

## **Pocomoke State Forest Continuous Forest Inventory: 2002**

### **Summary**

Pocomoke State Forest (15,163 acres) is located in Worcester County Maryland, generally between Snow Hill and Pocomoke City. The State Forest is noted for the native loblolly pine stands and cypress swamps that border the Pocomoke River.

The State Forest is managed for a variety of resources including recreation; water; wildlife; timber; and natural beauty. Of the forests 15,163 acres, 53% (7,997 acres) is reserved for multiple use management with an emphasis on forest management; 35% (5,286 acres) is for preservation and protection of special habitat, historical areas, research areas and threatened or endangered species; 12.0% (1,880 acres) for the protection of water quality.

The Maryland Department of Natural Resources - Forest Service conducts a periodic inventory of its State Forest lands about every ten years. The objective of this inventory is to collect data on growth, volume, and other forest conditions to assist in making decisions relative to short and long term forest resource planning and operations. More specifically, this inventory is designed to offer information on growth and volume by stand size class, forest type; individual tree information based on species distribution, size, volume, condition, as well as site conditions and land area classification that is available for administrative and operational decisions.

From 1999 to 2002, data was collected using permanent 1/5-acre inventory plots placed on a systemic grid pattern with 2000 feet spacing between plots. Statewide there are 1,503 plots. Approximately half of these plots were previously established and called for the same trees to be measured as well as any new trees. The other half were newly established plots which will be used in future inventories.

All trees five inches or greater were tallied within a 52.7 foot radius circle (1/5-acre) according to species, dbh, tree class, merchantable height (pole and sawtimber), cull, damage, crown ratio and crown class. The general stand characteristics were also recorded relative to forest type, stand size class, management zone, disturbance factors, and site index. In addition, all remeasured plots were reconciled with previous data for growth estimates. This extensive data collection allows the ability to compare all factors between the various land management zones as described in the Ten Year Resource Management Plans.

With the increase in forestry technology, many high-tech tools were employed to increase the accuracy of the inventory. For example, each plot location was monumented using

Real-Time Global Positioning System (GPS) and all are linked using a Geographic Information System (GIS). In addition crews used laser range-finders, digital compasses and hand-held data collection computers to reduce any human error.

In addition, through extensive recruitment and interviews, the DNR was able to employ an inventory staff made up of college students from all over the east coast. This staff had a variety of education in forestry, wildlife, and other natural resource fields to ensure a diversity of talents and expertise.

The third Continuous Forest Inventory (CFI) for Pocomoke State Forest, located in Worcester County, MD was completed during the period of summer, 1999 through summer 2001. Data check and processing by the USDA Forest Service occurred in the following months. The following document summarizes the findings of this CFI. All volumes are calculated in board feet using the International ¼ Inch Log Rule.

## **Current Forest Estimates**

The following volume estimates are in thousands of board feet.

### **Volume**

Current volume estimates show that there are 110,275 board feet of standing timber on Pocomoke State Forest spread out over the various forest types. Pocomoke is dominated by the loblolly pine/hardwood type, with 40,157 board feet. The majority of this volume falls into the small sawtimber category, which contains 21,537 board feet followed by the large sawtimber category with 12,266 board feet.

The second largest forest component is the loblolly pine type which makes up 35,955 bf. ft. Again, this type is comprised mostly of small sawtimber, with 13,924 board feet and large sawtimber with 5,570 board feet.

The third largest component is the swamp hardwood type with 25,161 board feet total. The highest size class, small sawtimber, contains 18,455 board feet followed by large sawtimber with 4,186 board feet.

### **Volume by Forest Type & Size-class**

(mbf = thousand board feet)

Further detailed by size-class, the data shows that all softwoods comprise a major portion of the forest with 70,401 mbf total. Large sawtimber is the largest class by volume with 6,620 mbf board feet and 4,185 mbf in the small sawtimber class. Loblolly pine is the dominate softwood species with 64,675 mbf, and pond pine with 3,711 mbf and 1,625 in shortleaf pine.

As would be expected, hardwoods make up the minority of the forest with 39,874 total mbf. This is dominated by red maple with 17,146 mbf and sweet gum with 5,809 mbf.

## **Volume by Management Zone**

Three management zones were used to classify forest use: Water Management Zone (1,772 acres: riparian buffers), Special Management Zones/Wildlands (1,012 protected areas), and General Management Zone (10,251 acres: areas available for silvicultural treatments).

## **Growth**

Pocomoke State Forest has approximately 13,348 forested acres (at the time of the inventory). As a whole, the forest is growing at a net rate of 3,372,139 bf per year or 297 board feet (bf) per acre per year. Of this, 2,628,265 bf per year is grown in the General Management Zone. This growth is dominated by the loblolly pine species which is growing at 1,958,689 board feet per year. The second highest growth species is red maple, growing at 239,692 board feet per year, followed by sweet gum at 86,804 board feet per year.