



Chesapeake Forest  
Continuous Forest Inventory  
Field Inventory Report

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The first Continuous Forest Inventory (CFI) was conducted, during the summer of 2004, on Chesapeake Forest. The forest consists of 58,306 acres of forestlands spread throughout five counties of the lower eastern shore of Maryland.

Two hundred and nine permanent plots were established using a computer-generated randomization. The plots were 1/10 acre (37.2 foot radius) in size and all 5.0" dbh (diameter at breast height) or larger trees were measured. The information recorded at each plot included species, dbh, merchantable height, tree class, percent cull, damage, crown ratio, and crown class. Stand characteristics were also determined using size class, site index, land use, forest type, disturbance factor, distance to road, and physical limitations. Herpetological, ornithological, and botanical surveys were also completed in conjunction with the forest survey. Fourteen resource professionals were hired to conduct the inventory; three ornithologists, two herpetologist, two botanist, six foresters, and a project supervisor. Education backgrounds ranged from college students to individuals holding master degrees. The forestry portion of the inventory took 10 weeks, ornithological survey 8 weeks, herpetological and botanical surveys took 20 weeks.

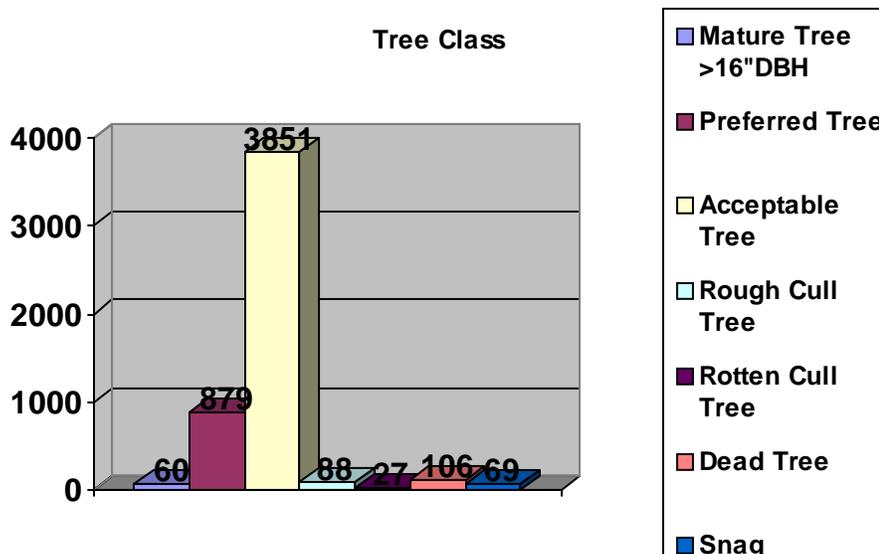
There were a total of 5,080 trees measured with an average of 24 trees per plot. A total of 30 different tree species were measured with the majority of the trees being Loblolly Pine. DBH for the trees ranged from 5.0 to 40 inches, with the majority of the trees measured falling into the smaller dbh classes of 5.0 to 10.0 inches (poletimber class). Forty-seven percent of the plots landed in the poletimber class. Softwood Poletimber had a dbh range of 5.0 to 9.0 inches and Hardwood Polewtimber had a range of 5.0 to 11.0 inches. The forest was categorized into 5

different forest types; Pine, Pine-Hardwood, Hardwood-Pine, Mix Hardwoods, Non-forested and unknown. The following is a breakdown of the various forest types by acres:

Pine	47,029.5	81%
Mix Hardwoods	6,793.5	12%
Hardwood-Pine	2,273.3	4%
Pine-Hardwood	1,712.1	3%
Non-Forested	494.0	Less than 1%
<u>Unknown</u>	<u>3.9</u>	Less than 1%
<b>Total</b>	<b>58,306.3 acres</b>	

A pine forest type consists of a forest that has over 90% of the crown cover as pine. A pine-hardwood type is delineated when the majority (>50%) of the trees present are pine. Conversely a hardwood-pine type is a forest where the majority of the trees (>50%) are hardwood and pine is present. A mix hardwood type is a stand that is dominated by a variety of hardwood species.

Tree class was also measured. Tree class measures the quality of individual trees found within the plot based on the health and vigor of the tree. Seventy-six percent of the trees measured were categorized as acceptable growing stock. An acceptable tree is a tree that has the potential of growing over 50 years old with good health and form. Three percent of the trees surveyed were categorized as a dead or snag trees. A snag tree is dead tree where the tree species could not be identified due to decay.





Site index was measured on each plot. Site index is a species specific tool used to measure actual or potential forest productivity (site quality) expressed in terms of the average height of trees included in a

specified stand component at a specified base age (we used 50 years). Sixty-eight percent of the plots had a site index of 56 to 74.

The data collected will be used as a baseline for all future inventories. Future inventories will allow us to monitor forest growth, health, mortality, habitat, suitability, and change in species composition of the forest. The inventory serves as a useful tool that will help The Department of Natural Resources understand the dynamics of the forest by measuring changes over time. It's only through a continued monitoring effort that we will be able to understand how forest management activities influence the landscape and contributed to the sustainability of our natural resources.