Boston College tree inventory

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In the summer of 2008 the Office of Sustainability and Energy Management at Boston College, headed by Deirdre Manning, began an inventory of the trees contained within the three main campuses of Boston College: Newton, Chestnut Hill, and Brighton. The inventory was modeled on one performed by the city of Boston in 2006. Using P.D.A. installed with ArcPad, students scoured Boston College's land to plot and take data on each tree above one inch in diameter. The goal of the inventory is to provide a better picture of Boston College's carbon footprint. With the data collected, the amount of sequestered carbon can be determined for each tree through known relationships between total biomass and carbon content, and through applying allometric equations which relate total biomass of a tree as a function of its diameter. These amounts can then be used to determine how much carbon dioxide each tree has sequestered. ArcMap allows for a convenient and powerful interface to analyze and manipulate such numbers . When possible, the trees were identified by their genus and/or species revealing an interesting variety and distribution of species.

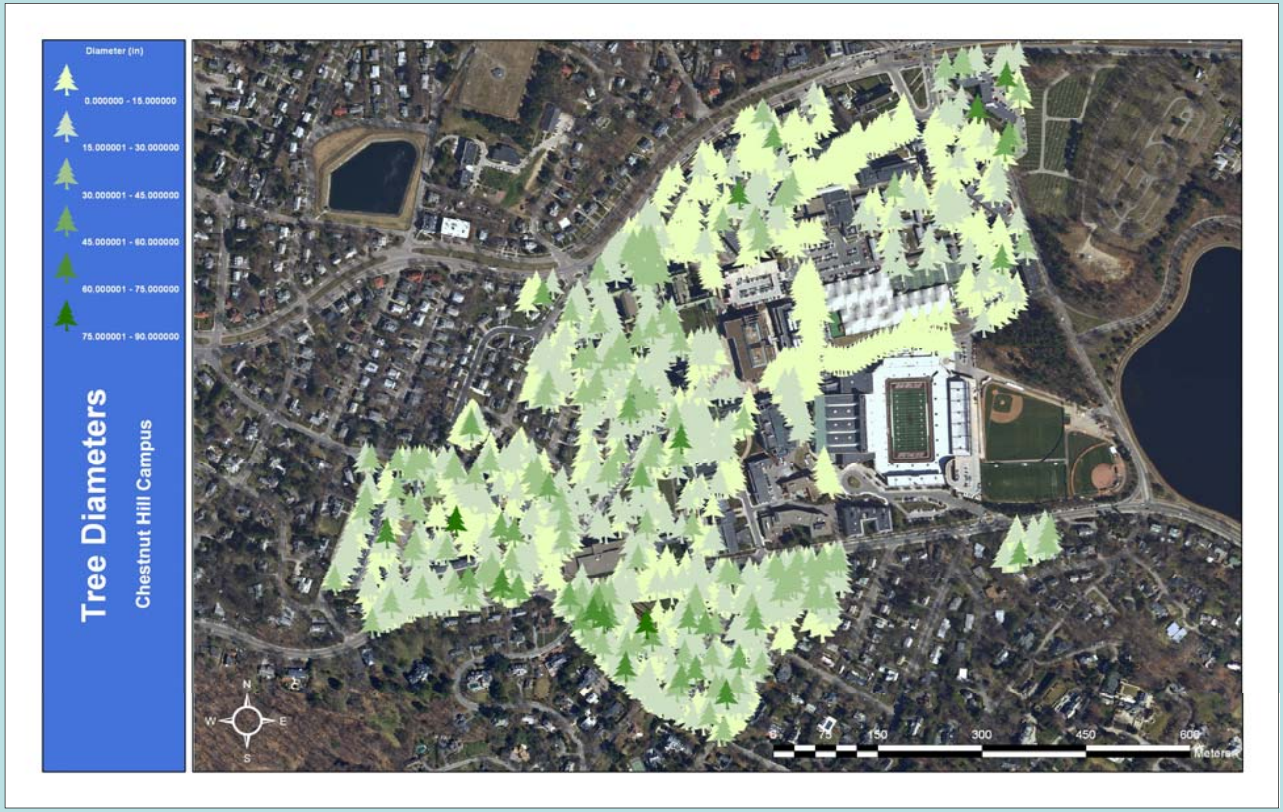

Figure 1: Tree diameters are shown here represented as a color gradient from light green to dark green. The diameter attribute has been divided into six classes with each interval equal to 15 inches. There is a noticeable density in larger diameter trees in Upper Campus and Middle Campus, as well as in the Hammond Triangle. Lower campus, with drainage issues and more recent construction, has a dearth of larger diameter trees

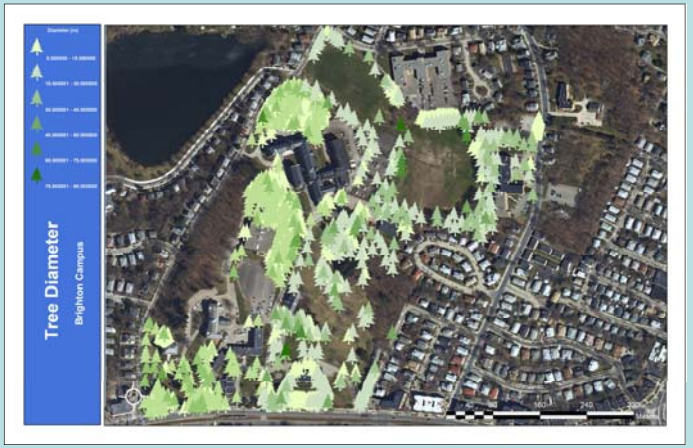

Figure: 2 Here the same information is displayed concerning the trees as in Figure 1, but the frame of reference is now Brighton Campus.

Figure: 3 Each species is displayed by a unique color and any unidentified trees have been omitted. Notice the variety of colors and the contiguous stretch of color where Linden Lane is. What type of trees could those be?

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Aerial Imagery MassGIS - http://www.mass.gov/mgis/laylist.htm