

# **Outline for Revised Delaware Sediment and Stormwater Regulations**

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**Subcommittee Comments**  
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**To:**  
**Delaware Department of Natural Resources and Environmental Control**  
**Sediment and Stormwater Division**

## Proposed Outline for Revised Delaware Sediment and Stormwater Regulations

Numbers in ( ) refer to relevant section of current regulations (if applicable)

Each subsection is followed by a description of the type of information that will be included

Example language is provided in underlined text; and

Notes and topics that require further discussion are provided in *italics*.

### Section 1. General Provisions

#### 1.1. Findings of Fact (1.1)

Describes findings that relate to the effects of erosion and stormwater runoff on land and water resources, public health and safety, and economics within the state of Delaware.

#### 1.2. Purpose (1.1)

Establishes the reasons why the State is regulating sediment and stormwater.

#### 1.3. Applicability (1.2, 8.1)

Describes the specific types of projects that are subject to the conditions of the regulation

- All land changes or construction activities for residential, commercial, industrial or institutional land use.

**Policies and Procedures Subcommittee:** Sections 1.1, 1.2, and 1.3 language needs to be more reflective of the Law than the current regulations.

#### 1.4 Exemptions (1.2, 3.1)

**Policies and Procedures Subcommittee:** Exemptions need to be specific to the statute; exemptions cannot be created in Regulations. Anything not in reflected statute would fall into the waiver or variance category, not exemption.

Lists any project types that are exempt from the regulations. Exemptions are given for:

- ~~Agriculture~~ Agricultural land management practices having with an approved conservation plan ~~(except chicken houses)~~
- Biosolids applications with an approved conservation plan

**Policies and Procedures Subcommittee:** include ag utilization permit, ag waste plan, nutrient management plan in addition to approved conservation plan.

- Disturbance less than 5,000 sq ft AND impervious surfaces less than 2,000 sq ft (*or other impervious cover threshold*)

**Policies and Procedures Subcommittee:** do not include impervious surface threshold because this is not reflected in section 4004(c) of the Law.

- Activities that are regulated under specific state or federal laws that provide for sediment and stormwater management (e.g., permits required under NPDES when discharges are a combination of stormwater and wastewater, NPDES Individual Permits)

- Emergency projects
- Policies and Procedures Subcommittee: emergency procedures would be handled as a variance procedure; they would not be exempt from requirements of Law or Regulations.**
- Certain commercial forest harvesting operations
- 1.5. Variances (3.3, 3.2.2)  
~~Describes conditions under which variances may be granted.~~ Variances may be granted only for exceptional circumstances that result in unnecessary hardship and will not fulfill the intent of the regulations.
  - 1.6. Waivers  
Refers to Sections 5.2.b, 5.3.b, and 5.4.b for conditions that may warrant a waiver of these requirements.
  - 1.7. Legal Authority (4.1)  
Establishes legal authority for the sediment and stormwater program, and refers to the enabling legislation (Sediment and Stormwater Law).
  - 1.8. Consistency/Concurrency with Other Program Requirements  
States that compliance with this regulation does not eliminate need to comply with any other applicable law or regulations and these are minimum standards – if a conflict exists, the more restrictive regulation shall apply.
  - 1.9. Severability (18)  
Reinforces the validity of the regulations in the event that any portion is deemed invalid by a court of law.
  - 1.10. Liability  
States that anyone undertaking land development shall take all necessary measures to minimize pollution of receiving waters. The statement also releases the Department from liability associated with the design, installation, operation and maintenance of BMPs.
  - 1.11. Hearings (17)  
Refers to relevant state law regarding conduct of hearings pursuant to the regulations.
  - 1.12. Designation of Stormwater Authority: Powers and Duties (4)  
Establishes authority of the Department to implement and oversee the Sediment and Stormwater Program. Outlines specific powers and duties, including the authority to maintain standards and guidelines (e.g., design manual and policy papers) and the authority to enter upon land for purposes of inspection.
  - 1.13. Delegation of Program Elements (1.3, 5)  
Outlines the process by which program elements can be delegated to conservation districts, counties, municipalities or state agencies, and lists criteria for delegation and responsibilities of delegated agencies.

- 1.14. Criteria for Implementation of a Stormwater Utility (1.4, 7)  
Describes the components of an ordinance required for establishment of a stormwater utility to fund stormwater management.

**Policies and Procedures Subcommittee:** Subcommittee would like CWP to provide recommendations for bringing private utilities into the maintenance of stormwater management facilities and systems.

## **Section 2. Definitions (2)**

Provides definitions of key terms. These terms will be defined consistently across other related guidance and regulatory documents.

**Policies and Procedures Subcommittee:**

- Include all definitions from Law;
- reference for consistency with Ch. 60 Section 9.1.02;
- include all applicable definitions from the current regulations;
- define emergency project
- define impervious surface
- define hardship
- define variance
- define agricultural land management practice
- define biosolids
- define conservation plan
- define disturbance (i.e. land disturbance)
- define “major changes” and “minor changes” to the approved plan
- define stormwater impact study

### Section 3. Permit Procedures and Requirements (8, 10)

#### 3.1. Pre-Application Meeting

Identifies conditions under which a pre-application meeting is required (all sites requiring a sediment/stormwater plan). Lists pre-application meeting submittal package elements. (*Refer to separate ~~policy document~~ technical guidance to be developed concurrently. This checklist would require applicant to document the conservation design and Green Technology BMPs used and/or why they are not able to be used*). Describes the process for preliminary approval and the responsibilities of the applicant and delegated agency. Major discussion elements for pre-application meeting include:

- TMDLs
- Source water protection
- Watershed master plan requirements
- Natural resources inventory (includes mapping of critical environmental resources)
- Stormwater Impact Study (including determination of watershed position, and downstream analysis)
- Stormwater quality management (including optimized recharge volume)
- Stormwater quantity management

*Planning & Land Use Subcommittee: The pre-application meeting step would be most beneficial when it takes place prior to PLUS; however it needs to be structured to work with PLUS and non-PLUS projects. The Stormwater Impact Study Findings Report would be submitted with PLUS application. All regulatory program requirements and non-regulatory program datasets should be coordinated and considered at the pre-application meeting in accordance with section 4001(b) of the Sediment and Stormwater Law. However, those program requirements need not be listed in the regulations; they may be included on the pre-application meeting documents and checklists which are subject to public review and comment.*

*Policies and Procedures Subcommittee: Include requirement of “10%+” point for downstream analysis in regulatory language. Include designated watershed status and tax ditches in the list for discussion elements at the pre-application meeting.*

#### 3.2. Plan Requirements (8.2, 8.3, 10.1, 10.2.4)

Identifies conditions that require a Sediment and Stormwater Plan. Lists the application requirements for the plan (*Refer to separate checklist to be revised concurrently*). Identifies requirement for a concept plan and a final design plan and outlines required elements of each plan.

*Policies and Procedures Subcommittee: Identify requirement for construction site stormwater management as well as post construction stormwater management. Identify requirement for Schematic Plan as prescribed in the technical guidance document “Delaware Erosion and Sediment Control Handbook”.*

#### 3.3. Plan Review Procedures (8.7, 8.8., 8.9)

Describes the process for reviewing and approving Sediment and Stormwater Plans, including preliminary review for completeness of plan, review period, modifications needed for approval, appeal decisions, substantive changes to plans, and expiration of plan approval. Provides standard conditions of plan approval.

#### 3.4. Standard Plan Criteria (11)

Identifies activities eligible for a standard plan, and describes the minimum criteria for a standard plan, and the approval process and time frame for plan approval. Activities eligible for standard plans include:

- Individual detached residential homes or agricultural structures where the disturbed area will be less than 1 acre (*discuss adding a threshold for impervious surfaces*)
- Highway shoulder and side swale maintenance
- Repair, maintenance and installation of utilities
- Minor commercial, institutional and industrial projects where total disturbed area is less than 1 acre (*discuss adding a threshold for impervious surfaces*)
- Modification or reconstruction of tax ditches under certain conditions

**Policies and Procedures Subcommittee: Include (1) maintenance of stormwater management facilities with disturbances less than one acre, and (2) agricultural structures as activities eligible for a standard plan.**

#### 3.5. Plan Preparation and Certification (8.4, 8.5)

Identifies the type, required training and credentials of professionals who shall develop the Sediment and Stormwater Plan. Plans must be signed and certified by the plan preparer that design of BMPs meets the requirements of this regulation. The owner must also certify that all activities will be conducted according to the approved plan and that the inspecting agency has right of entry for inspections and that responsible personnel have appropriate training.

**Policies and Procedures: Include Storm Water Pollution Prevention Plan elements in this section.**

#### 3.6. Coordination with Other Approvals and Permits

Describes the relationship of the Sediment and Stormwater permit to other required permits and regulations, such as building permits, site and subdivision plans, demolition permits, and other relevant approvals from federal, state and/or local agencies.

**Planning & Land Use: The requirement for a pre application meeting and a stormwater impact study (SIS) should be included in the regulations and these items should precede PLUS. This will improve the coordination with permitting agencies outside of Sediment and Stormwater Delegated Agencies. The SIS Findings Report generated at the pre application meeting should be a requirement to be submitted to local land use planning agencies prior to preliminary approval of the site plan. Approved Sediment and Stormwater plans should be a requirement prior to Record Plan approval. The approval process needs to be streamlined with other regulatory programs such as DelDOT, wetlands, tax ditches, etc.**

### 3.7. Maintenance Agreement and Plan (15.2)

Establishes the party responsible for maintenance, allows for transfer of maintenance responsibility in accordance with Section 3.14, requires a maintenance agreement and plan as part of approval and review process, requires maintenance agreements to be recorded, and establishes required elements for maintenance agreement and plan:

- Designate responsible party
- Pass responsibility to successor
- Right of entry for delegated agency [or their assigns](#)
- Maintenance plan and schedule

**Maintenance subcommittee:** Much of the information contained within this section rests on the existence of HOAs. Many HOAs are now dissolving, and there is no requirement for them to exist or penalties if they dissolve. This is a county responsibility to ensure this. Without this foundation, you can't rest much on the existence of an HOA (as it is currently written here). Maintenance associations (or HOAs) should also be registered with the county and/or conservation district, which can be updated as part of the state Franchise tax, which includes principals and contact information. HOAs should be required to have (1) an approved budget, and (2) a maintenance schedule.

**Maintenance Subcommittee:** Establish an emergency plan, for example – HOA inspection after a tropical storm or hurricane

**Maintenance Subcommittee:** If infrastructure is within a tax ditch right of way (i.e. emergency spillway, crossing pipe, pond outlet, riprap outlet protection, ect...) The Tax Ditch should be a party to the maintenance agreement.

**Maintenance Subcommittee:** There should be standard guidelines for maintenance and operation of approved BMPs so that they could be cut and pasted into a maintenance plan (similar to the ESC handbook).

**Maintenance Subcommittee:** Specify the requirements to needing a permit before non-routine maintenance (such as dredging).

**Maintenance Subcommittee:** Things to decide: Open existing NOI, or make new permit? Require permit or not require permit? Older projects may not have an NOI. Also, do projects greater than 5000 square feet need a new plan (like in NCC)?

**Staff comment:** Regarding the use of the word “agreement”, the language should reflect it as being a “requirement”

### 3.8. Easements (10.3.11)

Identifies situations where easements are required and lists required dimensions. Contains language to ensure that easements for maintenance and access are approved before record plan approval and recorded on property deeds.

Storm drainage easements shall be required where the conveyance, storage, or

treatment of stormwater is identified on the stormwater management design plan, or where access is needed to structural or non-structural stormwater measures.

The following conditions shall apply to all easements:

- (1) Dimensions: Easements shall be of a width and location specified in the Stormwater Design Manual.

Maintenance Subcommittee (Later task): look into Standard or minimum easement dimensions for specific BMPs (to be put in manual).

- (2) Easements Approved Before Record Plan Approval: Easements shall be approved by the [JURISDICTION'S PLAN APPROVING AUTHORITY] prior to approval of a final record plan and shall be recorded with the [JURISDICTION] and on all property deeds.

Maintenance Subcommittee: This can be done concurrently with review and recording can be a condition to receive building/grading permits.

Maintenance Subcommittee: Clarify "off site" easements, verses "on-site" easements, in terms of needing record plan.

Maintenance Subcommittee: On the record plan, it must be noted whose easement it is and who the responsible party for maintenance is.

Maintenance Subcommittee: The regulations should require Tax Ditch rights of way (easements) be shown on the plans.

**Staff response:** The regulations should require Tax Ditch rights of way (easements) and ponds be shown on the approved plans and the record plan.

- (3) Deeds of Easement: A deed of easement shall be recorded along with the final record plan specifying the rights and responsibilities of each party to the easement.

Planning and Land Use Subcommittee comments on Section 3.8 Easements: Recommend differing easement widths depending upon type of easement (access, maintenance area around BMP, drainage, etc.). Easement widths must be clearly identified and labeled on the sediment and stormwater plan and recorded on the Record Plan. The dimensions for the various easements should be discussed with the Maintenance Subcommittee.

Maintenance subcommittee: There are many types of easements. Specify what types of easements (See NCC Code for all): Drainage, Access, Maintenance

Maintenance Subcommittee: Will easements be required or allowed on individual lots (for drainage swales) or will easements have to be in open space?



**Maintenance Subcommittee:** Maintenance easement/ROW should be handed to \_\_\_\_\_ (who?). Counties, delegated agencies, municipalities, stormwater utility (if exists)?

**Staff comment:** Need the easements to allow for public access; not restricted to just the state or municipality. In some cases, a private firm will perform the maintenance or repairs.

### 3.9. Performance Bond or Guarantee (6.2)

Establishes a requirement for a performance bond or guarantee prior to permit issuance that is tied to specific phases of construction, and identifies the performance bond term, with a clause that allows for extension of term (no more than 2 years) and partial release of bond at the discretion of the approval authority at project completion stages. Partial bond release to be limited to: (1) installation and maintenance of ESC practices, including final stabilization of construction site disturbance, (2) successful installation of permanent BMPs and approval of as-builts, and (3) transfer of BMPs to responsible maintenance entity (e.g., HOA).

**Maintenance Subcommittee:** Consideration should be given for extended bonding periods (or Utility contribution) to prevent HOA's or oversight bodies from having to foot the bill for failed embankments or outlet structures.

**Maintenance Subcommittee:** Bonds are only held within a certain time. Have an automatic renewal clause in the bond, where every year it is automatically rolled over (see Newark's code).

**Policies and Procedures Subcommittee:** Sections 3.9 and 6.7 cover much of the same ground. It is recommended that Section 3.9 be structured to address bonding of permanent stormwater BMPs, and that Section 6.7 cover the performance bonding of construction in general, including temporary BMPs and vegetative stabilization.

### 3.10. Maintenance Escrow Fund

Establishes a requirement for the applicant to contribute a specified funding amount to a maintenance escrow fund for a specified time period. The escrow amount could be based on the first ~~25~~40 years of the annual maintenance cost estimate submitted by the applicant. Maintenance funding would be included as part of transfer from private to public ownership (e.g., HOA) as specified in Section 7.2. *Note: this section will require additional discussion, as there is no existing model for this type of funding system and the legal aspects are still unclear. Additional discussion points include whether this would apply to all projects.*

**Maintenance Subcommittee:** Escrow amount should be longer to closer match the expected lifetime of the BMP.

**Maintenance Subcommittee:** This seems to be pretty controversial. Who will hold the money? Should they be required to add a certain amount of money to it each year? How do you ensure that the funds are not being spent inappropriately? How do we estimate what maintenance costs will be in 20 years? Could the Escrow be a percentage of initial construction costs? This would only be needed for projects that have BMPS to maintain that are on properties which are

controlled by maintenance association or HOAs. Commercial sites would not need to place funds in an escrow if there is a sufficient enforcement policy to help with compliance.

**Staff comment:** The regulations should allow for the requirement of escrow funds under the management of a delegated agency or stormwater utility. (The importance here is not require the escrow funds, but allow for it).

### 3.11. As-Built Plans

Establishes a requirement for submittal of as-built plans (also known as record drawings) for all permanent BMPs after final construction is completed. For ponds, as-builts are also required within 60 days ~~after construction~~. Describes general requirements for as-built plans (*refer to separate checklist to be developed concurrently*) and partial release of performance bond. *Note: this may require a decision about who can certify as-builts (e.g., P.E. or geotechnical engineer).*

**Maintenance subcommittee:** Have requirement to do an interim as-built (checking major items) and end of project as-built (checking sediment deposition and ensuring that things haven't changed (See NCC code).

**Maintenance subcommittee:** Begin performing a conveyance as-built (interim) to ensure that conveyance system is properly functioning (See new NCC draft code). What are the penalties for as-built plans that display major changes to the original reviewed and approved plan? (bonds? Other penalties?)

**Staff comment:** The stormwater facility should be completely inspected, as-built, and approved before entering into the project termination process.

### 3.12. Fees (6.1)

Presents the applicable fee schedule for plan review, variances, and inspections.

### 3.13. Fee-In-Lieu Payment

Describes the conditions under which a payment may be made in lieu of meeting the full requirements of this regulation as part of a variance request and as part of an approved watershed plan (see section 5.7).

3.13.a. As Part of a Variance Request. Must be based on unique site circumstances and/or hardship.

3.13.b. As Part of an Approved Watershed Plan. Allows fee-in-lieu payment where delegated agency with approved structured implementation program (e.g., stormwater utility) recommends payment as part of an overall watershed planning strategy. The fee may substitute for full or partial compliance with on-site requirements.

**Maintenance Subcommittee:** Must clearly specify how fees will be determined and used. This must be very restrictive. Perhaps fees can go toward retrofitting of older, failing, stormwater systems.

Maintenance Subcommittee: Define “approved watershed plan.” What exactly does this include (Pollution Control Strategies? Inland Bays Watershed Plan? Appoquinimink Watershed Plan? Silver Lake? What does this mean?

#### 3.14. Dedication of Stormwater BMPs

Allows for BMP owners to offer BMPs for dedication and also allows for acceptance by the delegated agency, **public utility, municipality, or stormwater utility**, under specified conditions (e.g., BMPs should have maintenance access, pre-treatment, submitted as-built, constructed as per standards and operational).

Maintenance Subcommittee: Be more flexible on who can accept it.

Maintenance Subcommittee: Clarify that “dedication” means handing ownership of stormwater BMP over to a specified entity.

Maintenance Subcommittee: As it is written, it is a permanent action. Do we want it to be permanent?

Funding needs to be a condition

### **Section 4. Performance Criteria for Construction Site Stormwater Management**

#### 4.1. General Criteria (10.2, 10.2.2)

Establishes general design objectives for construction site stormwater management, including compliance with standards and specifications in the most recent ESC Handbook and approved supplements.

#### 4.2. Installation & Maintenance of Construction Site BMPs (10.2.3)

Requires a sequence of construction be contained on all plans and lists the required elements:

- Identify natural resources setbacks and limits of disturbance
- Identify special ESC controls for sensitive receiving waters
- Clearing and grubbing for perimeter controls
- Construction of perimeter controls
- Off-site water handling/diversions
- Remaining clearing and grubbing
- Road grading
- Grading for rest of site
- Utility installation and plan for stormdrain use during construction
- Final grading, landscaping or stabilization
- Removal of sediment controls
- Conversion of temporary sediment controls to permanent controls
- Activation of stormwater conversions

#### 4.3. Limits on Land Disturbance – Phasing (10.2.5)

Sets limits on the area of land that may be cleared at any given time (20-acres), and establishes requirements for phased clearing. *Refer to ESC handbook or other document for specific details of cutting trees, stumping, root raking (when, where and how). May want to consider exemptions for projects where this is not feasible or even desirable.*

- Once grading is initiated in one 20-acre section, a second 20-acre section may have stumps, roots, brush and organic matter removed.
- Grading may not proceed in the second 20-acre section until the first 20-acre section is stabilized.
- All open slopes must have erosion controls.

**Technical Subcommittee:** The 20-acre threshold for land disturbance should remain and be specified that this is 20 acres per discharge point. For disturbances that must exceed 20 acres up to disturbances of 40 acres, such as golf courses, additional construction stormwater management requirements will be applied. CWP should provide recommendations for additional management tools, which would include recommendations for controlling wind erosion. For any disturbances greater than 40 acres, a variance would be required. Committee would also like CWP to provide guidance on what to do when a project ceases construction prior to project completion.

#### 4.4. Clearing - Limits of Disturbance

Requires limits of disturbance (LOD) to be clearly marked on all plans and at the site. Specific features to be contained within the LOD include important natural features identified in a site natural resources assessment (Section 3.1) that are used to reduce runoff as well as areas to be used for permanent infiltration and bioretention BMPs. A setback (e.g., 20 feet) from these features shall be provided and also included in the LOD. *Need to determine appropriate setback distance. Refer to ESC Handbook for tree protection and LOD flagging specifications. May want to consider requiring designers to provide coordinates of the LOD.*

**Technical Subcommittee:** Agree that requirement for marking LOD on plans and on site should be included in regulations; however, the method of marking the LOD should be included in the E&S Handbook supporting technical document. Metes and bounds of the LOD is not necessary; this would only be applied to permanent easements protecting a resource. The setback distances should be resource-specific and exceptions should be provided for setback distances on stormwater outfalls. Buffers and setbacks as required by local land use agencies should be a requirement to be shown on Sediment and Stormwater Plans so that plan reviewers can verify that they're outside of the LOD.

#### 4.5. Stabilization (10.2.1)

Requires plans to have details of temporary and permanent stabilization measures and provides a timeline within which (MRA: initial stabilization) stabilization must be achieved. Includes performance standards for vegetative establishment, such as 70% vegetative establishment required prior to release of performance bond and/or issuance of certificate of occupancy. Soil testing is required if germination does not occur within specified time period.

Technical Subcommittee: With regard to tying stabilization to CO or project closeout, the definition of vegetative establishment may need to be different for individual residential lots within a residential subdivision as opposed to vegetative establishment on a commercial development site. The requirement for 14-day stabilization should remain in new regulations.

## Section 5. Performance Criteria for Post-Construction Stormwater Management

### 5.1. General Criteria (10.3.1, 10.3.2, 10.3.3, 10.3.6, 10.3.7, 10.3.8, 10.3.9, 10.3.10, 10.3.14, 10.3.16, 10.3.17)

Establishes general design objectives for post-construction stormwater management, including compliance with standards and specifications in the most recent BMP Handbook and approved supplements, hydrologic computation assumptions, and compliance with federal and state regulations. Outlines the overall process for stormwater management on a site (*Refer to new flow chart to be developed concurrently*):

- States overall preference for a site design approach to reduce runoff and mimic ~~pre-development hydrology~~ watershed processes through an optimization approach.
- Identifies that stormwater criteria and available waivers are based on watershed position, downstream analysis, and whether the site is included in an approved watershed plan

Technical Subcommittee: Waivers, exemptions and/or variances that apply to all regulated storm events should be included in Section 5.1. Those that apply to specific regulated events should be listed in the appropriate section for those events (i.e., Sections 5.2, 5.3 or 5.4)

- *Continued discussion is needed on how to address natural resources conservation, as it may not be practical or feasible to protect natural resources through the construction phase alone. The Sediment and Stormwater Law does allow for establishment of “a comprehensive sediment and stormwater program to conserve and protect land, water, air and other resources of the state.” This may lend some backing to including natural resources protection as part of stormwater management criteria.*

Technical Subcommittee: The concept of preserving natural areas for stormwater management was generally agreed upon by the Subcommittee, but most members felt this needs to have some sort of quantitative basis for implementation.

### 5.2. Resource Protection **Event** Criteria

Identifies specific stormwater criteria for protection of water quality and natural resources. Identifies conditions under which a waiver of resource protection criteria may be granted, depending on the results of the Stormwater Impact Study. Optimized recharge volume for each site will be determined by delegated agency based on its recharge potential.

#### 5.2.a. Criteria (10.3.5)

- Maximize runoff reduction for the volume of the 1-year, 24-hour storm through recharge/infiltration, re-use and other runoff reduction practices.

Technical Subcommittee: Provision must be made in this section to address additional requirements that may apply as a result of TMDLs, pollutants of special concern, etc. (See

### Sections 10.3.5.4 and 10.3.5.5 of existing Regulations)

- Acceptable runoff reduction strategies (*Refer to checklist of acceptable strategies and associated volume reduction credit -includes conservation design techniques and Green Technology BMPs*). The use of conservation design techniques to reduce impervious cover, conserve natural areas, disconnect impervious cover and re-use runoff shall be used to the maximum extent practicable. *Discussion point: do we assume that if BMPs are acceptable for runoff reduction, they are also acceptable for treatment purposes?*

**Technical Subcommittee:** Subcommittee members felt this needs to have a quantitative basis.

- Documentation of runoff reduction strategies (*Refer to checklist that requires documentation that all conservation design techniques and Green Technology BMPs were considered and incorporated into the site design, as practicable*).
- Provide storage and release (over a 24-hour period) for any portion of the 1-year storm runoff volume that is not recharged/reduced through extended filtration, extended detention, or other practice that delays release until after the storm hydrograph. *This requires further discussion about how to determine the appropriate release rate (e.g., distributing the volume over a 24 hour period does not account for changes in time of concentration)*.

**Technical Subcommittee:** Subcommittee members felt there should be some consideration for relaxing the 24 hour detention time in cases where only a small percentage of the runoff from the Resource Protection Event needs extended detention. This could result in very small control devices that could be prone to clogging.

#### 5.2.b. Waivers (3.2)

- Projects that return disturbed area to pre-development runoff condition and pre-development cover is unchanged at project end
- Redevelopment/infill sites where impervious cover does not increase
- Linear disturbances of less than 10 feet in width (*discuss adding a threshold for impervious surfaces*)
- Individual residential detached units, or agricultural structures where the total disturbed area is less than 1 acre (*discuss adding a threshold for impervious surfaces*)
- Agricultural structures for locations included in approved soil and water conservation plans

**Technical Subcommittee:** Review waivers, exemptions and/or variances; only those that apply specifically to the Resource Protection Event should be in this section.

#### 5.3. Conveyance **Event** Criteria

Identifies specific stormwater criteria for conveyance of stormwater. Identifies conditions under which a waiver of conveyance criteria may be granted, depending on the results of the Stormwater Impact Study.

##### 5.3.a. Criteria (10.3.4)

- Conduct downstream analysis and identify physical watershed conditions (e.g., watershed position). Identify erosivity and capacity problems.

**Technical Subcommittee:** This would only apply in areas in which release without detention has been identified as the optimal management strategy.

- Employ recharge and runoff reduction practices for required storage to extent possible.
- For runoff volume not reduced under Section 5.2, provide detention for the difference in runoff volume between the post-development 10-year, 24-hour storm and the post-development 1-year, 24-hour storm (prior to infiltration under Section 5.2). *Need to determine appropriate detention time and release rate.*

**Technical Subcommittee:** This would apply only in areas in which detention has been identified as the optimal management strategy.

- New structures or crossings within the floodplain shall have adequate capacity for the ultimate build-out condition.

**Technical Subcommittee:** Some members thought DelDOT and other agencies used “existing condition” as opposed to “ultimate build-out condition” for capacity analysis; needs further discussion.

#### 5.3.b. Waivers (3.2)

- Same as Section 5.2.b  
Projects will not generate an increase in the 2-year post-development peak discharge rate of more than 10% above the 2-year pre-development peak discharge rate and will have no adverse impacts on receiving waters. *Needs discussion about whether to keep this one.*

**Technical Subcommittee:** This would no longer be applicable under a volume-based approach, however there should be some consideration given for waiving a “minimal discharge” for this event.

- Non-erosive conveyance to tidewater (*may need discussion*)
- Detention and release would aggravate downstream flooding based on position in watershed/downstream analysis as verified by the delegated agency.

**Technical Subcommittee:** Review waivers, exemptions and/or variances; only those that apply specifically to the Conveyance Event should be in this section.

#### 5.4. Flooding Event Criteria

Identifies specific stormwater criteria for flood control. Identifies conditions under which a waiver of flood control criteria may be granted, depending on the results of the Stormwater Impact Study.

##### 5.4.a. Criteria (10.3.4)

- Conduct downstream analysis and identify physical watershed conditions (e.g., watershed position). Identify erosivity and capacity problems.

Technical Subcommittee: This would only apply in areas in which release without detention has been identified as the optimal management strategy. Criteria for coastal flood zones should be different than those in riverine floodzones.

- For runoff volume that is not reduced through runoff reduction measures, provide detention for the difference in runoff volume between the post-development 100-year, 24-hour storm and the post-development 10-year, 24-hour storm. *Need to determine appropriate detention time and release rate.*

Technical Subcommittee: This would apply only in areas in which detention has been identified as the optimal management strategy. Criteria for coastal flood zones should be different than those in riverine floodzones.

- New structures or crossings within the floodplain shall have adequate capacity for the ultimate build-out condition.

Technical Subcommittee: Some members thought DelDOT and other agencies used “existing condition” as opposed to “ultimate build-out condition” for capacity analysis; needs further research.

#### 5.4.b Waivers (3.2)

- Same as Section 5.3.b

Technical Subcommittee: Review waivers, exemptions and/or variances; only those that apply specifically to the Flooding Event should be in this section.

#### 5.5. Sensitive Waters and Wetlands: Enhanced Criteria (optional)

Provides for delegated agencies to develop and adopt additional and/or more stringent stormwater criteria for specific watersheds, based on approved watershed plans.

Planning and Land Use Subcommittee: Recommend that Section 5.5 mirror the Designated Watershed and Subwatershed section of the Law, with less definition than what is currently in Section 9.0 Criteria for Designated Watersheds in the Regulations. Proposed Section 5.5 should reflect coordination with the Clean Water Advisory Council for prioritization of watersheds and funding of watershed studies.

#### 5.6. Redevelopment Criteria

Identifies specific stormwater criteria for redevelopment and infill projects. Criteria are listed in priority order and applicants must document that they have considered each option. The approach selected for a particular site must be approved based on the results of the Stormwater Impact Study to ensure the project does not have any major impacts. One or a combination of the following criteria shall be met:

- Reduce existing impervious cover by at least 20%



- Provide management of the resource protection storm for at least 30% of the site's existing impervious cover and for all new impervious cover
- Use green technology BMPs across the site
- Provide equivalent stormwater treatment at an off-site facility
- Address downstream channel and flooding issues through stream restoration and/or off-site remedies
- Contribute to a watershed project through a fee-in-lieu payment through a variance request or as part of an approved watershed plan

#### Urban Subcommittee:

- Define Redevelopment – New Castle County has a definition in code. Review and compare with Kent and Sussex County. What do local entities consider/define as redevelopment? Consider characterizing redevelopment sites and applying different rules/criteria to each of the following.
  - General redevelopment – no change in impervious cover or 100% impervious. Allow for incentives in special revitalization areas. Provide incentives for developing on these sites. Consider commercial vs residential – need different requirements. Conveyance systems also need to be considered in criteria.
  - General redevelopment but with onsite or nearby drainage concerns. May provide opportunity for incremental improvement. Require additional practices, i.e. City of Wilmington requires disconnect of downspouts from stormdrain system.
  - Redevelopment with significant increase in impervious, but economic drivers. Consider requiring developer to provide quality treatment for 20% of existing impervious cover plus whatever increase caused by the redevelopment project. Or measure water quality requirements for difference between impervious cover pre and post redevelopment.
  - Infill – Urban site, with infrastructure available and development surrounding. Previously undeveloped. Concerns about infill sites include inadequate conveyance for small subdivisions, incremental redevelopment, building up sites may cause some parcels to be left in a hole.
  - Revitalization – currently disincentives by the regulations and laws. Should this be handled through variances and/or waivers?
  - Brownfields – use federal definition. What does EPA require on these sites? Brownfield sites should have the least amount of requirements/criteria for water quality. Decision on requirements should be based on remediation needed/completed on site, use of funds (public vs private), etc. Do not provide disincentives in regs for brownfield remediation. Need flexibility.
- Low Impact Development
  - Credits for green building/green technology bmps should be considered, based on science.
  - Should be pursued in local ordinances, not necessarily stormwater management regs.
  - Stormwater regulations DO need to prioritize local requirements for reduced impervious cover based on things like source water protection.
  - Allow in-structure devices on redevelopment sites to help meet requirements.
- CSOs

- CWP should meet with City of Wilmington to look at what they are doing. They are the main (only) jurisdiction in the state dealing with this issue.
- Quantity is the issue – focus on reducing the amount of water entering the system during a storm event.
- **Incremental Increases in Impervious Cover**
  - Focus on source reduction strategies, but allow flexibility on the practices that can be used on redevelopment sites that can be used as a source reduction strategy.
  - Defined as additional impervious cover added to a lot (residential or commercial) after project is complete (i.e. sheds, pools, additional buildings) that the stormwater system may not have been designed to handle.
    - New Castle County does track cumulative changes.
    - Is it worth tracking this information statewide and implementing additional requirements? What is the threshold?

Technical Subcommittee Section 5.6 comments: Section should address methods to accommodate shifting drainage areas and drainage patterns due to redevelopment. The “Whats” that need to be included in this section: drainage, watershed position, is the site currently developed with stormwater management?, and whether a downstream analysis will be required or waived.

Policies and Procedures Subcommittee: Include required elements for management of incremental impervious increase, or “parking lot creep”. *Discussion for Urban Considerations subcommittee.*

#### 5.7. Contribution to a Watershed Project: Fee-in-Lieu

Describes conditions under which an off-site or watershed project can be used to comply with stormwater criteria:

- Require full on-site compliance to maximum extent practicable
- Allow fee-in-lieu payment for off-site project as part of variance request (Section 1.5)
- Allow fee-in-lieu as part of approved watershed plan with structured implementation (e.g., stormwater utility). In this case, fee-in-lieu might be encouraged or recommended by the approved authority
- Other off-site projects in the watershed as approved by the Department

#### **Urban Considerations Subcommittee:**

- Who would administer? How would this be done?
- Jurisdictional issues
  - What do we do with the money collected from fee in lieu?
  - How do you incorporate fee in lieu into current program framework? Stormwater utilities could manage/administer within own jurisdiction.
  - Who would be able to use the funds collected?
    - Ecological restoration projects
  - Does this issue need to be brought before the Clean Water Advisory Council?
  - Could a Type 20 account be used– for receipt of funds from other entities?
- Fee in lieu for infill or small sites

- Monies should be directed towards watershed where the projects are located – however this could necessitate administration of 42 separate accounts.
- DNREC/DeIDOT Policy – fee in lieu projects within subarea; mitigation
- Money used in basin rather than watershed or subshed – 4 accounts vs 42 accounts.
- Could the Conservation Districts serve as a clearinghouse?
- What types of projects could qualify for fee – in – lieu?
  - Stream restoration, planting trees, etc?
  - Others?
- Project should have diminimus potential to be used for fee in lieu.
- Fee in lieu should be the last option on would only apply to a few properties.
- Issue – Need permission to enter properties

## Section 6. Inspection of Stormwater Management BMPs

### 6.1. Certified Construction Reviewer Requirements (12)

Identifies conditions where a certified construction reviewer is needed (projects > 50 acres) and describes their functions, minimum requirements, training and responsibilities. Adds authorization to conduct maintenance inspections. *Note: discussion still needed on whether CCRs should be employed by the contractor or be a 3<sup>rd</sup> party. Revisit need for CCRs on projects < 50 acres?*

*Policies and Procedures: The threshold for which CCR would be required should be 20 acres of disturbance; anything greater than 20 acres disturbed would require heightened design (Technical Subcommittee's recommendation on Section 4.3) and the CCR requirement would reinforce that requirement. Include flexibility in the reg language to allow the delegated agency to waive or suspend CCR reporting for a particular site.*

*Staff Response: All sites would require a CCR but allow the Department and the delegated agency to waive or suspend CCR reporting for a particular site. Also provide language that addresses a reduction in inspection frequency.*

*Policies and Procedures: The CCR should be a 3<sup>rd</sup> party, still hired by the owner but not related to any company (i.e. CM, general or site contractor) under contract for construction of the project.*

*Staff Response: Instead of requiring a 3<sup>rd</sup> party CCR, prescribe that a non-performing CCR would be placed on probation. Other criteria such as requiring an owner to hire a different CCR would be provided for in a policy document.*

*Policies and Procedures: The P.E. responsibility should reflect DAPE's position on "responsible charge". The P.E. should more specifically be a civil, agricultural, (or geotechnical?) engineer with knowledge of the site for which the reporting is being done.*

*Policies and Procedures: Eliminate "authorization to conduct maintenance inspections". This should be a separate type of certification, if someone other than a PE would be doing maintenance inspections. Handle in Maintenance Section of regulations.*

### 6.2. Contractor Certification Program (13)

Describes required training, including inspection of permanent BMPs, and certification for contractors responsible for sediment and stormwater management at a site.

*Policies and Procedures: Clarify responsibilities of the Blue Card Holder (i.e. needs to be on site at least daily during land disturbing activity). Include a requirement for a test in order to receive certification.*

### 6.3 Notice of Construction Commencement (14.2)

Requires the applicant to notify the inspecting agency prior to construction commencement.

**Policies and Procedures:** Include a requirement for all sites to have a pre construction meeting unless otherwise waived.

#### 6.4. Inspection of BMPs

Outlines the general process for inspections and compliance, including maximum allowable timeframes for fixing problems. Describes specific items to inspect for construction site BMPs and permanent BMPs. *Refer to ESC handbook and BMP design manual for technical specs.*

6.4.a. General Requirements (14.1, 14.3, 14.4, 14.5, 14.6, 14.8, 14.9)

6.4.b. Construction Site BMPs (15.1)

6.4.c. Installation of Permanent BMPs (14.7)

6.4.d. Maintenance of Permanent BMPs

**Staff comment:** This section needs to be reflective of the two-step as-built process. An as-built would be completed under Section 6.4b or 6.4c whenever the permanent stormwater BMP is originally constructed. Another as-built would be completed prior to project closeout, which may be part of a closeout procedure covered within 6.4d.

#### 6.5. Inadequacy of System

This clause requires correction of BMPs that are not working properly, even if they are built according to approved stormwater management plans. *Requires some discussion about who should be financially responsible for this and identify conditions where the applicant or maintenance entity would pay (e.g., in cases of negligence).*

**Policies and Procedures:** Section 6.5 should address inadequacies of the plan during construction (i.e. delegated agencies has right to add, modify, or delete . . .). Refer to current Section 14.6 of the Regulations. Definitions of minor and major plan changes need to be included. Remove references to maintenance entity, implying inadequacies discovered following project completion, from this section and include this in Section 3's language on post construction stormwater BMP maintenance.

#### 6.6. Approval of As-Built Plans & Issuance of Certificate of Completion

States that the certificate of completion will be issued after approval of as-built plans and final inspection.

**Policies and Procedures:** Coordinate this section with the NOT requirements from 9.1.02.7.B. Provide detailed language stating that a new permit is required if permit cover has been terminated with an NOT and maintenance of the stormwater facilities needs to occur at a later time.

**Staff comment:** The stormwater facility should be completely inspected, as-built, and approved before entering into the project termination process.

## 6.7. Release of Performance Bond

Identifies when performance bond can be released for the construction phase (stabilization as per Section 4.5) and the post-construction phase (within 60 days of as-built approval or acceptance by responsible maintenance entity).

6.7.a. For Construction Stormwater Phase

6.7.b. For Completion of Permanent Stormwater BMPs (upon issuance of certificate of completion)

6.7.c. Transfer of BMPs to responsible maintenance entity

Policies and Procedures Subcommittee: Sections 3.9 and 6.7 cover much of the same ground. It is recommended that Section 3.9 be structured to address bonding of permanent stormwater BMPs, and that Section 6.7 cover the performance bonding of construction in general, including temporary BMPs and vegetative stabilization. Performance bond should be an option to be employed by delegated agencies, not a requirement.

## Section 7. Ongoing Maintenance for Stormwater BMPs (15)

\*\*\*Maintenance Subcommittee: Again, without the requirement of HOAs or maintenance corporation by the counties, this entire section (along with Section 3) will not work, as HOAs are now legally dissolving in both Kent and Sussex counties. Also, HOA is different than a maintenance corporation. The county needs to set up and require maintenance corporations. Must be a corporate entity.

### 7.1. Maintenance Responsibility ~~& Maintenance Escrow Fund (6.3, 10.3.12, 15.3, 15.4)~~

Identifies maintenance responsibilities of the party to be named in the maintenance agreement ~~(and identifies this or another party (e.g., developer) as responsible for contributing to the maintenance escrow fund. The escrow amount will be based on the first 10 years of the annual maintenance cost estimate submitted by the applicant. Identifies the regulated system requiring maintenance (e.g., all BMPs and storm drainage infrastructure, everything contained in a stormwater management easement). Note: need further discussion on who is appropriate responsible party for different situations, minimum standards for responsible party (e.g., required training) and responsible parties for major vs. minor activities.~~

Maintenance Escrow already discussed in Section 3 – they should be separate).

The responsible party named in the recorded stormwater maintenance agreement (Section 3.7) shall maintain in good condition and promptly repair and restore all structural and non-structural stormwater BMPs and all necessary access routes and appurtenances (grade surfaces, walls, drains, dams and structures, vegetation, erosion and sedimentation controls, and other protective devices). Such repairs or restoration and maintenance shall be in accordance with the approved stormwater management design plan, the stormwater maintenance agreement, and the stormwater maintenance plan.

**Maintenance Subcommittee:**

1. Maintenance plan first needs to be established. This should developed along with the S&S plans, but should be a separate plan that the owner gets. Make the actual approved maintenance plan also the maintenance agreement. Keep wordage simple.
2. Refer to some kind of guidance document that would contain the standard of maintenance, state-wide. Again, keep the language simple so that anyone can read it (ex. homeowners)
3. These regulations would only pertain to new developments. Need to consider what happens with the older developments.
4. Property owner required to post educational signage at all major BMP facilities, with dimensions of \_\_\_\_\_, to include educational aspects and maintenance (not warnings).
5. If not maintained by property owner, give delegated agency authority for enforcement?
6. If not done, can some designated entity actually do the work and charge for the amount?

**MAINTENANCE BY MAINTENANCE ORGANIZATION (Modified from SECTION 40.27.520 NCC Code)**

A. The maintenance organization shall not be responsible for maintaining open space and common facilities until:

1. The common facilities have been transferred to the maintenance organization according to \_\_\_\_\_ (the provisions of this Article?); and

2. If applicable, the developer has transferred control of the maintenance organization to the homeowners.

B. When the requirements of this section have been satisfied, the common facilities shall thereafter be maintained and kept in good order and repair by the maintenance organization.

C. All maintenance organizations created for the purpose of maintaining common facilities located in residential subdivisions are required to perform minor maintenance and inspections on their stormwater management facilities as required by State of Delaware Minimum Maintenance Requirements.

**Staff comment:** The basic guidance of the maintenance for the stormwater facilities should be tied to the land parcels rather than the HOAs. For example, the open space areas and SW facilities should be tied to all the collective parcels in the subdivision.

## 7.2. Transfer of Responsibility

Provides for transfer of maintenance responsibility with sufficient documentation from the developer to a subsequent owner, operator, or homeowners' association, upon meeting certain conditions. *Note: may require a good model legal agreement based on example of community septic systems.*

**Maintenance subcommittee:**

1. 1. Expand to explain what process new owner sign approved plan. Re-recorded with new

organization? Legal process? Should specify a standard. This would be a good place to tie into Section 6.6 Certificate of Completion, and use this as part of the process (referring to section 6.6).

2. Have new owner sign the approved maintenance plan to have it transferred over?
3. Developer shouldn't be able to turn it over until there is a certificate of completion.

- 7.3. Maintenance Inspection by ~~Stormwater Authority-Delegated Agency~~ (15.5, 15.6)  
Describes the general process for maintenance inspections (timing, frequency, what to look for).

Maintenance subcommittee: in current regulations, delegated agency is responsible for doing yearly maintenance inspections. Have the delegated agency perform maintenance inspections every two or three years, and the HOAs/Maintenance corporations do yearly inspections, to be submitted to delegated agency. Provide an easy template that can be completed and submitted (these already exist).

- 7.4 OLD 7.4 deleted. Please refer to 15.3 and 15.4 of current regulations for requirements and inspections, and stick more closely to that (maintenance subcommittee comment).

~~7.4. Maintenance Inspection by Certified Inspector~~

~~Allows for the use of CCR or other private inspectors for maintenance inspections, provided the required training and certification is completed.~~

- 7.4 New added recommendation from maintenance subcommittee: Any private company performing non-routine maintenance to stormwater BMPs, including aquatic vegetation control or structural repairs, must take the Certified Maintenance Inspector course. The course shall be developed under the direction of the Department. Certification is valid for \_\_\_ years. Define non-routine and routine maintenance. Non-routine maintenance is really "repairs" or "corrective repairs." There are really two categories of types of maintenance to consider: structural repairs and vegetative maintenance. This needs to be discussed further in terms of specifics of this concept. Require CCR certification, DE Aquatic Pesticide Applicator's license, and additional course?

Maintenance subcommittee: Require any scope of work to be sent to the delegated agency for any major repairs.

- 7.5. Maintenance by another entity (dSoil & Water Conservation Districts)~~delegated agency or utility~~

Provides an option for SWCDs delegated agencies, or stormwater utility, to be take over a stormwater facility to perform corrective repairs, provided that the party agrees to take it over. ~~responsible for long-term maintenance inspections.~~

Maintenance subcommittee: something to consider. Is this permanently taking over the facility, or temporarily?

- 7.6. Records of corrective actions Maintenance Activities



Requires records of installation, maintenance, ~~and~~ repairs, and any other documentation relating to maintenance of stormwater BMPs, to be created and retained for a minimum of 5 years (maintenance subcommittee: be sure to make this time frame consistent with DE Archives requirements and NPDES requirements) and be available upon request to the inspection authority.

#### 7.7 Failure to Provide Adequate Maintenance

Provides for enforcement measures in the event that adequate maintenance does not occur.

#### Maintenance subcommittee:

1. (For wording example, refer to NCC code SECTION 40.27.530). This must include both the developer and the HOA (once handed over)
2. If they don't do the maintenance, what are their penalties? Can Delegated agency perform the maintenance and charge them for it?
3. Should delegated agencies be granted authority to enforce measures to ensure adequate maintenance is provided?

#### **NEW: DUTY TO INFORM HOME BUYER**

**Revised from SECTION 40.27.150, NCC code)**

In residential home sales, the seller of a lot, or his or her authorized agent, has an affirmative duty to inform the purchaser about maintenance corporation membership and educate the purchaser about members' responsibilities. This duty requires the seller to provide the buyer with a copy of the maintenance agreement and Delaware Sediment and Stormwater Regulations. A written acknowledgment stating that the seller has fulfilled his or her duty under this section shall be signed by the purchaser.

**A. New subdivisions.** The developer of a new subdivision shall maintain a record of the individual acknowledgments evidencing the fact that the purchaser of a lot within the subdivision has been provided a copy of the maintenance declaration and the bylaws.

1. The seller shall obtain the purchaser's acknowledgment at or before the time an agreement of sale is executed. Each acknowledgment shall be presented to the \_\_\_\_\_ (entity?) as a condition precedent to the issuance of each certificate of occupancy.

**B. Existing homes.** In existing subdivisions that are encumbered with maintenance declarations, the purchaser, at or before settlement, shall sign an acknowledgment evidencing the fact that the seller has provided a copy of the maintenance declaration and the bylaws to purchaser.

**NEW item (maintenance subcommittee):** no modifications to conveyance systems or stormwater systems without an approved plan

## Section 8. Violations, Enforcement and Penalties

Staff Response: Provide language or reference Section 9.1.02.2.I for connection to the General Permit.

### 8.1. Violations (8.6)

Defines violations as they relate to this regulation.

Any action or inaction which violates the provisions of this Ordinance, the requirements of an approved stormwater management design plan or permit, and/or the requirements of a recorded stormwater maintenance agreement may be subject to the enforcement actions outlined in this Section. Any such action or inaction may be abated by injunctive or other equitable relief. The imposition of any of the penalties described below shall not prevent such equitable relief.

### 8.2. Notice of Violation (14.3.4)

Outlines process for notifying applicant or responsible party of a violation and required compliance.

### 8.3. Penalties (14.10, 16)

Describes the various penalties enforceable by the authority for violations (e.g., cease and desist order, withholding permits, fines, and mitigation of damages).

In the event the remedial measures described in the notice of violation have not been completed by the date set forth for such completion in the notice of violation, any one or more of the following actions or penalties may be taken or assessed against the person to whom the notice of violation was directed.

- Stop work order
- Withhold certificate of occupancy
- Suspension, revocation or modification of permit
- Civil penalties
- Criminal penalties

### 8.4. Appeals

Sends appeals of authority decisions to the court.

### 8.4. Remedies Not Exclusive

States that remedies undertaken as part of these regulations are not exclusive of any other remedies available under other applicable laws.