and Materials Needed:

- Use a tree ID book, or download these applications to your phone.
- iNaturalist (recommended but you will need to create an account).
- LeafSnap (not as reliable).
- The Arbor Day Foundation has an online ID tool.
 - <https://www.arborday.org/trees/index-identification.cfm>
- You will need a measuring tape and a long length of string or yarn.



What to measure:

- Only collect tree data on private property. The Urban Forestry Dept. has been collecting street tree data already.
- Do not measure street trees (trees between the street and the sidewalk).
- Do not measure bushes or shrubs.

Data Sheet:

- Please fill in all of the information at the top of the data sheet to help me collect the data I need for my report.
- Don't forget to include the address where the trees are located.

Identify:

- Take a photo of the leaves of your tree. Include seeds/acorns in the photo if possible.
- Use your book or app to identify the tree to species. (Observe in iNaturalist and then click on suggestions)
- Record the species in the data sheet – try to record the common **and** scientific name if you can!



Measure:

- Take your string and put it around the trunk of the tree at **4.5 ft above** the ground.
- Tie a knot or be sure to hold the string tightly where the end meets the rest of the string.
- Let the end of the string go and use the measuring tape to measure the string to give you the circumference of the tree.
- Record the circumference in the data sheet and note the units (cm or in).
- Record other notes like if the tree is in the front, back or side of the house.



Report – Data must be reported no later than Oct 20, 2021

You have 3 options to get the information back to me:

- 1) Enter the data into the Google form at <https://forms.gle/8e3tZr7kdRdpj69h8>
- 2) Scan or take a photo, and email the data sheets to zaclobel@gmail.com
- 3) Mail or drop off the data sheets to Zac Lobel, 60 Grove Hill Ave., Newton, MA 02460.

Learn:

- What benefits do your trees provide? Use the information you just gathered to get this information at the i-Tree "My Tree" website <https://mytree.itreetools.org/#/>
- Follow the instruction on the site after clicking "Get started". Once you have entered the information, click on "All done" and the benefits will be calculated for your tree (be sure to select circumference for your measurement). Scroll down and click on the blue calculator to view the benefits. You can add all the trees in your yard to get the total benefits provided by your trees.

A screenshot of the "MyTree Benefits" calculator interface. It shows a tree identified as a Northern red oak (Quercus rubra) with a diameter of 43.90 inches and an excellent condition. The calculator lists various benefits such as carbon sequestration, storm water runoff avoidance, and air pollution removal, each with a corresponding monetary value.

MyTree Benefits	
Northern red oak (<i>Quercus rubra</i>)	
Serving Size: 43.90 in. diameter	
Condition: Excellent	
Total benefits for this year: \$21.05	
Carbon Dioxide (CO ₂) Sequestered	\$10.12
Annual CO ₂ equivalent of carbon ¹	435.3 lbs.
Storm Water Runoff Avoided	\$7.31
Runoff Avoided	816.29 gal.
Rainfall Intercepted	7,342.59 gal.
Air Pollution Removed Each Year	\$3.62
Carbon Monoxide	1.19 oz.
Ozone	37.59 oz.
Nitrogen Dioxide	8.43 oz.

See other side for data sheet

Safety:

- Work with a buddy. Scouts should have an adult with them.
- Ask permission from neighbors to measure their trees.
- Watch out for stinging insects and use insect repellent to avoid biting insects.
- Make sure to measure trees during the daytime to see roots that might trip you.
- Do a tick check!

Date: _____

Time: Start _____ End _____

Observer Names:

Adult Observers _____ Are you a Scout leader? Y / N

Youth Observers _____ Are you a Scout? Y / N

Address: _____

Data:

Tree #	Species	Circumference	Units	Location / Notes
1			cm / in	
2			cm / in	
3			cm / in	
4			cm / in	
5			cm / in	
6			cm / in	
7			cm / in	
8			cm / in	

Additional notes: