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A LOW COST DEER EXCLUSION APPROACH FOR FORESTED RIPARIAN BUFFER PLANTINGS

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ABSTRACT: Forested riparian buffers are a best management practice widely used to improve water quality by reducing the flow of pollutants into rivers. For example, as part of the strategy to restore the Chesapeake Bay, the Chesapeake Bay Program is preserving and restoring forested riparian buffers throughout the Bay's watershed. Between 1996 and August 2005, Bay Program partners planted 4,606 miles of riparian forest buffers, with a short-term goal of 10,000 miles restored by 2010. The considerable expense of riparian plantings (over \$1000 per acre) is justified by the need to improve water quality. But planting the trees is not enough. The planted trees must actually survive and grow to achieve water quality goals. Many studies, including one by Cacapon Institute, indicate that deer browsing is a serious threat to planting success where deer are abundant, despite the common use of tree tubes for browse protection. In response to the deer browsing problem in West Virginia demonstration plantings, Cacapon Institute began a pilot study in 2007 to test a low cost deer exclusion approach using electric fence. The method installs a double perimeter of a single electrified wire around a study plot, using temporary fencing materials and a solar charger. The installed cost for the fence is slightly lower than the cost of tree tubes in a one acre planting. As the size of the planting area increases, the relative costs of the fence versus tree tubes become increasingly attractive. Results from the first growing season indicated that, when the fence was properly installed, energized, and clear of heavy weed growth, protection from deer browsing within fenced areas was nearly 100%, as heavy browsing continued in control areas. This is an ongoing study, and the paper will report on the results from the first growing season, the first full dormant season, and results to date for the 2008 growing season.

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