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State Forester



# COMMONWEALTH of VIRGINIA

DEPARTMENT OF FORESTRY  
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December 15, 2010

Honorable Charles J. Colgan, Chairman  
Senate Finance Committee  
10<sup>th</sup> Floor General Assembly Building  
Capitol Square  
Richmond, VA 23219

Honorable Lacey E. Putney, Chairman  
House Appropriations Committee  
General Assembly Building, Room 947  
Capitol Square  
Richmond, VA 23219

Dear Chairman Colgan and Chairman Putney:

As requested in the 2002 Appropriations Act, it is my pleasure to submit to you this report on the Silvicultural Water Quality Program.

The report addresses some historical milestones of the program and our latest data on accomplishments.

Should you have questions or need additional information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Carl E. Garrison III".

Carl E. Garrison, III  
State Forester

c: Honorable Robert S. Bloxom  
Secretary of Agriculture and Forestry



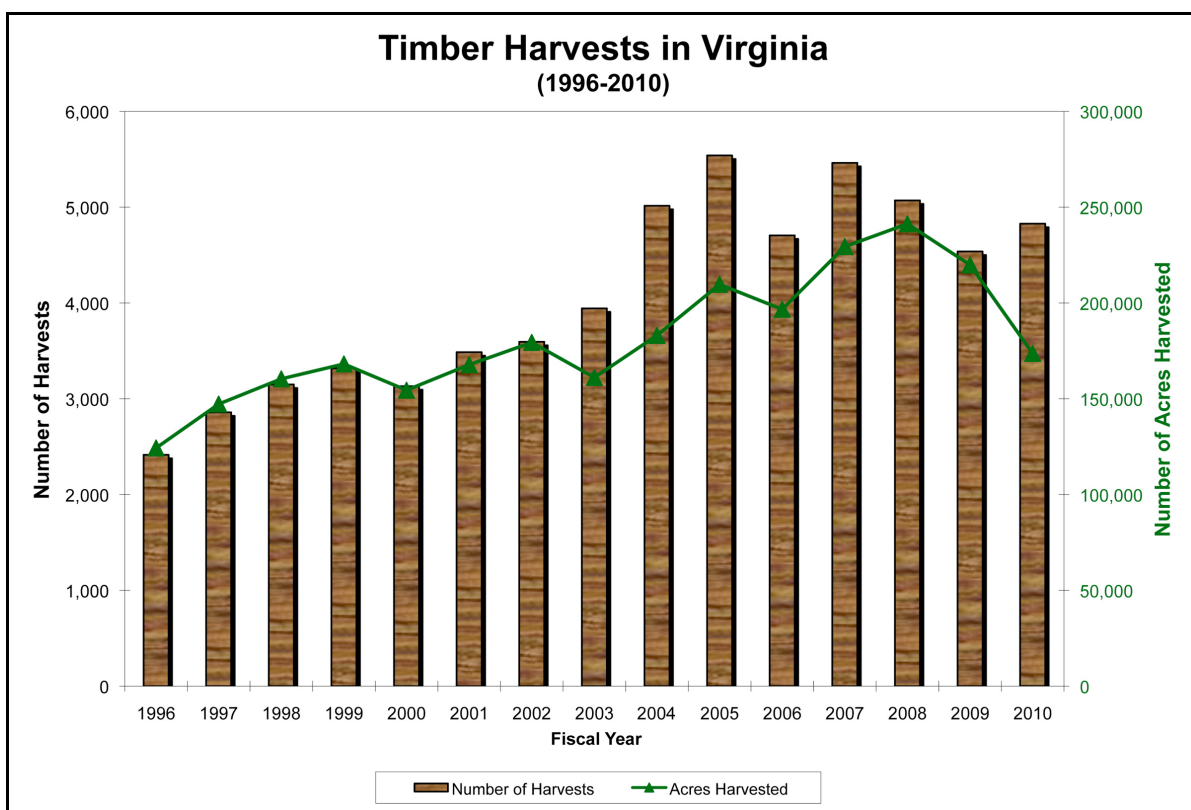
# Department of Forestry Implementation of the 1993 Silvicultural Water Quality Act for FY2010

Submitted December 2010

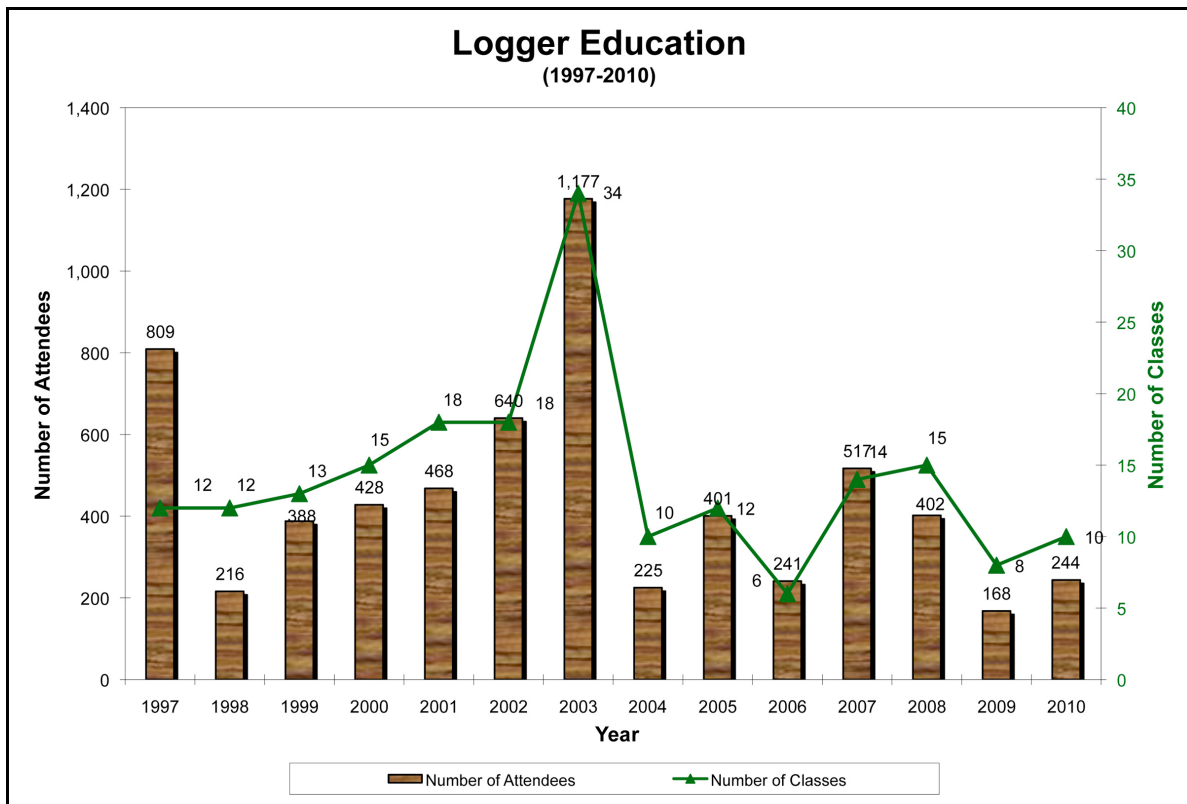
## Protecting Virginia's Water Quality

Water quality is important to all Virginians. Studies have shown that the cleanest water comes from forested watersheds. These watersheds are critical sources of pure drinking water; habitat for important fisheries, and areas that are treasured for their recreational value and purity of life. This is especially important when considering the impending Total Maximum Daily Load (TMDL) and Watershed Improvement Plan (WIP) being developed for the Chesapeake Bay. Two of the Department's important measures involve water quality. One focuses on Best Management Practices on forest harvesting operations and protecting streams from sediment. This will be one of the factors that is incorporated in the Bay Cleanup effort and Watershed Improvement Plan. The other focuses on improving and protecting watersheds through management and land conservation.

The backbone for the Department's water quality effort is the harvest inspection program, which began in the mid-'80s. In FY 2010, VDOF field personnel inspected 4,828 timber harvest sites across Virginia on 173,648 acres.



Another main focus of the VDOF water quality program is logger education. Since the development of the first BMP Manual for Virginia, the VDOF has been involved in the training of harvesting contractors in water quality protection techniques ranging from harvest planning, map reading and the use of GPS units to BMP implementation. For FY 2010, there were 10 training programs offered with 244 attendees present. Five of these courses were in the core area with 150 attendees, and the remaining five courses were for logger continuing education and had 94 attendees. In addition, for the first time there were two on-line courses offered on BMPs and Water Quality through the SHARP Logger Program, these courses were taken by 87 logging professionals during the program year.



In July 1993, the General Assembly of Virginia - with the support of the forest industry - enacted the Virginia Silvicultural Water Quality Law, §10-1-1181.1 through §10.1-1181.7. The law was created to provide Virginia with an enforcement mechanism to address water pollution originating from silvicultural activities. The law grants the authority to the State Forester to assess civil penalties to those owners and operators who fail to protect water quality on their operations. In FY 2010, the VDOF was involved with 281 water quality actions initiated under the Silvicultural Law. Of these actions, 15 resulted in Special Orders being issued for violations of the law.

A statewide audit system has been in place since 1993 to track trends in BMP implementation and effectiveness. This system was revised during fiscal year 2008 to include more tracts and will provide more specific information on areas to concentrate additional training for harvest operators. Results from the calendar year 2009 data show that overall BMP implementation on 240 randomly selected tracts is 82.4 percent and that BMPs associated with stream crossings on those same tracts is 83.4 percent, an increase of two percentage points over the previous audit cycle. The significance is that stream crossings are the place where significant water quality impacts can occur, and BMPs will mitigate any possible water quality impacts. The audit results also show that 97.1 percent of the sites visited had no active sedimentation present after the close-out of the operation. The information compiled using this audit process will be the basis of reporting for the Watershed Implementation Plan (WIP) that is under development in response to the TMDL being developed for the Chesapeake Bay.

Beginning July 1, 2009, the VDOF began use of its enterprise database system – IFRIS (Integrated Forest Resource Information System) – for Water Quality. This involved a redesign of the entire Water Quality Program during FY 2009 to incorporate the use of hand-held data recorders and a GIS-based system for recording timber harvest inspection information. The information that has been collected during FY 2010 has been linked geographically by GPS coordinate to a specific watershed. In conjunction with this, timber harvest operators have all been assigned a unique Logger Identification Number that will make it easier for the logger to be able to notify their timber harvesting operations as well as enable the agency to be more efficient in communicating with loggers on important issues. A unique component of this system allows the timber operators to have access to maps and aerial photographs for harvest-planning purposes if they notify the agency of their operation using GPS coordinates. Additionally, the VDOF has teamed up with the SHARP Logger Program to offer GPS training to harvest operators and actually provide cost-share assistance towards the purchase of a recreational-grade GPS unit to those logging companies that have participated in the training class.

The BMP Logger Cost-Share Program provides a 50 percent cost-share to timber harvesting contractors who implement appropriate BMPs on eligible stream crossings. The projects must be pre-approved by the VDOF, and harvesting contractors must be SHARP Logger certified to be able to participate. The program covers numerous items, such as culvert pipes, equipment time to construct water diversion structures as well as material to revegetate the site. But the one feature of the program that will have a lasting effect on water quality in the Commonwealth is that the program will provide cost-share for the purchase of portable timber bridges that will continue to provide water quality protection for sites beyond the original sites. In 2010, this program funded 29 BMP projects throughout the Commonwealth. Of those projects, 21 involved the purchase of portable bridges.

## WATERSHED PROTECTION

Forests provide the best protection for watersheds. Because of this, one of the Department's goals is to increase the amount of forestland conserved, protected and established in Virginia's watersheds. The concept here is to focus on tools and practices that will have a high benefit to water quality, specifically conserving land permanently; establishing and maintaining riparian buffer zones; planting trees on non-forested open land, and increasing urban forest canopy by planting trees. All of these activities are closely related to meeting water quality goals associated with the Chesapeake Bay restoration and watersheds for Virginia's southern rivers.

New riparian forest buffers were established by planting trees on 1,638 acres. Many of these areas were agricultural or pasture land. Forested buffers provide significant water quality benefits through nutrient uptake; reduced runoff, and by livestock and cropping exclusion.

One of the most valuable BMPs for water quality is the uncut or partially cut streamside management zone. This voluntary measure assures an unbroken forest groundcover near the stream; shade for the water, and wildlife corridors. Landowners can elect to receive a state tax credit for a portion of the value of the uncut trees in the buffer. By doing so, they agree to leave the buffer undisturbed for 15 years. The number of landowners electing this option is increasing, and in FY 2010, landowners participated in this watershed protection option on 475 acres.

Forests provide superior watershed benefits over nearly every other land use. Because of this, the Department is encouraging planting of open land with trees. This is a particularly valuable option on marginally productive pasture or crop land and land that is no longer being farmed or managed for other purposes. In the 2010 season, trees were planted on 1,244 acres of open land.