

GROUNDWATER DRAWDOWN IN PALUSTRINE FORESTED WETLANDS  
AS A RESULT OF DRAINAGE AND THE USE OF WATER  
CONTROL STRUCTURES TO REDUCE ADVERSE IMPACTS

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INTRODUCTION

Construction of drainage channels for farming has been common on the Delmarva coastal plain for over 200 years. This construction has been done to overcome the adverse effect of seasonal high water tables on seedbed preparation, planting, seedling development, and harvesting.

Historically, wetland areas have been drained and converted to agricultural lands or have been partially drained in attempts to convert them to agricultural land. Only recently have the values of wetland areas been recognized. A nationwide 1979 wetland inventory conducted by the U.S. Fish and Wildlife Service found that only about fifty percent of the Nation's original wetlands remain (Tiner 1984).

The wetlands in this study were depressional areas commonly forested with Acer rubrum, Liquidambar styraciflua, Quercus palustris, and Q.phellos as the dominant overstory plants. Acer rubrum is the dominant plant species. These wetlands are classified primarily as palustrine forested seasonally flooded (Cowardin et al. 1979).

The study area which we utilized to examine lateral groundwater drawdowns is located near the border of Maryland and Delaware in the