



Delaware

2011 Milestones to Reduce Nitrogen & Phosphorus Interim Progress Assessment June 2011



Introduction

During the 2009 Chesapeake Executive Council (EC) meeting, Delaware set short-term goals to reduce pollution to the Bay and dramatically accelerate the pace of restoration. Delaware's 2011 milestone commitments are to reduce nitrogen by 292,072 pounds and maintain the 2008 phosphorus levels during the three-year period, 2009-2011. An interim assessment of pollution control practices being implemented to achieve these reductions follows. As of June 2010, Delaware is generally on-track. In instances where they are behind, contingencies are being implemented. A final assessment of load reductions achieved during the entire three-year period will be available at next year's EC meeting.

Interim Progress

Pollution Control Practices Included in 2009-2011 Milestone Commitments

	2009-2011 Commitment	% Achieved (7/1/08- 6/30/10)
Agriculture:		
Cover Crop Planting, All Types (acres/yr)	37,000	49%
Forest Buffers (acres)	2,700	83%
Manure Transport (net tons reduced)	55,100	90%
Nutrient Management, All Types (acres/yr)	177,000	100%
Tree Planting (acres)	200	6%
Wetland Restoration (acres)	420	104%
Urban/Suburban:		
Septic Improvements, All Types (systems)	8,800	4%

Pollution Control Practices Delaware Substituted for Original 2009-2011 Milestone Commitments

(i.e. "Contingencies")

	Amount Completed
Agriculture:	
Animal Waste Mgmt. Systems, All Types (structures)	654
Conservation Plans/SCWQP (acres)	194,666
Conservation Tillage, All Types (acres/yr)	197,799
Cropland Irrigation Management (acres)	68,442
Forest Harvesting Practices (acres)	3,838
Grass Buffers (acres)	711
Heavy Use Poultry Areas Concrete Pads (farms)	866
Mortality Composters (units)	549
Pasture Grazing Best Mgmt Practices, All Types (acres)	310
Poultry Phytase	100% implementation
Stream Restoration (linear feet)	17,700
Water Control Structures (structures)	8,343
Urban/Suburban:	
Erosion & Sediment Control (acres)	100% new sites E&S Control
Stormwater Management, All Types, Urban/Suburban (acres)	33,385
Tree Planting (acres)	99
Storm Drain Marker Installation (markers/yr)	800
Wastewater:	
Wastewater Nitrogen (N lbs reduced)	90,141
Wastewater Phosphorus (P lbs reduced)	1,485

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Interim Progress Highlights

Since developing Delaware's 2009-2011 milestones, progress has been made on several fronts. First, funding, especially in the agriculture sector, has been focused in Delaware's portion of the Chesapeake Bay Watershed resulting in increased levels of implementation of several best management practices. Second, Delaware's data tracking and reporting systems have substantially improved so that more data on practices that have routinely been implemented within the State can finally be reported and credited within the Bay Program model. Finally, in addition to reducing the Invista wastewater permitted load, it was decided through the Watershed Implementation Plan process that the permitted loads of the three major municipal facilities should also be reduced. All of this progress is the result of better communication and coordination amongst partner agencies and organizations.

Current and Anticipated Shortfalls

As shown in the following table, the rate of implementation for Delaware's targeted practices has varied, with some practices reaching goal levels faster than others. In the case of cover crops, implementation levels have fluctuated in recent years as a result of weather conditions in the fall – when it is dry, more acres can be planted than when it is wet. There have also been changes made to the cost share programs and a new reporting system, so these factors may have also played a minor role in total acres reported. With respect to the septic improvement goals, a new regulation requiring a system pump out and inspection at the time of a property sale has not yet been promulgated, so the implementing mechanism is still under development. Fortunately, progress on other practices and programs not specifically identified during this milestone period will likely cushion individual practice shortfalls and result in a net improvement for water quality.

Contingencies to Address Shortfalls

During the development of Delaware's 2009-2011, several additional reduction options were identified to serve as gap filling strategies and contingences for potential shortfalls. Specific implementation levels could not, at the time, be identified for several of the practices, while nutrient reductions could not be calculated for others as they were programmatic in nature. Since identifying these additional options, implementation levels have increased for many of the practices listed. Improvements in data tracking and reporting systems have resulted in the reporting of more practices that receive credit in the watershed model and the capture of data fields that were previously missing or unpopulated. The table below shows data for these other BMPs that have resulted in additional reductions for Delaware. Additionally, progress has been made on many of the programmatic options. As an example, the State-wide regulation review for both the stormwater and onsite (septic) programs is underway and new controls for both sectors will be required when the regulations are promulgated by the end of this year. Finally, staff from both DDA and DNREC are working with Chesapeake Bay Program modeling staff to discuss possibly modifying model assumptions and variables to be more representative of the agriculture situation in Delaware and these changes may result in loading improvements.