

DELAWARE COASTAL NONPOINT PROGRAM NOAA/EPA DECISIONS ON CONDITIONS OF APPROVAL

FOREWORD

This document contains the basis for NOAA and EPA's decision to fully approve Delaware's Coastal Nonpoint Pollution Control Program (coastal nonpoint program). It discusses how the State has met each of the conditions of approval placed on the coastal nonpoint program submitted by Delaware pursuant to Section 6217(a) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA).

The Findings for Delaware's coastal nonpoint program were issued on October 3, 1997. Since that time, Delaware has undertaken a number of actions to address conditions of approval on its coastal nonpoint program. Based on those actions and on materials the State has provided to document how the conditions have been met, the National Oceanic and Atmospheric Administration (NOAA) and the U.S. Environmental Protection Agency (EPA) find that Delaware has satisfied all conditions of approval.

This document is organized in the same fashion as the Findings for Delaware's coastal nonpoint program. Where the Findings included a condition, this document repeats the condition, and discusses how the condition has been satisfied. For further understanding of terms in this document and the basis for these decisions, the reader is referred to the following: *Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters* (EPA, January 1993); *Coastal Nonpoint Pollution Control Program: Program Development and Approval Guidance* (NOAA and EPA, January 1993); *Flexibility for State Coastal Nonpoint Programs* (NOAA and EPA, March 1995); and *Final Administrative Changes to the Coastal Nonpoint Pollution Control Program Guidance for Section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA)* (NOAA and EPA, October, 1998)

FINAL APPROVAL DECISION

NOAA and EPA find that the State of Delaware has satisfied all conditions placed on approval of the Delaware coastal nonpoint program submitted to NOAA and EPA pursuant to Section 6217(a) of the Coastal Zone Act Reauthorization Amendments of 1990. Therefore, Delaware's coastal nonpoint program meets all program requirements and is hereby fully approved, constituting a final approval decision for the program.

Please note that the approval decision made for the Delaware coastal nonpoint program does not relieve the State of any requirements under the Endangered Species Act.

AGRICULTURE

CONDITION: Within two years, Delaware will develop a strategy to implement the agriculture management measures throughout the 6217 management area.

DECISION: Delaware has satisfied this condition

RATIONALE: Under the Final Administrative Changes published on October 16, 1998, NOAA and EPA agreed to approve program elements for which states had proposed voluntary or incentive-based programs, backed by existing State enforcement authorities, if the State provided three items: a legal opinion from the State that the authority can be used to prevent nonpoint pollution and require implementation of management measures; a description of the voluntary or incentive based programs; and a description of the mechanism or process linking the implementing agency with the enforcement agency and a commitment to use the enforcement authority when necessary. Delaware has provided these three components, and therefore has satisfied this condition.

Delaware submitted a legal opinion from its Deputy Attorney General certifying that the State has authority to implement and enforce the agriculture management measures through two primary statutes: *7 Delaware Code, Chapter 60* and *3 Delaware Code, Chapter 22*. Chapter 60 requires that no person, without first obtaining a permit, undertake any activity which may “cause or contribute to the discharge of a pollutant into any surface or ground water,” and specifically includes agricultural wastes as a pollutant. The Deputy Attorney General also notes that Delaware’s Surface Water Quality Standards were recently amended and recognize that nutrient over-enrichment as a problem, and sets policy to minimize nutrient input to surface waters and that waters be free from wastes attributable to agricultural activities.

Title 3 of the Delaware Code was amended in June 1999 to include a new chapter, Chapter 22, Nutrient Management. The Nutrient Management Act established a Nutrient Management Commission directed to establish a statewide Nutrient Management Program. This Commission is empowered to promulgate regulations relating to certification of nutrient applicators and the development of nutrient management plans. Over time, ground and surface water quality in Delaware has been impaired by nutrients originating from agricultural runoff, among other sources. With the approval of the Animal Feeding Operations (AFO) Strategy approved by the U.S. Dept. of Agriculture in 1999, stricter controls on nutrient management for animal manures in Delaware were enforced. One of the goals of Delaware’s Nutrient Management Program is to develop and implement best management practices designed to improve water quality, optimize nutrient use, and maintain a profitable agricultural industry.

All individuals or businesses covered by the Nutrient Management Act are required to develop a comprehensive nutrient management plan (CNMP) that must be updated a minimum of every three years and include: field maps showing buildings, streams, wells, number of acres, soil types, etc.; soil and organic waste analyses; current and planned crop rotations, with expected yields based on the best 4 of 7 year data or on soil productivity charts; storage practices for

animal manures that conform to Delaware Nutrient Management Commission requirements; and, recommended rates, timings and methods of nutrient applications. The Act also requires that records be maintained that include soil test results and recommended nutrient application rates; quantities, analyses and rates of nutrients applied and application dates and methods; and crops planted, yields obtained, and crop residues removed by harvest.

The Act requires that all commercial processors were to file a plan by July 1, 2001, with the Delaware Nutrient Management Commission indicating how they will meet the requirements of the Act. By January 1, 2003, the Delaware Nutrient Management Commission will begin official review of nutrient management plans. One-fifth of the plans will be reviewed each year between 2003 and 2007. Also by January 1, 2003, certification of all nutrient handlers must be completed. By 2007, the Delaware Nutrient Management Commission shall ensure that the State Nutrient Management Plan is fully implemented.

Other regulatory approaches to address the agriculture management measure were included in the State's original program submittal. These include Manure Management Guidelines, which apply to confined animal facilities, and Delaware's Pesticide Law, which regulates the application of restricted use pesticides.

Delaware also currently has a number of strong voluntary programs that include practices to implement the agricultural management measures. Over 50% of Delaware's cropland is under some type of conservation tillage. Delaware has continually updated their Section 319 Management Plan required under the Clean Water Act, which includes milestones for implementation of management measures in each agricultural subcategory.

The State also has a State Revolving Fund (SRF) partnership between the State's Department of Natural Resources and Environmental Control (DNREC), EPA and State Conservation Districts that helps provide financing for poultry and dairy Best Management Practices (BMPs). This program has been an overwhelming success, and has involved projects dealing with sediment and stormwater management, nutrient management, and water body restoration. Finally, Delaware is developing site-specific riparian buffer criteria for increased protection for wildlife habitats and erodible stream banks in wetlands and along riparian corridors.

The State's Nonpoint Pollution Management Plan and its Coastal Nonpoint Program 5-Year Implementation Plan and 15-Year Program Strategy outline anticipated activities and "milestones for implementation", an implementation schedule and lead agencies for the activities. These milestones will help the State track implementation of the management measures and assess the effectiveness of their efforts and programs in improving water quality.

FORESTRY

CONDITION: Delaware will finalize and implement the "Forestry Erosion and Sediment Rules and Regulations."

DECISION: Delaware has satisfied this condition

RATIONALE: Delaware submitted its final, “Forestry Erosion and Sediment Rules and Regulations,” on July 1, 1996. Delaware’s program submittal describes several commendable initiatives, including, “A Guide for Forestry Best Management Practices,” manual. This manual specifies best management practices that are in conformity with the 6217(g) management measures. The State also has back-up authority through Delaware’s Forestry Law, to address water quality problems that may result from silvicultural activities.

Delaware’s Forestry Practices and Erosion and Sediment Law was signed into law on July 11, 1994. The law charges the Delaware Department of Agriculture’s Forestry Administrator with “protection of waters of the State by pollution from sediment deposits resulting from silvicultural activities.....the State of Delaware recognizes that water quality protection techniques for silvicultural practices are an integral component of properly managed forests.”. The Forestry Administrator adopted and published Delaware’s Forestry Best Management Practices (BMP) Manual. This manual enumerates water quality protection techniques appropriate to silvicultural practices in Delaware and provides guidelines for their use. The Manual has enabled the Forestry Administrator to continue the program set forth in the law through technical assistance and education. The Manual also provides quantitative measures by which landowners and operators can protect the waters of the State while conducting silvicultural operations. New Castle County’s Ordinance 90-316 ensures implementation of some of the management measures in the northern part of the state.

A Memorandum of Understanding was initiated between the Department of Agriculture Forest Service and DNREC Department of Soil and Water Conservation. The MOA establishes and clarifies the procedures for both agencies to ensure water quality is protected from erosion and sedimentation on forested sites that are planned for conversion to residential or commercial development.

URBAN

WATERSHED PROTECTION and EXISTING DEVELOPMENT

CONDITION: Within one year, Delaware will develop a process to ensure full implementation of the elements of the watershed protection and existing development management measures throughout the 6217 management area.

DECISION: Delaware has satisfied this condition.

RATIONALE: Delaware is using several programs and initiatives to address the watershed protection and existing development management measures. Primarily, a new initiative by the Governor called, “Livable Delaware,” put in place by an executive order directs State agencies to implement strategies to target State infrastructure investments and future development to growth areas and to better protect farmland and natural resources. Livable Delaware builds upon the State’s 1999 Shaping Delaware Future’s report which set forth these strategies. In addition to guiding State infrastructure investments, the strategies set priorities for the State’s regulatory and

land protection programs with responsibilities related to the Initiative's goals. The strategies also provide a framework for State comment and input on local comprehensive planning and land use decisions to ensure consistency with the goals.

The Governor also passed four new laws in 2001 to help implement this initiative. New legislation sets a framework for graduated impact fees for development. There are no impact fees and a streamlined process if development occurs within an identified growth area. The legislation requires a fee schedule be developed by January 15, 2002, to include fees for anticipated service demands to serve new growth in environmentally sensitive developing areas, secondary developing areas, and rural areas. Also, the State passed legislation requiring local and county governments to adopt zoning laws that are consistent with their comprehensive plans. New legislation also created a change in the State's open space funding formula to increase acquisition and provide funds for stewardship, allowing the State to purchase open space through 2019. Legislation was passed to encourage the redevelopment of brownfields by providing up to \$1 million in matching grants for environmental assessment and mediation.

Another specific tool the State has developed is a Coastal Ocean Management, Planning and Assessment System (COMPAS). Using geographical information systems, COMPAS provides organized parcel, zoning and service areas, and natural resource information to be used by County planners during site review and the pre-application process for proposed development or other activities, and to evaluate growth management more efficiently. COMPAS enables the local governments to view relationships between selected land uses, proposed developments, and resources at risk and make better decisions about siting development.

Finally, DNREC created a Riparian Buffer Initiative through which site-specific riparian buffer models (width, vegetation type and distribution, adjacency) were developed for all land uses and major local conditions within the watersheds of New Castle and Kent Counties. Design criteria for the riparian buffer models addressed priority goals, including surface water quality enhancement, nutrient runoff reduction, erosion control, and habitat protection for key species. County planners and State and county resource managers can use the geographic information system-based models to compare designs and make improved decisions on placement and type of buffers. The system also uses existing data on environmental conditions to identify priority areas for protective riparian buffers. Participatory processes and education and outreach efforts are used to get needed support from managers and landowners to implement priority riparian buffer needs.

SITE DEVELOPMENT

CONDITION: Within three years, Delaware will incorporate provisions into the State Sediment and Stormwater Regulations that integrate the provisions of the site development management measure into the site development plan, an approved sediment and erosion plan or a similar mechanism.

DECISION: Delaware has satisfied this condition.

RATIONALE: Delaware's Department of Natural Resources and Environmental Control, along with the Brandywine Conservancy, developed and adopted a Conservation Design for Stormwater Management manual in 1997 to help reduce stormwater impacts from land development. The manual provides guidance to land developers for specific design approaches to retain and incorporate natural site features into the site development process and reduce or eliminate the need for structural stormwater management controls. The manual includes conservation design techniques related to reducing impervious surface, cluster development, minimum land disturbance or grading, reforestation, revegetation, vegetative filter strips and buffers. Land development companies and consultants have been using this document for guidance in Delaware and nationwide since 1997.

Specific criteria have been developed by DNREC's Nonpoint Program for the implementation of these non-structural stormwater BMP's and conservation site design techniques. DNREC's Sediment and Stormwater Program has developed improved techniques for quantification of design and engineering specifications, technical assistance for design application, and implementation of practices or approaches that are transferred Statewide. The benefits of such an approach are lower cost stormwater controls, more open space, less maintenance, and recharge potential for surface water runoff.

In 1999, DNREC began the next phase in the Conservation Design for Stormwater Management project: the design of a technical manual, stormwater runoff models and specific design practices for low impact development and stormwater management. This phase is completed and implementation will begin in early 2002 pending peer review.

Two stormwater runoff quality models have been developed. The first is a comprehensive site development model that examines the use of swales, bioretention, and open space recharge as important site design elements. The second model is a riparian buffer model that uses various land cover scenarios to determine optimal buffer design in terms of width and composition.

It is expected that the land development community will use these new site design tools as a way to meet regulatory requirements of the Sediment and Stormwater Program through better site design, more extensive protection of open space and riparian corridors. The open space design models take advantage of natural site features to meet stormwater quality goals.

DNREC's preview of these models and the site design procedures has been well received at national conferences. The technical manuals and models will be fully utilized by Spring 2002.

CONSTRUCTION SITE EROSION AND SEDIMENT and CHEMICAL CONTROL

CONDITION: Within one year, Delaware will complete revision of the State Sediment and Stormwater Program Erosion and Sediment Control Handbook to include construction site chemical management practices that are consistent with the elements of the construction site chemical control management measures. [NOTE: This condition also applies to the construction site chemical control management measure for roads, highways and bridges and the chemical and pollutant control management measure for hydromodification]

DECISION: Delaware has satisfied this condition.

RATIONALE: Delaware revised its State Sediment and Stormwater Program Erosion and Sediment Control Handbook to include construction site chemical management practices that are consistent with the management measure in the 6217(g) guidance for construction site chemical control. The Handbook includes a section entitled “Standards and Specifications for Construction Site Pollution Control,” which includes standards and specifications related to the use, handling, storage, application, and disposal of pollutants such as pesticides and petroleum products. This section also outlines components of a spill prevention and control plan, and the need for nutrient management plans, and locating fuel and vehicle maintenance staging areas away from all drainage courses.

NEW and OPERATING ONSITE DISPOSAL SYSTEMS (OSDS)

CONDITION: Within three years, Delaware will amend its program by adding provisions to address the inspection of operating OSDS.

DECISION: Delaware has satisfied this condition.

RATIONALE: Within DNREC, the Delaware Coastal Program partnered with the Ground Water Discharges Section and the State’s Nonpoint Source Program to develop an on-site disposal system compliance inspection program that is targeted in the first two years of implementation in priority watersheds which have identified Total Maximum Daily Load (TMDL) implementation needs, and areas specified in the State’s Whole Basin reports. Over the first two years, the program will enable DNREC to identify failing systems and estimate the costs involved to develop a statewide inspection program. An environmental scientist is in the process of being hired for the sole purpose of setting up the inspection protocol and implementing the program.

The primary goals of the inspection program are to inspect all on-site wastewater systems in the coastal watersheds of Delaware once every three years; map all of the systems throughout the State; secure State funding to ensure long-term success of the Program statewide; and to develop public private partnerships to carry out the inspections.

The DNREC’s Ground Water Discharges Section has developed a database of the location of holding tanks in the State and will be using this as a template for the development of an inspection compliance database. A geographical positioning system will be used to locate and map all of the inspected systems. Also, since New Castle County already requires onsite disposal systems inspections every three years through its Unified Development Code, information on their inspections will be added to the database.

The coordinator of the inspection program will work with the Delaware Technical Community College to ensure availability of classes to train and license inspectors. Educational material will be developed to inform the public about the importance of inspections and when and how inspections will be conducted. The program also includes some cost-share dollars to residents for septic tank pump-outs.

Measurable environmental results from the Program will be determined by summing the number of failing systems identified for repair through inspections and calculating the resultant reduction in ground water discharge. Nitrogen and phosphorous reductions will be calculated from multiplying literature values by the estimated total number of discharge gallons reduced.

HYDROMODIFICATION

CONDITION: Within one year, Delaware will develop a process to ensure full implementation of management measures for protecting surface water quality and habitat from the effects of dams and surface water withdrawals. Within one year, Delaware will also develop a process to address eroding streambanks or shorelines causing nonpoint problems which are not reviewed under existing authorities, and to ensure full implementation of management measures for eroding shorelines and streambanks.

DECISION: Delaware has satisfied this condition

RATIONALE: To address the management measures for protecting surface water quality and habitat from the effects of dams and surface water withdrawals, Delaware revised its Sediment and Stormwater Program Erosion and Sediment Control Handbook to include standards and specifications for the use of chemicals and pollutants. The State protects habitat at dams from excessive surface water withdrawals through existing regulations at *7 Delaware, Chapter 6001*. The regulations require water allocation permits for surface and groundwater withdrawals of 50,000 gallons in any 24-hour period. The regulations limit surface water withdrawals to rates which protect valuable fish and wildlife; allow dilution and flushing of waste discharges and maintain adopted water quality standards; and provide other ecological benefits which are dependent upon surface water flows.

To address the measure for managing eroding streambanks and shorelines, the State uses standards and specification for streambank and shoreline stabilization in the Sediment and Stormwater Program Erosion and Sediment Control Handbook. Also, as part of the Tax Ditch Program, the State developed *Principles and Guidelines for Planning, Construction and Maintenance of Drainage Ditches in the State of Delaware*. These principles are the conservation best management practices and operation and maintenance practices for the State's system of tax ditches. The principles and guidelines document are also attached to the Sediment and Stormwater Handbook to help ensure the practices are implemented for both private and publicly supported maintenance activities.

WETLANDS, RIPARIAN AREAS AND VEGETATED TREATMENT SYSTEMS

CONDITION: Within three years, Delaware will further develop its program to address activities in wetlands and riparian areas that are not currently reviewed under existing permit authorities.

DECISION: Delaware has satisfied this condition.

RATIONALE: The condition is aimed at protecting wetlands and riparian areas from indirect impacts associated with changes in hydrology or increased sediment/pollutant loading resulting from runoff. Delaware has addressed this condition by virtue of the fact that the State has in place management measures and enforceable policies and mechanisms for erosion and sediment control, stormwater management (new and existing development) and watershed management. These measures provide adequate controls to manage and mitigate potentially adverse hydrologic and sediment loading impacts to wetlands and riparian areas that perform beneficial water quality functions and thus should meet the measure.

In response to issues raised in the Delaware Coastal Nonpoint Program Findings, Delaware completed and is implementing the *Nontidal Wetlands Comprehensive Conservation and Management Plan* to improve the coordination for protection of freshwater wetlands. Delaware has also acted upon “The Top Ten Action List” in the *Comprehensive Tidal Wetlands Conservation and Management Plan*. For example, the State restored and enhanced the Lower Blackbird Creek Marsh, and study is still ongoing for the Milford Nest Marsh.

Also, on January 2, 2002, House Bill 340 was introduced, which is an Act to Amend Title 7 of the Delaware Code Relating to Wetlands. The Act was passed in response to a U.S. Supreme Court ruling that the federal government had exceeded its statutory authority over isolated, freshwater wetlands. The Act gives authority to DNREC to designate up to 50,000 acres to protect Delaware’s most unique wetlands that are no longer under federal jurisdiction. The Secretary of DNREC is required to adopt maps designating the location of, and procedures for, delineating these unique wetlands.