

ON-SITE SEQUESTRATION PROJECT

With the help of Wayne Walker who is Carbon Program Director at the Woodwell Institute, and he knows trees, we conducted an onsite sequestration project. Sequestration is the absorption and storage of carbon dioxide in trees and shrubs. Trees are an important part of climate change mitigation.



We identified plots of land that represent the typical planting at Heritage. Then, with the help of 25 volunteers, we measured the trees and stems of each plot. This measurement is at four foot, three inches, also called breast height. We cataloged each measurement along with the type of tree and its condition for over 300 trees and shrubs. At Heritage, there is a vast understory of rhododendrons. We included them in our measuring.

Using this information and tables from the International Panel on Climate Change, we derived the amount of carbon dioxide that is sequestered on the 75.94 acres of forested land. The Cape Cod Commission was very helpful in this process. Not only did they help identify how much land was forested using their GIS system and aerial photographs that are accurate down to a meter, but they also were a tremendous help in working out the calculations for sequestration of the entire site. Special thanks for their scientific knowledge, mapping, insights, hard work and dedication go to Jessica Rempel, Anne Reynolds, and Heather McElroy from the Cape Cod Commission.

We also learned that the rhododendrons play an important part of sequestration. Due to their leathery/thick recalcitrant eaves, they absorb carbon dioxide and hold on to it for a long period of time. Both the understory and overstory (leaves) of a forest sequester carbon. We have not conducted a formal study of the debris and soil of the property. We learned that at Heritage with just the trees and understory, there are 136 US tons of carbon dioxide sequestered. This is approximately one tenth of the amount of carbon dioxide that emitted.

This project was an excellent educational opportunity for the volunteers who measured trees. To a person, they grew to understand sequestration at a deeper level, felt like they were taking definitive action to curb climate change, and enjoyed the project tremendously. We have educational materials available if you want to engage in such a project. Contact us at info@heritagemuseums.org