

Appendix A

**Joint MRA-ETS Presentation to Delaware DNREC Regarding the
Effectiveness of Riparian Buffers in Meeting Water Quality Goals**

January 29, 2007

The Coalition
c/o Mr. Steve Lefebvre
5151 West Woodmill Drive
Wilmington, Delaware 19808

RE: Inland Bays PCS: Nutrient Removal
Effectiveness of Riparian Buffers

Dear Mr. Lefebvre:

As requested, we have completed an assessment of the nutrient removal effectiveness of riparian buffers. As part of these evaluations we have examined how riparian buffers are implemented on typical development projects and have included these Case Studies as Appendix A. In preparing this analysis we have relied on the research provided by scientists at Environmental and Turf Services, Inc. (ETS). Their paper on buffer nutrient removal efficiencies and limitations (Baris, et al., 2007) is enclosed as Appendix B. Finally, the resumes of the principal investigators are provided as Appendix C. Our findings are summarized below.

Introduction

The goal of the Inland Bays Pollution Control Strategy (PCS) is to reduce nutrient loads (nitrogen and phosphorus), to Delaware's Inland Bays. Accordingly, this paper focuses on the nutrient removal capabilities of riparian buffers, together with those factors that may limit their effectiveness in filtering nutrients.

We examined a number of actual development projects in southern Delaware and found that *very little of a typical development actually drains to the buffer due to the need to meet existing stormwater management (SWM) regulations*. Our analysis found that the majority of the pollutant removal is provided by the required SWM practices, not the riparian buffers, and *therefore, increases in buffer width had little affect on nutrient loads*, as described in greater detail below and in Appendix A.