



# Forests and the Bay



When the colonist's first arrived on the shores of the Chesapeake, they found a vast forest covering over 95% of the watershed. These forests served as a continuous living filter and regulator of the Bay's environment. However, as the land was settled, the pace of forest clearing accelerated. By the mid-1800's, over half of this vital resource had been converted to other uses.

Although the acreage of forest land has recovered some from historic lows, less than 60% of the original forest remains today. Twenty nine percent of the watershed is now used for agriculture, while 11-12% has been developed for roads, homes, businesses, and other uses. For the first time in nearly a century, the percent of forest lands in the watershed is declining. Although some forest land is still cleared for agriculture, the threat to today's forest comes primarily from urban development and sprawl. Over the last 25 years, forests were lost to urban expansion at a rate of as much as 100 acres per day.

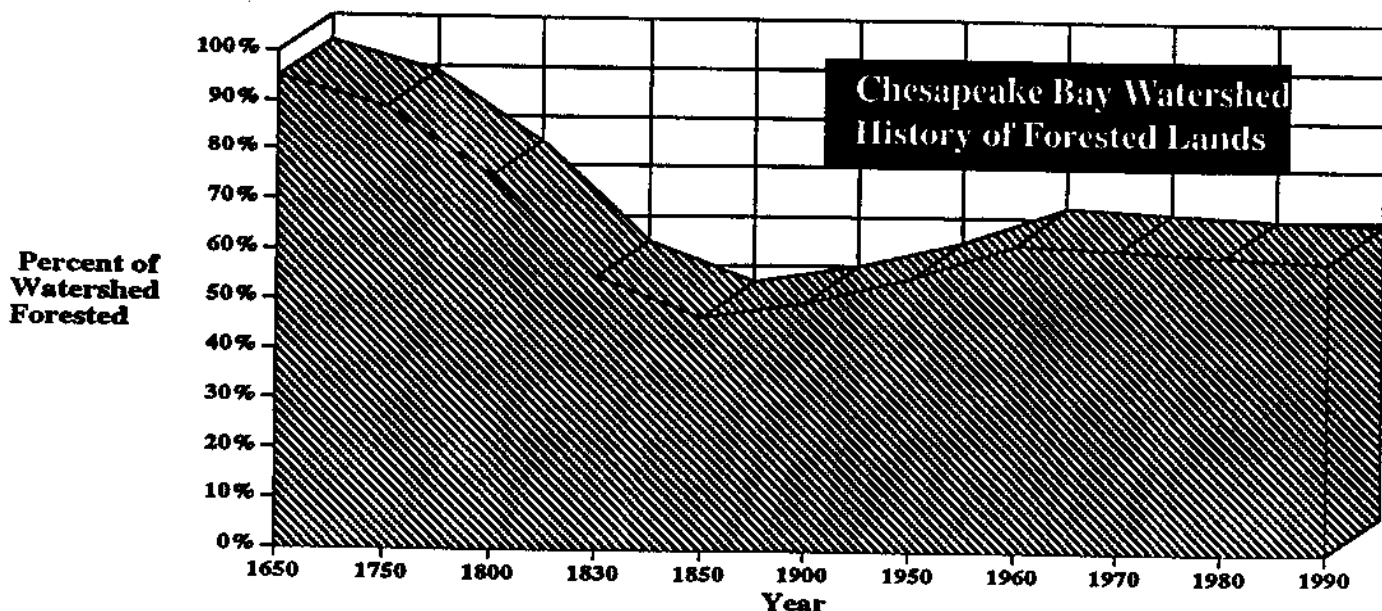
**The Importance of Forests.** As the natural land cover of the Bay's watershed, forests provided a physical and biological system which yielded clean waters and a productive Bay. Extensive scientific findings show clearly that forests are the most beneficial land cover for maintaining clean water. However, it is unknown how much forest we can lose without affecting the ability of the watershed to maintain the Bay's health and resilience over the long term.

## How can forests help the Bay?

- Filter nutrients and sediment
- Capture rainfall and regulate streamflow
- Moderate stream and air temperatures
- Stabilize erodible soils
- Create and maintain fish and wildlife habitat
- Preserve biodiversity

**Quantity vs. Quality.** Location and distribution of forests may be as critical as total acreage. Unevenly distributed, some watersheds in the Bay have lost over 85% of their forests while others have experienced little or no losses. Fragmentation of forests into small unconnected blocks is especially common in urban landscapes. Thousands of miles of stream have been left unprotected by their nature riparian forest.

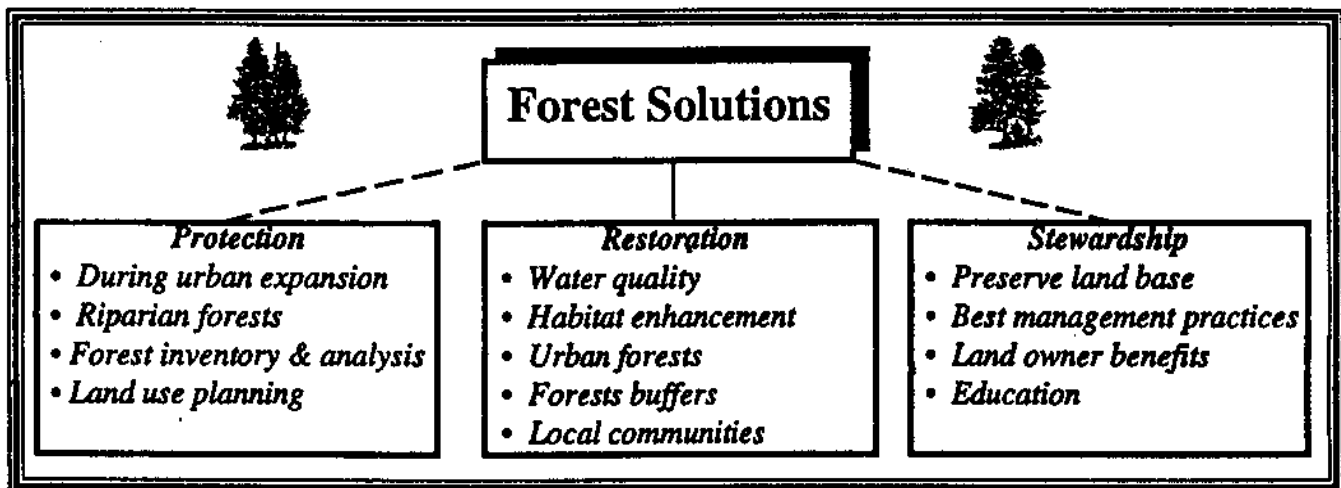
**Riparian Forests.** For the Chesapeake Bay and its inhabitants, forests located along streams, rivers, and the Bay itself are of utmost importance. Riparian forests serve an important role in the circulatory system of the watershed, the thousands of miles of river and stream that link the watershed to the Bay. Riparian forests are vital to controlling sediment and nutrient



inputs from rainfall and runoff, providing habitat and food for fish and wildlife, cooling water temperatures, increasing dissolved oxygen, and helping to maintain the integrity and constant energy flow of the aquatic ecosystem. Nutrients carried off the land in agricultural areas can be absorbed in large quantity by streamside buffers of forest while providing excellent habitat for fish, birds, mammals, and other species. These values translate into a forests' contribution to a healthier Bay.

**What are the issues?** The Chesapeake ecosystem has a tremendous ability to buffer and repair itself when faced with the impacts and stresses of man's demand on it's environment. Forests are an integral part of its capacity for resilience. Mitigation programs alone can not make up for forest losses. Recognizing the value of forests in the watershed, it is clear that conserving and replanting forests, and using them to reduce pollution will need to play an important role in restoring the Bay.

In addition, Bay State Foresters and local governments have responded to the Chesapeake Bay Program with the development and implementation of numerous programs and projects. States have taken bold steps to protect forests such as Maryland's passage of a Forest Conservation Act. This landmark legislation requires the consideration of forest conservation in land use planning. Aggressive urban forestry programs in Maryland and the District of Columbia are helping to enhance the urban environment through innovative education, management and tree planting projects. Promoting the reestablishment of riparian forests has been a particular focus of state programs and pilot projects. Maryland's "Treemendous" and Greenshores programs, Pennsylvania's stream fencing program and pilot projects in the Conodoguinet watershed, Virginia's Preservation Act and DC's Anacostia project is an examples. Virginia has implemented an aggressive model program to improve BMP implementation and



**What is being done?** Through the Chesapeake Bay Program, unique partnerships have been formed among the various elements of the Bay region's forestry agencies, forest managers, and interested citizen groups. Since 1990, the USDA Forest Service has assigned a Forestry program Coordinator to the Bay Program to assist the EPA and Bay committees develop strategies and projects which contribute to Bay restoration goals. A Forestry Work Group, formed as part of the Nonpoint Source Subcommittee, provides an effective vehicle to raise and address issues related to forests and the practice of forestry in the watershed.

effectiveness during forest management and evaluate the relationships of forests and water quality.

Forestry incentive programs in all of the Bay states have resulted in the planting of millions of trees, the restoration of nearly 50 miles of riparian forest, development of Forest Stewardship plans and enhancement projects on thousands of acres of the Bay watershed, thousands of hours of volunteer time and forest education, and hundreds of individual local projects demonstrating the valuable role of forests in the Bay watershed.