

DELAWARE SEDIMENT & STORMWATER REGULATIONS



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**Title 7 Natural Resources and Environmental Control
Delaware Administrative Code
5000 Division of Soil and Water Conservation
5101 Sediment and Stormwater Regulations**

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1.0 Scope

- 1.1 Stormwater runoff may reasonably be expected to be a source of pollution to waters of the State, and may add to existing flooding problems. The implementation of a statewide sediment and stormwater program will prevent existing water quantity and water quality problems from becoming worse, and in some cases, reduce existing problems.
- 1.2 Sediment and stormwater approvals are required for land changes or construction activities for residential, commercial, industrial, or institutional land use which are not exempted or waived by these Regulations. Requirements under these Regulations do not apply to agricultural land management practices unless the Conservation District or the Department determines that the land requires a soil and water conservation plan, and the owner or operator of the land has refused either to apply to a Conservation District for the development of such a plan, or to implement a plan developed by a Conservation District.
- 1.3 The Department intends that, to the extent possible, the provisions of these Regulations be delegated to either the Conservation Districts, local governments, or other State agencies. Those program provisions which are subject to delegation include sediment and stormwater management plan approval, inspection during construction, post-construction inspection, and education and training. Initial consideration regarding delegation of program components shall be given to the Conservation Districts.
- 1.4 The implementation of a stormwater utility represents a comprehensive approach to program funding and implementation. The activities which may be undertaken by a stormwater utility include not only assessment, collection, and funding activities, but also carrying out provisions of adopted stormwater management plans. These provisions may include contracting for such services as project construction, project maintenance, project inspection, and enforcement of installation and maintenance requirements imposed with respect to approved land disturbing activities.

2.0 Definitions

As used in these regulations, the following terms shall have the meanings indicated below:

“Adverse Impact” means a negative impact to land or waters resulting from a construction or development activity. The negative impact includes increased risk of flooding; degradation of water quality; increased sedimentation; reduced groundwater recharge; negative impacts on aquatic organisms; negative impacts on wildlife and other resources, and threatened public health.

“Agricultural Land Management Practices” means those methods and procedures generally accepted by the Conservation Districts and used in the cultivation of land in order to further crop and livestock production and conservation of related soil and water resources.

“Applicant” means a person, firm, or governmental agency who executes the necessary forms to obtain plan approval for a land disturbing activity.

“Appropriate Plan Approval Agency” means the Department, Conservation District, county, municipality, or State agency that is responsible in a jurisdiction for review and approval of sediment and stormwater management plans.

“As-Built Plans or Record Documents” means a set of engineering or site drawings that delineate the specific approved stormwater management facility as actually constructed.

“Certified Construction Reviewer” means those individuals, having passed a Departmental sponsored or approved training course, who provide on-site inspection for sediment control and stormwater management in accordance with these regulations.

“Delegation” means the acceptance of responsibility by a Conservation District, county, municipality, or State agency for the implementation of one or more elements of the statewide sediment and stormwater management program.

“Department” means the Department of Natural Resources and Environmental Control.

“Designated Watershed or Subwatershed” means a watershed or subwatershed proposed by a Conservation District, county, municipality, or State agency and approved by the Department. The Department may establish additional requirements in these watersheds and subwatersheds due to existing water quantity or water quality problems. These requirements shall be implemented on an overall watershed or subwatershed master plan that is developed for water quality and/or water quantity protection.

“Detention Structure” means a permanent stormwater management structure whose primary purpose is to temporarily store stormwater runoff and release the stored runoff at controlled rates.

“Develop Land” means to change the runoff characteristics of a parcel of land in conjunction with residential, commercial, industrial, or institutional construction or alteration.

“Developer” means a person undertaking, or for whose benefit, activities covered by these regulations are commenced and/or carried out.

“Drainage Area” means that area contributing runoff to a single point measured in a horizontal plane, which is enclosed by a ridge line.

“Easement” means a grant or reservation by the owner of land for the use of such land by others for a specific purpose or purposes, and which must be included in the conveyance of land affected by such easement.

“Erosion and Sediment Control” means the control of solid material, both mineral and organic, during a land disturbing activity, to prevent its transport out of the disturbed area by means of air, water, gravity, or ice.

“Exemption” means those land development activities that are not subject to the sediment and stormwater requirements contained in these regulations.

“Grading” means excavating, filling (including hydraulic fill) or stockpiling of earth materials, or any combination thereof, including the land in its excavated or filled condition.

“Green Technology Best Management Practices (BMP’s)” means those practices that achieve stormwater management objectives by applying the principles of filtration, infiltration and storage most often associated with natural vegetation and undisturbed soils while minimizing a reliance on structural components. They may also be constructed using an imported soil medium and planted with vegetation designed to promote the natural hydrologic process. These practices include, but are not limited to, vegetative filtration, riparian buffer plantings, bio-retention areas, vegetative flow conveyance, as well as recharge and surface storage in undisturbed natural areas.

“Infiltration” means the passage or movement of water through the soil profile.

“Land Disturbing Activity” means a land change or construction activity for residential, commercial, industrial, and institutional land use which may result in soil erosion from water or wind or movement of sediments or pollutants into State waters or onto lands in the State, or which may result in accelerated stormwater runoff, including, but not limited to, clearing, grading, excavating, transporting and filling of land.

“Off-site Stormwater Management” means the design and construction of a stormwater management facility that is necessary to control stormwater from more than one land disturbing activity.

“On-site Stormwater Management” means the design and construction of stormwater management practices that are required for a specific land disturbing activity.

“Person” means any State or federal agency, individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, municipality or other political subdivision of this State, any interstate body or any other legal entity.

“Redevelopment” means a land disturbance activity that alters the use of land but does not necessarily alter the pre-development runoff characteristics.

“Responsible Personnel” means a foreman or superintendent who is in charge of on-site clearing and land disturbing activities for sediment and stormwater control associated with a construction project.

“Sediment” means soils or other surficial materials transported and/or deposited by the action of wind, water, ice or gravity as a product of erosion.

“Sediment and Stormwater Management Plan” (or Detailed Plan) means a plan for the control of soil erosion, sedimentation, stormwater quantity, and water quality impacts resulting from any land disturbing activity.

“Stabilization” means the prevention of soil erosion by surface runoff or wind through the establishment of a soil cover through the implementation of vegetative or structural measures. Examples include, but are not limited to, straw mulch with temporary or permanent vegetation, wood chips, and stone or gravel ground cover.

“Standard Plan” means a set of pre-defined standards and/or specifications for minor land disturbing activities that may preclude the preparation of a detailed plan under specific conditions.

“State Waters” means any and all waters, public or private, on the surface of the earth which are contained within, flow through or border upon the State or any portion thereof.

“Stormwater” means the runoff of water from the surface of the land resulting from precipitation or snow or ice melt.

“Stormwater Management” means:

- for water quantity control, a system of vegetative, structural, and other measures that may control the volume and rate of stormwater runoff which may be caused by land disturbing activities or activities upon the land; and
- for water quality control, a system of vegetative, structural, and other measures that control adverse effects on water quality that may be caused by land disturbing activities or activities upon the land.

“Stormwater Utility” means an administrative organization that has been established for the purposes of funding sediment control, stormwater management or flood control planning, design, construction, maintenance, and overall resource needs by authorized and imposed charges.

“Tidewater” means water that alternately rises and falls due to the gravitational attraction of the moon and sun and is under the regulatory authority of Delaware Code, Title 7, Chapter 72. Examples of tides include the Atlantic Ocean, the Delaware Bay, and the Delaware Inland Bays.

“Variance” means the modification of the minimum sediment and stormwater management requirements for specific circumstances where strict adherence of the requirements would result in unnecessary hardship and not fulfill the intent of these regulations.

“Waiver” means the relinquishment from sediment and stormwater management requirements by the appropriate plan approval authority for a specific development on a case-by-case review basis.

“Water Quality” means those characteristics of stormwater runoff from a land disturbing activity that relate to the chemical, physical, biological, or radiological integrity of water.

“Water Quantity” means those characteristics of stormwater runoff that relate to the rate and volume of the stormwater runoff to downstream areas resulting from land disturbing activities.

“Watershed” means the total or partial drainage area contributing stormwater runoff to a single point.

3.0 Exemptions, Waivers, and Variances

3.1 The following activities are exempt from both sediment control and stormwater management requirements established by these regulations:

3.1.1 Agricultural land management practices, unless the local Conservation District or the Department determines that the land requires a new or updated soil and water conservation plan, and the owner or operator of the land has refused either to apply to a Conservation District for the development of such a plan, or to implement a plan developed by a Conservation District;

3.1.2 Developments or construction that disturb less than 5,000 square feet;

3.1.3 Land development activities which are regulated under specific State or federal laws which provide for managing sediment control and stormwater runoff. An example of this exemption would be specific permits required under the National Pollutant Discharge Elimination System when discharges are a combination of stormwater and industrial or domestic wastewater or which must comply with Parts 122, 123, and 124 of Title 40 of the Code of Federal Regulations. The Department shall ensure that all land developments which are regulated under specific State or federal laws are coordinated with delegated plan approval agencies to ensure compatibility of requirements

3.1.4 Projects which are emergency in nature that are necessary to protect life or property such as bridge, culvert, or pipe repairs and above ground or underground electric and gas utilities or public utility restoration. The emergency nature of a project may preclude prior plan review and approval, but subsequent inspection may necessitate sediment control or site stabilization in accordance with the provisions of this Chapter. The appropriate plan approval agency shall be notified orally or in writing within 48 hours of the initiation of such emergency activity.

The appropriate plan approval agency shall determine and approve of the emergency nature of a project. If the nature of the emergency will require more than 120 days to accomplish construction, formal approval shall be obtained for sediment control and stormwater management. These activities must still comply with other State, federal, and local requirements.

3.1.5 Commercial forest harvesting operations that meet the requirements of the Department of Agriculture under Subchapter VI, Chapter 10, Title 3, of the Delaware Code.

3.2 Appropriate Plan Approval Agencies may grant waivers from the stormwater management requirements of these regulations for individual developments provided that a written request is submitted by the applicant containing descriptions, drawings, and any other information that is necessary to evaluate the proposed development. A separate written waiver request shall be required if there are subsequent additions, extensions, or modifications which would alter the approved stormwater runoff characteristics to a development receiving a waiver.

- 3.2.1 A project may be eligible for a waiver of stormwater management for both quantitative and qualitative control if the applicant can demonstrate that:
 - 3.2.1.1 The proposed project will return the disturbed area to a pre-development runoff condition and the pre-development cover is unchanged at the conclusion of the project; or
 - 3.2.1.2 The proposed project consists of a linear disturbance of less than ten (10) feet in width; or
 - 3.2.1.3 The project is for an individual residential detached unit or agricultural structure, and the total disturbed area of the site is less than one acre; or
 - 3.2.1.4 The proposed project is for agricultural structures in locations included in current soil and water conservation plans that have been approved by the appropriate Conservation District.
- 3.2.2 A project may be eligible for a waiver or variance of stormwater management for water quantity control if the applicant can demonstrate that:
 - 3.2.2.1 The proposed project will not generate an increase in the 2-year post-development peak discharge rate of more than ten (10) percent above the 2-year pre-development peak discharge rate and will have no adverse impact on the receiving wetland, watercourse, or waterway; or
 - 3.2.2.2 Provisions will be made or exist for a nonerosive conveyance system to tidewater by either a closed drainage system or by open channel flow that has adequate capacity to contain the runoff events being considered as a requirement of these regulations; or
 - 3.2.2.3 The location of a project within a watershed would aggravate downstream flooding by the imposition of peak control requirements.
- 3.3 The plan approval agency may grant a written variance from any requirement of these regulations if there are exceptional circumstances applicable to the site such that strict adherence to the provisions of these regulations will result in unnecessary hardship and not fulfill the intent of these regulations. A written request for variance shall be provided to the plan approval agency and shall state the specific variances sought and the reasons for their granting. The plan approval agency shall not grant a variance unless and until sufficient specific reasons justifying the variance are provided by the applicant.

4.0 Departmental Responsibilities

4.1 The Department is responsible for the implementation and supervision of the sediment and stormwater program which is established by Chapter 40, Title 7, Delaware Code. This responsibility shall include, but not be limited to, the authority to:

- 4.1.1 Provide technical and other assistance to Conservation Districts, counties, municipalities, federal, and State agencies in implementing this Chapter;
- 4.1.2 Develop and publish, as regulation components, minimum standards, guidelines and criteria for delegation of sediment and stormwater program components, and model sediment and stormwater ordinances for use by Conservation Districts, counties, State agencies, and municipalities;
- 4.1.3 Review the implementation of all components of the statewide sediment and stormwater management program that have been delegated to either the Conservation Districts, counties, municipalities, or other State agencies in reviews to be accomplished at least once every three years;
- 4.1.4 Require that appropriate sediment and stormwater management provisions be included in all new erosion and sediment control plans developed pursuant to these regulations;
- 4.1.5 Cooperate with appropriate agencies of the United States or other states or any interstate agency with respect to sediment control and stormwater management;
- 4.1.6 Conduct studies and research regarding the causes, effects, and hazards of stormwater and methods to control stormwater runoff;
- 4.1.7 Conduct and supervise educational programs with respect to sediment control and stormwater management;
- 4.1.8 Require the submission to the Department of records and periodic reports by Conservation Districts, tax ditch organizations, county, and municipal agencies as may be necessary to carry out these regulations;
- 4.1.9 Review and approve designated watersheds;
- 4.1.10 Establish a maximum life of three years for the validation of approved plans. These regulations shall specify variances which expand this time limitation in specific situations; and
- 4.1.11 Establish a means of communication, such as a newsletter, so that information regarding program development and implementation can be distributed to interested individuals.

4.2 Matters of policy, procedures, standards, criteria, approvals, inspection, or enforcement relating to the Sediment and Stormwater Chapter shall be established by the Department subject to the jurisdiction of the Secretary of the Department. Sediment and stormwater programs or portions of programs which are delegated to the Conservation Districts, counties, municipalities, or State agencies shall include sediment and stormwater criteria consistent with the standards, procedures, and regulations of the Department.

A variation of requirements by the delegated agency on a specific watershed will not be valid unless approved by the Department. All State and federal development in the watershed shall be reviewed subject to the same variations and requirements by the delegated State agency or Department as appropriate.

- 4.3 In situations where public notification and comment are required before an action is taken by the Department, the Regulatory Advisory Committee shall have an opportunity to review the proposed Departmental action and provide input to the Department regarding the action.

5.0 Criteria for Delegation of Program Elements

- 5.1 Conservation Districts, counties, municipalities, and State agencies may seek delegation of four program elements relating to the implementation of the statewide sediment and stormwater program. Delegation may be granted by the Secretary for review and approval of sediment and stormwater management plans, inspection during construction, subsequent maintenance inspection, and education and training. Program elements that are delegated shall be implemented according to Chapter 40 and these regulations.
- 5.2 The Secretary, or his designee, shall grant delegation of one or more program elements to any Conservation District, county, municipality, or State agency seeking delegation that is found capable of providing compliance with Chapter 40 and these regulations. The final decision regarding delegation shall be made only after an opportunity has been provided for public review and comment. Initial consideration regarding delegation of program elements shall be given to the Conservation Districts. The Conservation Districts, having unique capabilities and area wide responsibilities are in ideal positions to coordinate and implement local sediment and stormwater programs.
- 5.3 Requests for delegation of more than one program element may be accomplished by the submission of one request for all the elements requested. A concern by the Department over one element will not jeopardize delegation of other requested program elements.
- 5.4 To be considered capable of providing compliance with Chapter 40 and these regulations, applications for delegation of program elements shall contain the following requisite items.
 - 5.4.1 Requests for delegation of plan approval responsibility shall include the following information:
 - 5.4.1.1 Ordinance or program information detailing the plan approval process,
 - 5.4.1.2 Plan review check lists and plan submission requirements,
 - 5.4.1.3 Sediment and stormwater criteria, including waiver and variance procedures, that meet minimum standards established by these regulations,
 - 5.4.1.4 Assurance of adequate personnel allocations and expected time frames for plan review which meet the requirements of Section 8(9), and
 - 5.4.1.5 Assurance that plan reviewers will attend Departmental training programs in related fields such as wetlands identification, subaqueous permits requirements, etc.
 - 5.4.2 Requests for delegation of inspection during construction shall include the following information:
 - 5.4.2.1 Inspection and referral procedures,
 - 5.4.2.2 Time frames for inspection of active land disturbing activities,
 - 5.4.2.3 Inspection forms,
 - 5.4.2.4 Assurance of adequate personnel allocations or a timetable to obtain adequate personnel,
 - 5.4.2.5 Criteria for the Certified Construction Reviewer if utilized, and
 - 5.4.2.6 Procedures and time frames for processing complaints.

- 5.4.3 Requests for delegation of maintenance inspection responsibility shall include the following information:
 - 5.4.3.1 Inspection and referral procedures,
 - 5.4.3.2 Inspection forms,
 - 5.4.3.3 Time frames, not exceeding one year, for inspection of completed stormwater management structures, and
 - 5.4.3.4 Assurance of adequate personnel allocation or a timetable to obtain adequate personnel.
- 5.4.4 Requests for delegation of education and training responsibility shall include the following information:
 - 5.4.4.1 Types of educational and training activities to be accomplished,
 - 5.4.4.2 Frequency of activities,
 - 5.4.4.3 Names and backgrounds of those individuals conducting the training, and
 - 5.4.4.4 Procedures and timetables to notify the Department of educational programs.
- 5.5 A Conservation District, county, municipality, or State agency which has been granted delegation of one or more program elements may establish alternative requirements which are compatible with or are more stringent than Departmental requirements. These alternative requirements may be implemented only when prior Departmental approval has been granted. These alternative requirements shall apply in lieu of the provisions of these regulations in the specific program element that has been delegated. Alternative requirements shall be implemented only after public notice has been provided which would allow for public review and comment prior to Departmental approval.
- 5.6 Delegation of authority for one or more program elements may be granted for a maximum time frame of three years. After three years a new application to the Department must be made. Over the time frame for which delegation has been granted, the Department will evaluate delegation implementation, coordinate review findings with the delegated authority, and determine if the new delegation should be granted.
- 5.7 A Conservation District, county, municipality, or State agency requesting or renewing delegation shall submit a written request to the Secretary on or before January 1 of the year immediately preceding the fiscal year for which delegation or renewal of delegation is sought.
- 5.8 The Secretary shall, in writing, grant or deny delegation on or before April 1 of the year during which delegation is sought. The Secretary may not deny a requested delegation unless opportunity has been afforded to the appropriate officials to present arguments. Delegation shall be effective July 1 of that year and extend no more than three years, unless renewed. In the event that the Department does not act on the renewal request by April 1, the delegated authority submitting the request would be entitled to continue operating for a subsequent three year time period unless action is taken by the Department to suspend the program.
- 5.9 If the Secretary determines that a delegated program falls below acceptable standards established by these regulations, delegation may be suspended after opportunity is afforded

for a hearing. During a period of suspension, the program element shall revert to the Department for implementation. Funds set aside by a delegated agency, that were collected through fees established by the plan approval agency, shall be transferred to the Department for use if delegation is suspended.

- 5.10 A delegated authority may sub-delegate program elements, with Departmental concurrence, to a stormwater utility or other responsible entity or agency.
- 5.11 The Department shall maintain, and make available upon request, a listing of the current status of delegation for all jurisdictions within the State.

6.0 Plan Approval Fees, Maintenance Fees, and Performance Bonds

6.1 The establishment of plan approval fees, not involving stormwater utilities, shall be in accordance with the following items:

6.1.1 Delegation of program elements will depend, to a large extent, on funding and personnel commitments. If the delegated jurisdiction has a source of funding that is provided through State General or local revenues, then the implementation of the delegated component will not necessitate the imposition of a plan approval fee to cover the cost of the delegated program component.

6.1.2 In the event that one component of an overall sediment and stormwater management program is not funded through the use of general or special funds, a non-refundable plan approval fee will be collected at the time that the sediment and stormwater management plan or application for waiver or variance is submitted or approved. The plan approval fee will provide for the unfunded costs of plan review, administration and management of the approval agency, construction review, maintenance inspection, and education and training. The plan review or permit approval agency, whether delegated or the Department, shall be responsible for the collection of the plan approval fee.

Unless all program elements in a county or municipality have been delegated to a single agency, the funds collected not supporting the plan review function shall be distributed to the appropriate agencies.

6.1.3 The number of needed personnel and the direct and indirect expenses associated with those personnel shall be developed by the agencies requesting delegation in a specific jurisdiction in conjunction with and with the concurrence of the Department. Those expenses will then form the basis for determining unit plan approval costs.

6.1.4 Prior to plan approval, a fee may be assessed by the appropriate plan approval agency for those activities approved prior to July 1, 1991 for which construction will initiate after July 1, 1991.

6.1.5 Where the Department becomes the designated plan approval agency, the Department may assess a plan review and construction review fee. That fee shall not exceed \$80.00 per disturbed acre per project.

6.1.6 The use of Certified Construction Reviewers for sediment control and the submission of "As Built or Record Document" certification regarding stormwater management construction may reduce the inspection requirements for the delegated agency but may not eliminate that inspection requirement. Periodic overview inspections will still be necessary to ensure construction management.

6.2 The imposition of a financial guarantee, based on existing local authority, may be required by the plan approval agency to ensure that construction of the stormwater management practices was accomplished according to the approved sediment and stormwater management plan. The developer, when required, shall submit to the plan approval agency a surety or cash bond, or irrevocable letter of credit prior to the issuance of any building or grading permit for construction of any land disturbing activity that requires a stormwater management facility.

The amount of the security shall not exceed 150% of the total estimated construction cost of the stormwater management facility. The financial guarantee so required shall include

provisions relative to forfeiture for failure to complete work specified in the approved stormwater management plan, compliance with all the provisions of these regulations, and other applicable laws and regulations, and any time limitations. The financial guarantee, fully or partially, shall not be released without a final inspection of the completed work and, when required, after submission of "As Built or Record Document" plans, and after written confirmation by the design engineer that construction was accomplished according to the approved plans. A partial release of the financial guarantee shall be allowed only to the extent that the work already accomplished would warrant such release.

- 6.3 A maintenance fee may be required on approvals granted for stormwater management structures that will be maintained by a Conservation District, county, or municipality. A fee mechanism shall be established prior to the final release of any required financial guarantee or final approval of the completed stormwater management structure by the designated construction review agency.

7.0 Criteria for Implementation of a Stormwater Utility

The implementation of a stormwater utility will necessitate the development of a local utility ordinance prior to its implementation. There are essential components that an ordinance must contain to function as a funding mechanism for stormwater management and those components shall include, but not be limited to, the following items:

- 7.1 The financing of a stormwater utility with a user charge system must be reasonable and equitable so that each user of the stormwater system pays to the extent to which the user contributes to the need for the stormwater system, and that the charges bear a substantial relationship to the cost of the service. The use of county and municipal taxpayer rolls and accounting systems are allowed for the assessment and collection of fees.
- 7.2 The intent of the utility must be clearly defined regarding program components that are to be funded through the utility. Those components may include but not be limited to the following activities:
 - 7.2.1 Preparation of long range watershed master plans for stormwater management,
 - 7.2.2 Annual inspections of all stormwater management facilities, both public and private,
 - 7.2.3 Undertaking regular maintenance, through contracting or other means, of stormwater management structures that have been accepted for maintenance,
 - 7.2.4 Plan review and inspection of sediment control and stormwater management plans and practices, and
 - 7.2.5 Retrofitting designated watersheds, through contracting or other means, to reduce existing flooding problems or to improve water quality.
- 7.3 The authority for the creation of the stormwater utility and the imposition of charges to finance sediment and stormwater activities is conferred in Chapter 40, Title 7, Delaware Code. The application of a stormwater utility by means of a local ordinance shall not be deemed a limitation or repeal of any other powers granted by State statute.
- 7.4 The creation of a stormwater utility shall include the following components:
 - 7.4.1 The boundaries of the utility, such as watersheds or jurisdictional boundaries as identified by the local governing body,
 - 7.4.2 The creation of a management entity,
 - 7.4.3 Identification of stormwater problems,
 - 7.4.4 Method for determining utility charges,
 - 7.4.5 Procedures for investment and reinvestment of funds collected, and
 - 7.4.6 An appeals or petition process.
- 7.5 As established by local ordinance, the local governing agency shall have responsibility for implementing all aspects of the utility including long range planning, plan implementation, capital improvements, maintenance of stormwater facilities, determination of charges, billing, and hearing of appeals and petitions. The local agency also will have responsibility for providing staff support for utility implementation

In the event that an agency or department other than the one in which the utility is located is best equipped to undertake a particular task, the local governing agency shall ensure that appropriate interagency charges are determined such that all costs of stormwater management are reflected in the utility budget and that utility charges finance all aspects of stormwater management.

- 7.6 With respect to new stormwater management facilities constructed by private developers, the local governing agency shall develop criteria for use in determining whether these will be maintained by the utility or by the facility owner. Such criteria may include whether the facility has been designed primarily to serve residential users and whether it has been designed primarily for purposes of stormwater management. In situations where it is determined that public maintenance is not preferable, standards shall be developed to ensure that inspection of facilities occurs annually and that facilities are maintained as needed.
- 7.7 The use of charges is limited to those purposes for which the utility has been established, including but not limited to: planning; acquisition of interests in land including easements; design and construction of facilities; maintenance of the stormwater system; billing and administration; and water quantity and water quality management, including monitoring, surveillance, private maintenance inspection, construction inspection, and other activities which are reasonably required.

8.0 Plan Application and Approval Process

- 8.1 After July 1, 1991, unless a particular activity is exempted by these regulations, a person may not disturb land without an approved sediment and stormwater management plan from the appropriate plan approval agency. A grading or building permit may not be issued for a property unless a sediment and stormwater management plan has been approved that is consistent with the following items:
- 8.1.1 Chapter 40, Title 7, Delaware Code, relating to erosion and sediment control and stormwater management, and;
 - 8.1.2 These regulations, or duly adopted county or municipal ordinances that are adopted as a part of the delegation process and relate to the intent of these regulations.
- 8.2 A sediment and stormwater management plan or an application for a waiver shall be submitted to the appropriate plan approval agency by the developer for review and approval for a land disturbing activity, unless otherwise exempted. The sediment and stormwater management plan shall contain supporting computations, drawings, and sufficient information describing the manner, location, and type of measures in which stormwater runoff will be managed from the entire development. The appropriate plan approval agency shall review the plan to determine compliance with the requirements of these regulations prior to approval. The approved sediment and stormwater management plan shall serve as the basis for water quantity and water quality control on all subsequent construction.
- 8.3 The sediment and stormwater management plan shall not be considered approved without the inclusion of an approval stamp with signature and date, on the plans by the appropriate plan approval agency.
- 8.4 All sediment and stormwater management plans submitted for approval shall contain certification by the owner or developer that clearing, grading, construction, or development will be accomplished pursuant to the plan and that responsible personnel involved in the land disturbance will have a Certification of Training at a Departmental sponsored or approved training program for the control of erosion and sediment control before initiation of the project. The Certification of Training for responsible personnel requirement may be waived by the appropriate plan approval agency on any project involving silviculture or fewer than four residential homes.
- 8.5 All sediment and stormwater management plans shall contain certification by the owner or developer of the right of the Department or delegated inspection agency to conduct on-site inspections.
- 8.6 A grading or building permit issued by a local jurisdiction may be suspended or revoked after written notice is given to the permittee by the responsible delegated agency or the Department for any of the following reasons:
- 8.6.1 Violations of the conditions of the sediment and stormwater management plan approval;
 - 8.6.2 Changes in site runoff characteristics upon which a waiver was granted;
 - 8.6.3 Construction not in accordance with the approved plans;
 - 8.6.4 Noncompliance with correction notice or stop work order issued for the construction of the sediment control practices or the stormwater management facilities;

- 8.6.5 An immediate danger exists in a downstream area in the opinion of the appropriate plan approval or inspection agency, or the Department; or
- 8.6.6 Failure to submit stormwater management “As Built or Record Document” plans, when required, at the completion of the project.
- 8.7 Approved plans remain valid for 3 years from the date of an approval, unless specifically extended or renewed by the appropriate plan approval agency. The basis for extension or renewal may include, but not limited to, the following items:
 - 8.7.1 Failure to initiate the approved project for reasons acceptable to the appropriate plan approval agency such as funding or other agency permit delays; or
 - 8.7.2 Time duration for a type of activity that typically exceeds three years.
- 8.8 Projects which have been approved prior to July 1, 1991, and where site clearing has not been initiated on the project within two years, shall be resubmitted to the appropriate plan approval agency for review and approval subject to the requirements of these regulations.
- 8.9 Upon receipt of a completed application for sediment and stormwater management, the appropriate plan approval agency shall accomplish its review within 30 calendar days, and have either the approval or review comments transmitted to the applicant. If that 30 day time frame cannot be met, the appropriate plan approval agency shall notify the applicant of the reasons for delay, and an expected time frame not to exceed an additional 30 days, when that review will be accomplished.

9.0 Criteria for Designated Watersheds

The concept of designated watersheds is intended, not only to prevent existing water quantity and water quality problems from getting worse, but also to reduce existing flooding problems and to improve existing water quality or meet State Water Quality Standards in selected watersheds. Criteria is established for designated watersheds and that criteria will depend on whether the specific problems of the watershed are water quantity or water quality oriented. Water quantity and water quality concerns will be considered in all designated watersheds, but the overall emphasis for each designated watershed will depend on its existing and anticipated problems.

- 9.1 To initiate consideration of a watershed for Designated Watershed or Subwatershed status, a watershed shall be recommended by a Conservation District, county, municipality, or State agency, to the Department. Upon recommendation to the Department, all involved agencies at the local level will be contacted and their input received prior to any watershed study being initiated.
- 9.2 Included with the recommendation of a watershed for Designated Watershed or Subwatershed status to the Department shall be an identification of the specific problems that exist in the watershed so that the pursuit of a watershed study is warranted. Inclusion in these regulations as a Designated Watershed or Subwatershed requires approval by the Department that a significant water quantity or water quality problem exists that would necessitate this joint State, District, and local government involvement. Also, inclusion of a watershed as a Designated Watershed or Subwatershed will necessitate a public hearing process. The process of problem identification shall be based on the following information:
 - 9.2.1 To initiate a watershed study based on water quality considerations the following information must be submitted:
 - 9.2.1.1 Existing water quality data that has been collected as a result of the overall statewide water quality inventory process, or
 - 9.2.1.2 Other water quality data collected through specific sampling that was accomplished in the watershed, or
 - 9.2.1.3 Submission of a water quality assessment that was accomplished using a qualitative collection method of benthic macroinvertebrates.
 - 9.2.2 To initiate a watershed study based on flooding or water quantity considerations the following information must be submitted:
 - 9.2.2.1 Estimated annual flood damage to either private, residential, commercial, industrial, or public properties, or
 - 9.2.2.2 Number of residences or industries in the floodplain, or
 - 9.2.2.3 The history of flooding in the watershed, or
 - 9.2.2.4 Measures already taken to minimize or reduce flooding, or
 - 9.2.2.5 Dangers to public health and welfare.
- 9.3 Upon modification of these regulations to include a watershed as a Designated Watershed or Subwatershed an advisory group will be established that will guide the overall watershed study. The advisory group will be appointed by the Secretary and will include State, District, and local representatives in addition to representatives of the regulated community and others affected by the results of the study.

- 9.4 The general components contained in the actual watershed studies shall be the following items:
 - 9.4.1 Stormwater quantity or water quality problem identification,
 - 9.4.2 The overall needs of the watershed including the additional impacts of new development activities,
 - 9.4.3 Alternative approaches to address the existing and future problems,
 - 9.4.4 A selected approach that includes the overall costs and benefits,
 - 9.4.5 Schedule for implementation,
 - 9.4.6 Funding sources that are available for the actual implementation of study recommendations, and
 - 9.4.7 A public hearing process prior to final Departmental approval.
- 9.5 The following goals are to be obtained through the implementation of the Designated Watershed or Subwatershed program:
 - 9.5.1 Reduction of existing flooding or water quality impacts,
 - 9.5.2 Prevention of future flooding or water quality impacts, and
 - 9.5.3 Minimization of economic and social losses.
- 9.6 Specific plan components of a water quality watershed study shall include, but not be limited to, the following items:
 - 9.6.1 The limits of the watershed,
 - 9.6.2 An inventory of existing water quality data,
 - 9.6.3 An inventory of areas having significant natural resource value as defined in existing State or local studies as they may be impacted by the construction or location of stormwater control structures,
 - 9.6.4 An inventory of areas of historical and archaeological value identified in existing State or local studies as they may be impacted by the construction or location of stormwater control structures,
 - 9.6.5 A map or series of maps of the watershed showing the following information:
 - 9.6.5.1 watershed topography,
 - 9.6.5.2 Significant geologic formations,
 - 9.6.5.3 Soils information,
 - 9.6.5.4 Existing land use based on existing zoning,
 - 9.6.5.5 Proposed land use based on expected zoning or comprehensive plans,
 - 9.6.5.6 Location of tidal and nontidal wetlands, and
 - 9.6.5.7 Locations where water quality data were obtained.
 - 9.6.6 An evaluation of water quantity concerns so that flooding does not become a problem in the watershed.
- 9.7 Specific components of a water quantity based study shall include, but not be limited to, the following items:

- 9.7.1 The limits of the watershed,
- 9.7.2 An inventory of historic flood damage sites, including frequency and damage estimates,
- 9.7.3 An inventory of areas of significant natural resource value as noted in existing State and local studies as they may be impacted by the construction or location of stormwater control structures,
- 9.7.4 An inventory of areas of historical and archaeological value identified in existing State and local studies as they may be impacted by the construction or location of stormwater control structures,
- 9.7.5 A map or series of maps of the watershed showing the following information:
 - 9.7.5.1 watershed topography,
 - 9.7.5.2 Soils information,
 - 9.7.5.3 Existing land use based on existing zoning,
 - 9.7.5.4 Proposed land use based on expected zoning or comprehensive plans,
 - 9.7.5.5 Locations of tidal and nontidal wetlands,
 - 9.7.5.6 Locations of existing flooding problems including floor and corner elevations of structures already impacted, and
 - 9.7.5.7 100 year floodplain delineations, water surface profiles, and storm hydrographs at selected watershed location.
- 9.7.6 An evaluation of water quality concerns so that water quality degradation does not become a problem in the watershed.
- 9.8 The initiation of studies for Designated Watersheds or Subwatersheds depends on the availability of funding for the study. Once a watershed has been designated, the Department will make every effort to secure funding through federal, State, or local means.
- 9.9 The Department is designated as the agency responsible for administering designated watershed or subwatershed studies with the advice of the advisory group appointed by the Secretary. Recommendations based on the results of the watershed study will only be made with the overall consent of the advisory group.
- 9.10 The formal results of the Designated Watershed or Subwatershed study will require formal acceptance by the local Conservation District Board of Supervisors and the local governing body of the appropriate county or municipality.
- 9.11 Implementation of the results of the Designated Watershed or Subwatershed study will necessitate the development and implementation of a dedicated funding source such as a stormwater utility to ensure design, construction, and maintenance of needed structures is accomplished.
- 9.12 Those watersheds or subwatersheds designated due to existing water quantity or water quality problems include the following:
 - 9.12.1 Dover/Silver Lake/St. Jones River and all drainage areas upstream of the Silver Lake dam.

10.0 Specific Design Criteria and Minimum Standards and Specifications

- 10.1 General submission requirements for all projects requiring sediment and stormwater management approval include the following information:
 - 10.1.1 A standard application form,
 - 10.1.2 A vicinity map indicating north arrow, scale, and other information necessary to locate the property or tax parcel,
 - 10.1.3 A plan at an appropriate scale accompanied by a design report and indicating at least:
 - 10.1.3.1 Name and address of:
 - 10.1.3.1.1 The owner of the property where the project is proposed;
 - 10.1.3.1.2 The land developer; and
 - 10.1.3.1.3 The applicant.
 - 10.1.3.2 The existing and proposed topography, as required on a case by case basis.
 - 10.1.3.3 The proposed grading and earth disturbance including:
 - 10.1.3.3.1 Surface area involved; and
 - 10.1.3.3.2 Limits of grading including limitation of mass clearing and grading whenever possible.
 - 10.1.3.4 Stormwater management and stormwater drainage computations, including:
 - 10.1.3.4.1 Pre- and post-development velocities, peak rates of discharge, and inflow and outflow hydrographs of stormwater runoff at all existing and proposed points of discharge from the site,
 - 10.1.3.4.2 Site conditions around points of all surface water discharge including vegetation and method of flow conveyance from the land disturbing activity, and
 - 10.1.3.4.3 Design details for structural controls.
 - 10.1.3.5 Erosion, sediment control, and stormwater management provisions including:
 - 10.1.3.5.1 Provisions to preserve top soil and limit disturbance;
 - 10.1.3.5.2 Details of site grading, and;
 - 10.1.3.5.3 Design details for structural controls which includes diversions and swales.
 - 10.1.4 Federal Emergency Management Agency flood maps and federal and State protected wetlands, where appropriate.
 - 10.1.5 The appropriate plan approval agency shall require that plans and design reports be sealed by a qualified design professional that the plans have been designed in accordance with approved sediment and stormwater ordinances, regulations, standards and criteria. The appropriate plan approval agency may waive this requirement on a case by case basis.

- 10.1.6 Additional information necessary for a complete project review may be required by the appropriate plan approval agency as deemed appropriate. This additional information may include items such as public sewers, water lines, septic fields, wells, etc.
- 10.2 Specific requirements for the erosion and sediment control portion of the sediment and stormwater management plan approval process include, but are not limited to, the following items. The appropriate plan approval agency may modify the following items for a specific project or type of project. Modification for a specific type of project will require the concurrence of the Department before that modification may be applied and that modification shall be subject to public review and comment prior to adoption.
- 10.2.1 All plans shall include details of temporary and permanent stabilization measures including placement of the following statement on all plans submitted for approval. Following soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within 14 calendar days as to the surface of all perimeter sediment controls, topsoil stockpiles, and all other disturbed or graded areas on the project site.
- These requirements do not apply to those areas which are shown on the plan and are currently being used for material storage, or for those areas on which actual earth moving activities are currently being performed.
- 10.2.2 All plans shall be consistent with the standards and specifications contained in the Delaware Erosion and Sediment Control Handbook, and approved supplements. The supplements shall be subject to public review and comment prior to their incorporation in the Erosion and Sediment Control Handbook.
- 10.2.3 A sequence of construction shall be contained on all plans describing the relationship between the implementation and maintenance of sediment controls, including permanent and temporary stabilization and the various stages or phases of earth disturbance and construction. The sequence of construction shall, at a minimum, include the following activities:
- 10.2.3.1 Clearing and grubbing for those areas necessary for installation of perimeter controls;
- 10.2.3.2 Construction of perimeter controls;
- 10.2.3.3 Remaining clearing and grubbing;
- 10.2.3.4 Road grading;
- 10.2.3.5 Grading for the remainder of the site;
- 10.2.3.6 Utility installation and whether stormdrains will be used or blocked until after completion of construction;
- 10.2.3.7 Final grading, landscaping, or stabilization; and
- 10.2.3.8 Removal of sediment controls.
- 10.2.4 The plans shall contain a description of the predominant soil types on the site, as described by the appropriate soil survey information available through the local Conservation District.
- 10.2.5 Unless an exception is approved on a case by case basis or an exception is approved for a specific type of activity by the appropriate plan approval agency,

not more than 20 acres may be cleared at any one time. Once grading is initiated in one 20 acre section, a second 20 acre section may have stumps, roots, brush, and organic material removed. This will necessitate the phasing of construction on sites in excess of 20 acres to minimize areas exposed of ground cover and reduce erosion rates. Grading of the second 20 acre section may not proceed until temporary or permanent stabilization of the first 20 acre section is accomplished.

- 10.3 Specific requirements for the permanent stormwater management portion of the sediment and stormwater management plan approval process include, but are not limited to, the following items. The appropriate plan approval agency may modify the following items for a specific project or type of project. Modification for a specific type of project will require the concurrence of the Department before the modification may be applied and the modification for a type of project shall be subject to public review and comment.
- 10.3.1 It is the overall goal of the Department to utilize stormwater management on a as a means to minimize water quantity and water quality impacts due to land disturbing activities and to mimic pre-development hydrology, to the maximum extent practicable, in regards to the rate, volume and duration of flow. These regulations will provide general design requirements that must be adhered to in the absence of Designated Watershed or Subwatershed specific criteria.
- 10.3.2 All hydrologic computations shall be accomplished using the methodologies from the most recent U.S.D.A. Natural Resources Conservation Service Technical Releases 20 or 55, or other methods as approved by the Department. The storm duration for computational purposes shall be the 24 hour rainfall event. For projects south of the Chesapeake and Delaware Canal, the Delmarva Unit Hydrograph shall be incorporated into the design procedure.
- 10.3.3 Stormwater management requirements for a specific project shall be based on the entire area to be developed, or if phased, the initial submittal shall control that area proposed in the initial phase and establish a procedure and obligation for total site control.
- 10.3.4 Water quantity control is an integral component of overall stormwater management. Control of peak discharges will, to some extent, prevent increases in flooding. The following design criteria for peak flow control is established for water quantity control purposes, unless a waiver is granted based on a case-by-case basis:
- 10.3.4.1 Projects in New Castle County that are located north of the Chesapeake and Delaware Canal shall not exceed the post-development peak discharge for the 2, 10, and 100 year frequency storm events at the pre-development peak discharge rates for the 2, 10, and 100 year frequency storm events.
- 10.3.4.2 Projects in New Castle County that are located south of the Chesapeake and Delaware Canal, Kent County, and Sussex County shall not exceed the post-development peak discharge for the 2 and 10 year frequency storm events at the pre-development peak discharge rates for the 2 and 10 year frequency storm events.
- 10.3.4.3 Watersheds, other than Designated Watersheds or Subwatersheds, that have well documented water quantity problems may have more stringent, or modified, design criteria that is responsive to the specific

needs of that watershed. Modified criteria for that watershed must receive Departmental approval, and all projects reviewed and approved by the appropriate plan approval agency shall meet or exceed the modified criteria. Proposed modification of criteria for a watershed shall be subject to public review and comment prior to implementation.

- 10.3.5 Water quality control is also an integral component of stormwater management. Control of runoff from small, frequent rainfall events on-site will minimize further degradation of downstream water quality and habitat. The following design criteria are established for water quality protection unless a waiver or variance is granted on a case-by-case basis.
- 10.3.5.1 In general, the preferred option for water quality protection shall be those practices collectively referred to as “Green Technology BMP’s”. Other practices shall be considered only after preferred practices have been eliminated for engineering or hardship reasons as approved by the appropriate plan approval agency.
 - 10.3.5.2 Water quality practices shall be designed to manage the rate and volume of flow from the 2.0" NRCS Type II rainfall event, up to a maximum of 1.0" of runoff.
 - 10.3.5.3 Alternative stormwater quality practices may be acceptable to the Department and/ or the plan approval agency if the removal efficiency for suspended solids meets or exceeds 80% as demonstrated by scientifically independent evaluation and monitoring performance data.
 - 10.3.5.4 The Department and/or the plan approval agency may require other acceptable stormwater quality practices if a receiving waterbody has been identified as impaired, or designated with a specific pollutant reduction target necessary to meet State of Delaware water quality regulations.
 - 10.3.5.5 Water quality practices may also be acceptable to the Department and/ or the plan approval agency if they are designed to reduce pollutant loading from a specific post-development source. The Department and/ or the plan approval agency will determine if this criterion for water quality Best Management Practices is appropriate.
 - 10.3.5.6 The Department will develop policy and maintain documentation related to the performance of water quality practices. The Department will also provide guidance for the design, appropriate use and required maintenance of water quality practices. These shall include structural and non-structural practices in addition to source reduction management strategies.
 - 10.3.5.7 The Department and/or the plan approval agency will review the specific water quality practices proposed in a Sediment and Stormwater Management Plan, and review, approve or deny approval of the plan based on the criteria specified in Section 10.3.5 of these regulations.
- 10.3.6 All ponds that are constructed for stormwater management shall be designed and constructed in accordance with the U.S.D.A. Soil Conservation Service Small Pond Code 378, dated September, 1990, as approved for use in Delaware.

- 10.3.7 Any pond utilized for water supply purposes, or for irrigation, must obtain approval from the Department for that use pursuant to Chapter 60.
- 10.3.8 Where ponds are the proposed method of control, the developer shall submit to the approving agency, when required, an analysis of the impacts of stormwater flows downstream in the watershed for the 100 year frequency storm event.
- The analysis shall include hydrologic and hydraulic calculations necessary to determine the impact of hydrograph timing modifications of the proposed development, with and without the pond, on downstream dams, highways, structures, or natural points of constricted streamflows past which the timing effects would be considered negligible. The results of the analysis will determine the need to modify the pond design or to eliminate the pond requirement. Lacking a clearly defined downstream point of constriction, the downstream impacts shall be established, with the concurrence of the approving agency, downstream of a tributary of the following size:
- 10.3.8.1 The first downstream tributary whose drainage area equals or exceeds the contributing area to the pond; or
- 10.3.8.2 The first downstream tributary whose peak discharge exceeds the largest designed release rate of the pond.
- 10.3.9 Where existing wetlands are intended as a component of an overall stormwater management system, the following criteria shall be adhered to:
- 10.3.9.1 The only disturbance to the wetland, for the purposes of these regulations, shall be that disturbance caused by the stormwater management pond embankment placement and construction; or
- 10.3.9.2 The applicant can demonstrate that the intended or functional aspects of the stormwater management facility and wetlands are maintained or enhanced, or the construction in the wetland for stormwater management is the only reasonable alternative.
- 10.3.9.3 All other necessary State and federal permits can be obtained.
- 10.3.10 Designs shall be in accordance with standards developed or approved by the Department, which are subject to public review and comment.
- 10.3.11 Ease of maintenance must be considered as a site design component. Access to the stormwater management structure must be provided for in the design, and land area adjacent to the structure must be set aside for disposal of sediments removed from the structure when maintenance is performed. The land set aside for pond maintenance shall be sized as follows:
- 10.3.11.1 The set aside area shall accommodate at least 2% of the stormwater management basin volume to the elevation of the 2 year storage volume elevation;
- 10.3.11.2 The maximum depth of the set aside volume shall be one foot;
- 10.3.11.3 The slope of the set aside area shall not exceed 5%; and
- 10.3.11.4 The area and slope of the set aside area may be modified if an alternative area or method of disposal is approved by the appropriate plan approval agency.

- 10.3.12 A clear statement of defined maintenance responsibility shall be established during the plan review and approval process.
- 10.3.13 All ponds shall have a forebay or other design feature to act as a sediment trap. A reverse slope bench must be provided one foot above the normal pool elevation for safety purposes and all embankment ponds, having a normal pool, shall have a drain installed to facilitate maintenance.
- 10.3.14 The use of infiltration practices for the disposal of stormwater runoff is classified by the USEPA as an underground injection control practice, class V injection well. The appropriate plan approval agency shall forward a copy of all such approvals and the results of all construction inspections to the Department's Underground Injection Control program manager.
- 10.3.15 Infiltration practices have certain limitations on their use on certain sites. These limitations include the following items:
- 10.3.15.1 Areas draining to these practices must be stabilized and vegetative filters established prior to runoff entering the system. Infiltration practices shall not be used if a suspended solids filter system does not accompany the practice. If vegetation is the intended filter, there shall be, at least, a 20 foot length of vegetative filter prior to stormwater runoff entering the infiltration practice;
 - 10.3.15.2 The bottom of the infiltration practice shall be at least three feet above the seasonal high water table, whether perched or regional, determined by direct piezometer measurements which can be demonstrated to be representative of the maximum height of the water table on an annual basis during years of normal precipitation, or by the depth in the soil at which mottling first occurs;
 - 10.3.15.3 The infiltration practice shall be designed to completely drain of water within 48 hours.
 - 10.3.15.4 Soils must have adequate permeability to allow water to infiltrate. Infiltration practices are limited to soils having an infiltration rate of at least 1.02 inches per hour.

Initial consideration will be based on a review of the appropriate soil survey, and the survey may serve as a basis for rejection. On-site soil borings and textural classifications must be accomplished to verify the actual site and seasonal high water table conditions when infiltration is to be utilized.
 - 10.3.15.5 Infiltration practices greater than three feet deep shall be located at least 20 feet from basement walls;
 - 10.3.15.6 Infiltration practices designed to handle runoff from impervious parking areas shall be a minimum of 150 feet from any public or private water supply well;
 - 10.3.15.7 The design of an infiltration practice shall provide an overflow system with measures to provide a non-erosive velocity of flow along its length and at the outfall; and
 - 10.3.15.8 The slope of the bottom of the infiltration practice shall not exceed

five percent. Also, the practice shall not be installed in fill material as piping along the fill/natural ground interface may cause slope failure.

10.3.15.9 Unless allowed on a specific project, infiltration practices will be used primarily for water quality enhancement only.

10.3.15.10 An infiltration practice shall not be installed on or atop a slope whose natural angle of incline exceeds 20%.

10.3.16 A regional approach to stormwater management is an acceptable alternative to site specific requirements. As a substitute control practice, regional stormwater management structures shall be required to meet the following items:

10.3.16.1 They shall have a contributory drainage area not in excess of 400 acres unless, on a case by case basis, a larger drainage area is approved by the appropriate plan approval agency;

10.3.16.2 They shall have a permanent pool of water and provide for 24 hour detention of the first inch of stormwater runoff from the entire upstream watershed; and

10.3.16.3 All other necessary approvals have been obtained that could be cause for site rejection.

10.3.17 The pre-development peak discharge rate shall be computed assuming that all land uses in the site to be developed are in good hydrologic condition.

11.0 Standard Plan Criteria

- 11.1 Approval under this section involves submission of a standard plan by a land owner, developer, or agent to the appropriate plan approval agency. The minimum criteria for the standard plan will be developed by the Department, and may be expanded upon by the appropriate plan approval agency. The standard plan will contain standard conditions for erosion and sediment control that must be implemented on sites where a detailed plan is not required. The appropriate plan approval agency shall approve or deny standard plan requests within 14 calendar days of receipt.
- 11.2 The inclusion of an activity into the standard plan classification does not relinquish that activity from the requirements of Chapter 40. Rather, the standard plan precludes that activity from the necessity of a detailed plan review for each individual project.
- 11.3 Approval of a standard plan does not relieve the applicant from the conditions that are a part of the standard plan approval regarding the implementation of control practices as required by the standard plan. Failure to implement control practices pursuant to conditions included in the general permit standard plan may necessitate appropriate enforcement action as provided in Chapter 40 and these regulations.
- 11.4 Those activities eligible for standard plans include the following, when the stormwater management requirements have been waived in accordance with Section 3 of these Regulations:
 - 11.4.1 Individual detached residential home or agricultural structure construction where the disturbed area for construction will be less than one acre in size. Two or more contiguous lots being developed concurrently by the same land developer will not be eligible for the general permit standard plan.
 - 11.4.2 Highway shoulder and side swale maintenance.
 - 11.4.3 The repair, maintenance, and installation of above and underground utilities.
 - 11.4.4 Minor Commercial, Institutional, and industrial projects where the total disturbed area will be less than one acre.
 - 11.4.5 Modification or reconstruction of a tax ditch by a tax ditch organization when that tax ditch is not intended to serve new development, and which will not increase water quantity or adversely impact water quality, or change points of discharge so as to adversely affect the waters of the State.
- 11.5 The appropriate plan approval agency may place more restrictive conditions upon the standard plan approval including the requirement for detailed plans for any standard plan category. The imposition of more specific requirements for categories of projects shall be approved by the Department, and shall be subject to public review and comment prior to their imposition.

12.0 Certified Construction Reviewer Requirements

- 12.1 Projects reviewed and approved by the Department for sediment control and stormwater management, in general, shall have a certified construction reviewer when the disturbed area of the project is in excess of 50 acres. In addition any project, regardless of its size, may be required by the Department, or the appropriate plan approval agency, to have a certified construction reviewer on a case by case basis.
- 12.2 The Department or the appropriate inspection agency may require that any project, already under construction, have on site a certified construction reviewer if, on that project, significant sediment control or stormwater management problems necessitate more frequent inspections.
- 12.3 The certified construction reviewer shall function under the direction of a registered professional engineer licensed to practice engineering in the State of Delaware.
- 12.4 Individuals designated as certified construction reviewers shall attend and pass a Departmental sponsored or approved construction review training course. The course content will contain, at a minimum, information regarding the following items:
 - 12.4.1 Basic hydrology and hydraulics;
 - 12.4.2 Soils information including texture, limitations, erodibility, and classifications;
 - 12.4.3 Types of vegetation, growing times, and suitability;
 - 12.4.4 Erosion, sediment control, and stormwater management practices;
 - 12.4.5 Inspection and problem referral procedures;
 - 12.4.6 Aspects of State law, regulations, local ordinances, and approval procedures: and
 - 12.4.7 Sediment and stormwater management plan content.
- 12.5 The time frame for certification shall not exceed five years unless extended by the Department.
- 12.6 The responsibility of the certified construction reviewer will be to ensure the adequacy of construction pursuant to the approved sediment and stormwater management plan.
- 12.7 The certified construction reviewer shall be responsible for the following items:
 - 12.7.1 Provision of a construction review of active construction sites on at least a weekly basis;
 - 12.7.2 Within five calendar days, informing the person engaged in the land disturbing activity, and the contractor, by a written construction review report of any violations of the approved plan or inadequacies of the plan. The plan approval agency shall be informed, if the approved plan is inadequate, within five working days. In addition, the appropriate construction review agency shall receive copies of all construction review reports; and
 - 12.7.3 Referral of the project through the delegated inspection agency to the Department for appropriate enforcement action if the person engaged in the land disturbing activity fails to address the items contained in the written construction review report. Verbal notice shall be made to the Department within two working days and written notice shall be provided to the Department within five working days.

- 12.8 If the Secretary or his designee determines that a certified construction reviewer is not providing adequate site control or is not referring problem situations to the Department, the Secretary or his designee may suspend or revoke the certification of the construction reviewer.
- 12.9 In any situation where a certified construction reviewer's approval is being suspended or revoked, an opportunity for hearing before the Secretary or his designee shall be provided. During any suspension or revocation, the certified construction reviewer shall not be allowed to provide construction reviews pursuant to these regulations. The minimum time of suspension or revocation shall be 6 months.

13.0 Contractor Certification Program

- 13.1 The Department shall require certification of responsible personnel for any foreman or superintendent who is in charge of on-site clearing and land disturbing activities for sediment and stormwater control associated with a construction project. Responsible personnel are not required on any project involving silvaculture or fewer than four residential homes. Responsible personnel shall obtain certification by completing a Department sponsored or approved training program. Enrollment of existing and future responsible personnel is the responsibility of employers. Response to a Department notice of training and certification in accordance with the provisions of item 3 of this section shall serve as an application for training. The Department shall notify employers of responsible personnel as to the date and location of training programs for attendance by responsible personnel and other interested persons.
- 13.2 After July 1, 1991, any applicant seeking sediment and stormwater plan approval shall certify to the appropriate plan approval agency that all responsible personnel involved in the construction project will have a certificate of attendance at a Departmental sponsored or approved training course for the control of sediment and stormwater before initiation of any land disturbing activity. The certificate of attendance shall be valid until the Department notifies the individual or announces in local newspapers that recertification is required due to a change in course content.
- 13.3 After July 1, 1991, employers of responsible personnel may receive interim certification for responsible personnel during the period before attendance at a Departmental sponsored or approved training course by submitting an enrollment form to the Department. Interim certification shall be valid until the scheduled date of attendance for training of responsible personnel. These enrollment forms are available from the Department and the Conservation Districts.

14.0 Construction Review and Enforcement Requirements

- 14.1 The land developer shall request, at least 24 hours ahead of time, that the appropriate inspection agency approve work completed at the stages of construction outlined in the sequence of construction contained on the approved plans. Any portion of the work which does not comply will be promptly corrected by the developer after written notice by the appropriate inspection agency. The notice shall set forth the nature of corrections required and the time frame within which corrections must be made.
- 14.2 The land developer shall notify the appropriate inspection agency before initiation of construction and upon project completion when a final inspection will be conducted to ensure compliance with the approved sediment and stormwater management plan.
- 14.3 The responsible inspection agency shall, for inspection purposes, do all of the following items:
 - 14.3.1 Ensure that the approved sediment and stormwater management plans are on the project site and are complied with;
 - 14.3.2 Ensure that every active site is inspected for compliance with the approved plan on a regular basis;
 - 14.3.3 Prepare and leave on site, or forward to the contractor, a written report after every inspection that describes:
 - 14.3.3.1 The date and location of the site inspection;
 - 14.3.3.2 Whether the approved plan has been properly implemented and maintained;
 - 14.3.3.3 Approved plan or practice deficiencies; and
 - 14.3.3.4 The action taken.
 - 14.3.4 Notification of on-site personnel or the owner/developer in writing when violations are observed, describing the:
 - 14.3.4.1 Nature of the violation;
 - 14.3.4.2 Required corrective action; and
 - 14.3.4.3 Time period for violation correction.
- 14.4 The Department may investigate complaints or refer any complaint received to the local inspection agency if the activity is located in a jurisdiction that has received delegation of sediment and stormwater management inspection. In conjunction with a referral, the Department may also initiate an on-site investigation after notification of the local inspection agency in order to properly evaluate the complaint. The Department shall take enforcement action when appropriate, and notify the local inspection agency in a timely manner of any enforcement actions taken.
- 14.5 The Department, at its discretion and upon notification to either the owner, developer, or contractor, may visit any site to determine the adequacy of sediment and stormwater management practices. In the event that the Department conducts site inspections, the appropriate inspection agency shall be notified prior to the initiation of any enforcement action. The appropriate inspection agency shall establish a time frame to obtain site compliance. This notification shall, in no way limit the right to the Department to take action

subsequent to any provision of these regulations or Chapter. Formal procedures for interaction between the Department and the appropriate inspection agency on site inspection and referral will be developed on an individual basis.

- 14.6 The appropriate plan approval agency may require a revision to the approved plans as necessary due to differing site conditions. The appropriate plan approval agency shall establish guidelines to facilitate the processing of revised plans where field conditions necessitate plan modification. Where changes to the approved plan are necessary those changes shall be in accordance to the following:
 - 14.6.1 Major changes to approved sediment and stormwater management plans, such as the addition or deletion of a sediment basin, shall be submitted by the owner/developer to the appropriate plan approval agency for review and approval.
 - 14.6.2 Minor changes to sediment and stormwater management plans may be made in the field if approved by the construction reviewer and documented in the field review report. The appropriate inspection agency shall develop a list of allowable field modifications for use by the construction reviewer.
- 14.7 Stormwater management construction shall have inspections accomplished at the following stages:
 - 14.7.1 Infiltration practices shall be inspected at the commencement, during, and upon completion of construction;
 - 14.7.2 All ponds shall be inspected at the following stages:
 - 14.7.2.1 Upon completion of excavation to sub-foundation and where required, installation of structural supports or reinforcement for structures, including, but not limited to;
 - 14.7.2.1.1 Core trenches for structural embankments,
 - 14.7.2.1.2 Inlet-outlet structures and anti-seep structures, watertight connectors on pipes, and
 - 14.7.2.1.3 Trenches for enclosed storm drainage facilities.
 - 14.7.2.2 During placement of structural fill, concrete, and installation of piping and catch basins;
 - 14.7.2.3 During backfill of foundations and trenches;
 - 14.7.2.4 During embankment construction; and
 - 14.7.2.5 Upon completion of final grading and establishment of permanent vegetation.
- 14.8 The agency responsible for construction review may, in addition to local enforcement options, refer a site violation to the Department for additional enforcement action.
- 14.9 Referral of a site violation to the Department may initiate a Departmental construction review of the site to verify site conditions. That construction review may result in the following actions:
 - 14.9.1 Notification through appropriate means to the person engaged in a land disturbing activity and the contractor to comply with the approved plan within a specified time frame; and

14.9.2 Notification of plan inadequacy, with a time frame for the person engaged in a land disturbing activity to submit a revised sediment and stormwater plan to the appropriate plan approval agency and to receive its approval with respect thereto. The Department shall notify the local inspection agency in a timely manner of what enforcement action is taken on the site.

14.10 Failure of the person engaged in the land disturbing activity or the contractor to comply with Departmental requirements may result in the following actions in addition to other penalties as provided in Chapter 40.

14.10.1 The Department shall have the power to issue a cease and desist order to any person violating any provision of Chapter 40 and these regulations by ordering such person to cease and desist from any site work activity other than those actions necessary to achieve compliance with any administrative order.

14.10.2 The Department may request that the appropriate plan approval agency refrain from issuing any further building or grading permits to the person having outstanding violations until those violations have been remedied.

15.0 Maintenance Requirements

- 15.1 For erosion and sediment control, all practices shall be maintained in accordance with requirements specified in the Delaware Sediment and Erosion Control Handbook dated 1989 or as directed by the construction reviewer.
- 15.2 Prior to the issuance of any building or grading permit for which stormwater management is required, the responsible plan approval agency shall require the applicant or owner to execute an inspection and maintenance agreement binding on all subsequent owners of land served by the private stormwater management facility. Such agreement shall provide for access to the facility at reasonable times for regular inspection by an inspection agency and for an assessment of property owners to ensure that the stormwater management structure is maintained in proper design working condition.
- 15.3 The Department encourages, and will provide technical assistance to, any Conservation District or local jurisdiction who chooses to assume the maintenance responsibility for stormwater management structures on, at least, residential lands. Public maintenance provides a reasonable assurance that maintenance will be accomplished on a regular basis.
- 15.4 The owner or person responsible shall perform or cause to be performed preventive maintenance of all completed stormwater management practices to ensure proper functioning. The responsible inspection agency shall ensure preventive maintenance through inspection of all stormwater management practices. The inspections shall occur at least once each year.
- 15.5 Inspection reports shall be maintained by the responsible inspection agency on all detention and retention structures and those inspection reports shall include the following items:
 - 15.5.1 The date of inspection;
 - 15.5.2 The name of the inspector;
 - 15.5.3 The condition of:
 - 15.5.3.1 Vegetation,
 - 15.5.3.2 Fences,
 - 15.5.3.3 Spillways,
 - 15.5.3.4 Embankments,
 - 15.5.3.5 Reservoir area,
 - 15.5.3.6 Outlet channels,
 - 15.5.3.7 Underground drainage,
 - 15.5.3.8 Sediment load, or
 - 15.5.3.9 Other items which could effect the proper function of the structure.
 - 15.5.4 Description of needed maintenance.
- 15.6 Responsible inspection agencies shall provide procedures to ensure that deficiencies indicated by inspections are rectified. The procedures shall include the following:
 - 15.6.1 Notification to the person responsible for maintenance of deficiencies including a time frame for repairs;

- 15.6.2 Subsequent inspection to ensure completion of repairs; and
- 15.6.3 Effective enforcement procedures or procedures to refer projects to the Department if repairs are not undertaken or are not done properly.

16.0 Penalties

- 16.1 Any person who violates any rule, order, condition imposed in an approved plan or other provision of these regulations shall be fined not less than \$200 or more than \$2,000 for each offense. Each day that the violation continues shall constitute a separate offense. The Justice of the Peace Courts shall have jurisdiction of offenses brought under this subsection.
- 16.2 Any person who intentionally, knowingly, and after written notice to comply, violates or refuses to comply with any notice issued pursuant to these regulations shall be fined not less than \$500 or more than \$10,000 for each offense. Each day the violation continues shall constitute a separate offense. The Superior Court shall have jurisdiction of offenses brought under this subsection.

17.0 Hearings

The conduct of all hearings conducted pursuant to these regulations shall be in accordance with the relevant provisions of Delaware Code, Title 7, Chapter 60.

18.0 Severability

If any section, subsection, sentence, clause, phrase, or portion of these regulations are for any reason held invalid or unconstitutional by any court or competent jurisdiction, such provision and such holding shall not affect the validity of the remaining portions of these regulations.