City of Wilmington Department of Public Works
Louis L. Redding City/County Building
800 French St. - 6th Floor
Wilmington, DE 19801

Step 3: Sediment & Stormwater Management Plan Review Checklist

DATE RECEIVED: _____PROJECT NUMBER: _____

PROJECT NAME: _____

The items contained on this checklist are necessary to properly evaluate and determine the completeness of any plan submitted for approval under the Delaware Sediment and Stormwater Regulations.

Complete all items. It is understood not all items will be applicable to all projects and as such marking an item "N/A" is acceptable.

I. General Information:

1) _____ One set of plans and reports, and a completed checklist for each review. An electronic hardcopy of the plan and reports (i.e., PDF) should also be transmitted for **final** approval. Submit electronic program files as applicable upon request.

   a) ____AutoCAD / Microstation

   b) ____DURMM Excel files from the latest version available on DNREC website

   c) ____Hydrologic and hydraulic modeling files (i.e. HydroCAD or similar)

2) _____ Resubmitted hydraulic and hydrology computations and plans, reflecting the updated site conditions, and be revised per the review comments from the preliminary submittal or the previous full submittal. They should continue to follow the requirements specified in the Preliminary Sediment and Stormwater Management Plan Review Checklist.

3) _____ All plans scaled to 24" x 36" (minimum) sheets unless otherwise approved.

4) _____ Index sheet illustrating the entire project on one 24" x 36" (minimum) sheet when two or more sheets are used to illustrate the plan view.

5) _____ North arrow.

6) _____ All plan views to a defined scale with a scale bar.

7) _____ Names of adjacent property owners.

8) _____ Existing and proposed contours based on NAVD 88 vertical datum at 1-foot intervals (2-foot intervals can be provided for offsite drainage information based on the latest Lidar information).

9) _____ Existing and proposed spot elevations for small projects less than ½ acre of disturbance, based on NAVD 88 vertical datum on a 50-foot grid system. Include high and low points.

10) ____ Location of site in NAD 83 horizontal datum

11) ____ Copy of the Site Plan(s) and Grading Plan(s) as prepared for the local approval agencies for review and informational purposes.

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12) ____ Copy of the preliminary Record Plan as prepared for the local land use approval agency for review and informational purposes.

13) ____ Plan signed, dated, and sealed by a Licensed Professional in the State of Delaware.

14) ____ Sediment and Stormwater Management plans in the following order and title. The sheet list should appear on the cover sheet, and each plan sheet should be respectively titled (include the title of the plan within the title block or lower right-hand corner of the sheet):

a) ____Coversheet and General Notes

b) ____Overall Construction Site Phasing Plan (if applicable)

c) ____Overall Pre-Construction Site Stormwater Management Plan (if applicable)

d) ____Pre-Construction Site Stormwater Management Plan #X

e) ____Overall Construction Site Stormwater Management Plan (if applicable)

f) ____Construction Site Stormwater Management Plan #X

g) ____Construction Site Details and Notes (including the Sequence of Construction)

h) ____Overall Post Construction Stormwater Management Plan

i) ____Post Construction Stormwater Management Plan, Facility #X

j) ____Overall BMP Contributing Drainage Area Plan (to be included in the final Stormwater Report)

k) ____BMP Contributing Drainage Area Plan (to be included in the final Stormwater Report)

l) ____Pre-Developed Subarea Limit of Disturbance Drainage Area Plan (to be included in the final Stormwater Report)

15) ____ For final approval, the following items should be submitted:

a) ____Completed Notice of Intent (NOI) and associated fee should be submitted to DNREC.

b) ____Copy of the recorded permanent easement when a stormwater facility or outfall is located outside of the property boundary.

c) ____Wetland permit when construction of a stormwater facility will impact State and/or Federal wetlands.

d) ____Approval letter from the DNREC Drainage Section for any encroachment or change in runoff discharge to an existing tax ditch or adjacent right-of-way.

II. Coversheet:

16) ____ Project Header:

a) ____Project Name (and Phase, if applicable; to duplicate in the title block on each sheet).

b) ____Title of Plan Set: Sediment and Stormwater Management Plans (to duplicate in the title block on each sheet)

c) ____Project Location (including watershed, hundred, town, county, etc., as applicable).

d) ____Project tax map identification number(s).

17) ____ Legend indicating plan symbols and lines, including but not limited to, soils, drainage area information, grading, and site information.

18) ____ Vicinity map with a scale appropriate to project size and the site boundary within the map. The map should be no smaller than 4”x4” and clearly indicate at least one intersecting road.

19) ____ Project Notes:

a) ____Parcel Data:

i) ____ Project tax map identification number(s)

ii) ____ PLUS Number (if applicable)

iii) ____ DNREC Sediment and Stormwater Program (or relevant Delegated Agency) Number

iv) ____ Site Address (or Nearest Intersecting Street and Distance between)

v) ____ Latitude and Longitude State Plane coordinates, with approximate geographical location (i.e., Benchmark #1, Northeast Site Corner, etc.) and in degree decimal format. (xx.xxxxxx, -xx.xxxxxx)

vi) ____ Existing Site Area

vii) ____ Proposed Site Area

viii) ____ Existing Wetland Area

ix) ____ Proposed Condition (i.e., number of lots, total building square footage, etc.)

x) ____ Proposed Discharge Location(s)

xi) ____ Proposed Total Limit of Disturbance per Discharge Location

b) ____Contact Data: (Name, Company, Full Street Address, Phone Number, e-mail Address)

i) ____ Owner

ii) ____ Developer

iii) ____ Designer

20) ____ Signed Owner’s Certification that states “I, the undersigned, certify that all land clearing, construction and development should be done pursuant to the approved plan and that responsible personnel (i.e., Blue Card Holder) involved in the land disturbance will have a Certification of Training prior to initiation of the project, at a DNREC sponsored or approved training course for the control of erosion and sediment during construction. In addition, I grant the DNREC Sediment and Stormwater Program and/or the relevant Delegated Agency the right to conduct onsite reviews, and I understand my responsibilities under the NPDES Construction

General Permit, as referenced on this Coversheet." Signed in ink on each plan submitted or on an original reproducible. Include the owner's name and title printed under the signature line.

21) ____ If during the SAS review meeting, it is determined that a wetland delineation is required onsite, include a Wetland Certification, signed in ink, stating the site has been examined to both State and Federal requirements. The following should be used unless an alternate has been approved: "This property, tax map #XXX, has been examined by [company name] for the presence of Waters of the United States, including wetlands (Section 404 and Section 10), State subaqueous lands and State regulated wetlands as established by the reviewing agencies in the form of manuals, policies and procedures in place at the time that the investigation was conducted. The wetland information contained in this plan set is in accordance with this criteria [or, There were no wetlands found within the subject property], per State JD #XXX and/or Army Corps JD #XXX [as applicable].

22) ____ Signed Licensed Professional Certification that states: "I hereby certify that this plan has been prepared under my supervision and to the best of my knowledge complies with the applicable state and local regulations and ordinances." Signed in ink or an original reproducible. Include the Licensed Professional's name and title printed under the signature line.

23) ____ Include the following Standard Sediment and Stormwater Construction Notes:

a) ____ The DNREC Sediment and Stormwater Program *[or the relevant Delegated Agency]* shall be notified in writing 5 days prior to commencing with construction. Failure to do so constitutes a violation of the approved Sediment and Stormwater Management Plan.

b) ____ Review and/or approval of the Sediment and Stormwater Management Plan shall not relieve the contractor from his or her responsibilities for compliance with the requirements of the Delaware Sediment and Stormwater Regulations, nor shall it relieve the contractor from errors or omissions in the approved plan.

c) ____ If the approved plan needs to be modified, additional sediment and stormwater control measures may be required as deemed necessary by DNREC or the Delegated Agency.

d) ____ Following soil disturbance or redisturbance, permanent or temporary stabilization shall be completed for all perimeter sediment controls, soil stockpiles, and all other disturbed or graded areas on the project site within 14 calendar days unless more restrictive Federal requirements apply.

e) ____ All erosion and sediment control practices shall comply with the Delaware Erosion and Sediment Control Handbook, latest edition.

f) ____ At any time a dewatering operation is used, it shall be previously approved by the Agency Construction Site Reviewer for a non-erosive point of discharge, and a dewatering permit should be approved by the DNREC Well Permitting Branch.

g) ____ Approved plans remain valid for 5 years from the date of approval.

h) ____ Post construction verification documents shall be submitted to the Department *[or the relevant Delegated Agency]* within 60-days of stormwater management facility completion.

i) ____ Approval of a Sediment and Stormwater Management Plan does not grant or imply a right to discharge stormwater runoff. The owner/developer is responsible for acquiring any and all

agreements, easements, etc., necessary to comply with State drainage and other applicable laws.

j) ____The Notice of Intent for Storm Water Discharges Associated with Construction Activity under a NPDES General Permit for this project is # (to be filled in once received). The permittee of record shall not be relieved of their responsibilities until a Notice of Termination has been processed by the Department.

k) ____The owner shall be familiar with and comply with all aspects of the NPDES Construction General Permit.

l) ____The contractor shall at all times protect against sediment or debris laden runoff or wind from leaving the site. Perimeter controls shall be checked daily and adjusted or repaired to fully contain and control sediment from leaving the site. Accumulated sediment shall be removed when it has reached half of the effective capacity of the control. In addition, the contractor may need to adjust or alter measures in times of adverse weather conditions, or as directed by the Agency Construction Site Reviewer.

m) ____Before any earthwork or excavation takes place, the contractor should call Miss Utility at 811 or 1-800-282-8555 at least 48 hours prior to construction, to have all existing utilities marked onsite.

n) ____Best available technology (BAT) shall be employed to manage turbid discharges in accordance with requirements of 7 Del.C. Ch. 60 and the current Delaware Construction General Permit (CGP).

o) ____Documentation of soil testing and materials used for temporary or permanent stabilization including but not limited to soil test results, seed tags, soil amendment tags, etc. shall be provided to the Department *[or the relevant Delegated Agency]* to verify that the permanent or temporary stabilization has been completed in accordance with the approved plan.

p) ____The Department *[or the relevant Delegated Agency]* may require additional soil testing and reapplication of permanent or temporary stabilization in accordance with the specifications in the Delaware Erosion and Sediment Control Handbook, or alternative measures that provide functional equivalency.

q) ____When directed by the Department [*or the relevant Delegated Agency]*, the Owner shall acquire the services of a third party Certified Construction Reviewer (CCR) to perform weekly construction reviews. Sediment and Stormwater management Plans approved by the Department shall have a third party CCR.

24) ____List of all sheets and their corresponding sheet number for all Sediment and Stormwater Management Plans.

25) ____Minimum 3”x5” clear area for an approval stamp on the right third of the coversheet.

III. Construction Site Stormwater Management Plans

26) ____Overall Construction Site Phasing Plan:

a) ____Only when the site has more than one limit of disturbance. Projects should be phased so that no more than 20 acres are disturbed at any one time. Grading of the next phase cannot proceed until temporary or permanent stabilization of the first 20-acre section is accomplished.

b) ____Extents of each phase clearly indicated in relation to the site plan (no existing or proposed grading).

c) ____Indicate the location of the detailed sheets by match line and page number reference.

d) ____Summary/legend for the limit of disturbance areas, indicating their total disturbed acreage and the lots, buildings and/or stormwater facilities that are included within the limit of disturbance.

27) ____ For subsequent Pre-Construction and Construction Site Stormwater Management Plans:

a) ____"Limit of disturbance" line(s).

b) ____Total disturbed acreage on the plan if an Overall Phasing Plan has not been included.

c) ____Existing contours a minimum of 100 feet beyond the limit of disturbance. LiDAR 2' contours are acceptable for offsite areas.

d) ____State and Federal wetlands delineated.

e) ____All streams and drainage ways delineated.

f) ____The National Flood Insurance Program 100 Year Flood Zone delineated.

g) ____Project benchmark with the elevation in NAVD 88 vertical datum and NAD 83 horizontal datum.

28) ____ Overall Pre-Construction Site Stormwater Management Plan (as determined at the SAS review meeting):

a) ____Only for sites that cannot be shown in their entirety at the maximum scale of 1"=100'.

b) ____Entire site boundary in existing conditions plan view (i.e., site boundary, existing contours, wetlands, tree lines, existing structures/utilities to remain or to be removed, etc.).

c) ____Location of all perimeter controls, stockpile locations, sediment trapping facilities, and other construction stormwater management controls needed for demolition and bulk grading (i.e., silt fence, stabilized construction entrances, temporary swales, inlet protection for existing inlets, sediment basins, etc.).

d) ____Location of the detailed sheets by match line and page number reference.

e) ____Legend for all of the construction site lines and symbols used within the Pre-Construction Plan (i.e., silt fence, limit of disturbance, temporary berm, etc.). The lines and symbols shall be as specified in the Delaware Erosion and Sediment Control Handbook, latest edition. If an Overall plan is not needed, provide the legend on the singular Pre-Construction Site Stormwater Management Plan.

29) ____ Pre-Construction Site Stormwater Management Plan (as determined at the SAS review meeting):

a) ____For all sites at a maximum scale of 1" = 100'.

b) ____Entire site boundary in an existing conditions plan view (i.e., site boundary, existing contours, wetlands, tree lines, existing structures/utilities to remain or to be removed, etc.).

c) ____Location of all perimeter controls, stockpile locations, sediment trapping facilities, and other construction stormwater management controls needed for demolition and bulk grading (i.e., silt fence, stabilized construction entrances, temporary swales, sediment basins, etc.).

d) ____Detailed labels and specifications for the controls used (i.e. “Data to be Provided” or “Data” blocks from the Delaware Erosion & Sediment Control Handbook, latest edition, details).

30) ____Overall Construction Site Stormwater Management Plan:

a) ____Only for sites that cannot be shown in their entirety at the maximum scale of 1”=50’.

b) ____All construction stormwater management controls for the site in relation to the site’s grading and stormwater facilities.

c) ____Indicate the location of the detailed sheets by match line and page number reference.

d) ____Legend for all of the construction site lines and symbols used within the plan set (i.e., silt fence, limit of disturbance, inlet protection, etc.). The lines and symbols should be as specified in the *Delaware Erosion and Sediment Control Handbook*, latest edition. If an Overall plan is not needed, provide the legend on the singular Construction Site Stormwater Management Plan.

31) ____Construction Site Stormwater Management Plan(s):

a) ____For all sites at a maximum scale of 1” = 50’.

b) ____All construction stormwater management controls for the site in relation to the site’s grading and stormwater facilities.

c) ____Detailed labels and specifications for the controls used (i.e. “Data to be Provided” or “Data” blocks from the Delaware Erosion & Sediment Control Handbook, latest edition, details).

d) ____Location of all utilities, construction staging areas, geothermal well-fields, and any/all other areas that construction equipment will traverse or disturb. These areas should be within the limit of disturbance and be provided with appropriate construction site controls.

32) ____For Pre-Construction and Construction Site Stormwater Management Plans, locate ***and*** label all construction site stormwater control practices on the plans as previously mentioned. The following should be included, unless supporting evidence of why they are not necessary is addressed in the revised Stormwater Management Report. The list is not exhaustive and the construction site design should include any/all control practices contained within the *Delaware Erosion and Sediment Control Handbook*, or others as approved by DNREC, that are necessary to prevent sediment and pollution discharge from the site.

a) ____An approved perimeter control placed downslope of all disturbed areas (or surrounding “flat areas”) to protect against sediment laden runoff from leaving the site or entering non-disturbed areas. It should be placed parallel to the contours and keyed perpendicular to the contours at the limits to prevent sediment from washing around the ends. Locate and denote the type with any specifications.

b) ____Reinforced and/or super silt fence in areas of steep slopes and/or adjacent to sensitive areas such as wetlands, streams, and drainage ways.

c) ____Silt fence behind the curb lines if site conditions warrant.

d) ____Orange safety fencing provided around all infiltration areas and noted that no heavy construction equipment should traverse the future infiltration area.

e) ____Orange safety fencing is recommended to be placed around the drip line of all preserved trees.

f) ____Soil stockpile areas delineated for each phase of construction. Locate stockpiles on areas with little or no slope. Stockpiles surrounded with an approved perimeter control.

g) ____Stabilized construction entrance(s) for each phase of construction and appropriate measures to ensure traffic uses the entrance (i.e., keying silt fence up to the entrance).

h) ____Sediment traps and basins as appropriate and sized to accommodate 3,600 cubic feet of storage per acre of contributing drainage area until project stabilization is complete. These structures should be located at the base of the drainage area and include the top of slope elevation, bottom elevation, outlet elevation, dimensions, proposed volume, required volume, type of trap or basin, a minimum 2:1 length to width ratio and contributing drainage area. Include details, cross-sections, and specifications. This information can be combined with the facility's Post Construction Stormwater Management Plan as appropriate.

i) ____Specify the location, DNREC denoted type, and an example product for all stabilization practices, including any treatments, seeding, mulching and/or matting, both temporary and permanent.

j) ____Erosion control matting on slopes of 3:1 or greater and in areas of concentrated flow. Specify the DNREC denoted type, with an example product, and the location of the matting.

k) ____Channel interruptions in all swales, ditches and channels, with velocities greater than 2 feet/sec. Locate and denote the type with any specifications.

l) ____Steep slope interruption by use of straw wattles, coir logs, etc. Locate and denote the type with any specifications.

m) ____Appropriate inlet protection for all catch basins and culvert inlets. Locate and denote the type with any specifications.

n) ____Diversions should be used to direct run-off into traps. When sediment laden stormwater is directed to traps and basins by closed pipe systems, temporary diversions should be used to direct stormwater to traps and basins until closed pipe systems are operational. Locate and denote the type with any specifications.

o) ____Outlet protection at all points of discharge from pipes, channels and spillways. Locate and provide details, cross-sections and specifications, including d_{50} stone size, stone depth, outlet dimensions, and type of geotextile fabric.

p) ____All stone, with the exception of check dams, underlain with a geotextile fabric, or approved equivalent practice. Geotextile fabric specifications should be provided for various applications with the DNREC denoted type and an example product.

q) ____Location of a concrete washout station and construction staging areas, including dumpster(s). Note that if the locations are to be moved, it should be approved in writing by the Agency Construction Site Reviewer.

IV. Construction Site Details and Notes:

33) ____ Specify whose responsibility it will be to maintain and repair all erosion and sediment control and stormwater management practices during construction and utility installation.

34) ____ Stabilization measures to be initiated if dust control becomes a problem.

35) ____ Volume of any spoil or borrow material.

36) ____ Detailed, site specific sequence of construction. The sequence of construction should include the following activities as applicable, with Notes included as provided:

a) ____Notification. Note: Notify the DNREC Sediment and Stormwater Program [or relevant Delegated Agency] in writing at least five (5) days prior to the start of construction. Failure to do so constitutes a violation of the approved Sediment and Stormwater Management Plan.

b) ____Pre-construction meeting. Note: Prior to any clearing, installation of sediment control measures or grading, a pre-construction meeting shall be scheduled and conducted with the Agency Construction Site Reviewer. The landowner/developer, contractor, and third party Certified Construction Reviewer (CCR) are required to be in attendance at the pre-construction meeting; the designer is recommended to attend.

c) ____Clearing and grubbing for those areas necessary for installation of perimeter controls.

d) ____Construction of perimeter controls, including sediment traps.

e) ____Perimeter control review. Note: All perimeter controls are to be reviewed by the Agency Construction Site Reviewer and approved prior to proceeding with further site disturbance or construction.

f) ____Remaining clearing and grubbing.

g) ____Utility installation.

h) ____Road grading.

i) ____Grading for the remainder of the site.

j) ____Maintenance of construction site stormwater management BMPs. Note: The contractor should at all times protect against sediment or debris laden runoff or wind from leaving the site. Perimeter controls should be checked daily and adjusted and/or repaired to fully contain and control sedimentation on the site. Accumulated sediment should be removed when it has reached half of the effective capacity of the control. In addition, the contractor may need to adjust or repair measures in times of adverse weather conditions, or as directed by the Agency Construction Site Reviewer.

k) ____Sediment trap conversion.

l) ____Stormwater facility construction. Note: Notify the person responsible for stormwater system construction review at least 3 days prior to the start of the stormwater system construction; stormwater facilities must be reviewed throughout their construction.

m) ____Final grading, landscaping or stabilization

n) ____Removal of sediment control practices. Note: Erosion and sediment control devices to be removed only after work in an area has been completed and stabilized, with written approval from the Agency Construction Site Reviewer.

o) ____Project closeout. Note: The termination of the Construction General Permit will require submission and acceptance of the Post Construction Verification Documents, including final stabilization throughout the site, all elements of the Sediment and Stormwater Management Plan implemented, and acceptance of the final Operation and Maintenance Plan.

37) ____When site disturbance will exceed 20 acres, a phased sequence of construction is required. Note: Prior to commencing a new phase of construction, the contractor shall receive approval from the Agency Construction Site Reviewer that the previous phase has been sufficiently stabilized.

38) ____Details and specifications for all erosion and sediment control management practices used from the *Delaware Erosion and Sediment Handbook* (or unusual practices approved for use by DNREC) and reproduced as close to their native 8.5” x 11” size as practicable. Most projects typically include the following details:

a) ____Stabilized Construction Entrance

b) ____ Perimeter Control (i.e., Silt Fence, Temporary Berm, etc.)

c) ____Temporary and Permanent Seeding and Stabilization

d) ____Sediment Trapping (i.e., Inlet Protection, Sediment Basins, etc.)

e) ____Stormwater Pollution Prevention Plan (SWPPP) elements

i) ____ Construction Site Waste Management & Spill Control

ii) ____ Concrete Washout

iii) ____ Concrete Mixing Operation

f) ____Dewatering Practice(s)

g) ____Individual Lot Control (for residential use only)

h) ____All other applicable details to the site

39) ____“Data” for all Erosion and Sediment Control practices having design data criteria. The data should be provided in the corresponding detail, or a note should be provided to refer to the relevant chart for the information.

V. Post Construction Stormwater Management Plan:

40) ____ Overall Post Construction Stormwater Management Plan indicating the location and identification of all stormwater facilities in relation to the proposed site and the existing and proposed grading.

a) ____ The National Flood Insurance Program 100 Year Flood Zone delineated.

b) ____ Project benchmark with elevation in NAVD 88 vertical and NAD 83 horizontal datum identified.

c) ____ Easements, rights-of-way, and/or demarcation of where public maintenance responsibility ends and private maintenance begins throughout the stormwater and drainage system, with responsible entity for the maintenance in each area.

41) ____ Detailed Post Construction Stormwater Management Plan per facility clearly showing the proposed construction and specifications, including:

a) ____ Plan view of the facility indicating any/all benches, inlets, outlets and their associated elevation; seed and stabilization type and locations; cross-section locations; grading of the facility; forebays; subsurface testing boring locations; etc. The maximum scale of facility should be 1" = 30'.

b) ____ Cross-section view of the facility to a defined scale, indicating any/all benches; water surface elevations; depth of construction; location of liners or underdrains; slopes; structures and/or pipes; seed and stabilization type and locations; embankment specifications; existing and proposed grade; fill locations; etc.

c) ____ Cross-section view of the principal spillway to a defined scale, including the entire length of the discharge pipe, indicating any/all water surface elevations; location of liners; slopes; phreatic lines; structure details; embankment specifications; anti-seep collar location(s); crossings; outfall details; existing and proposed grade; etc. Extend the view to include the opposite side of any outfall ditch, and location of any wetlands, as applicable.

d) ____ Cross-section views of the emergency spillway(s) to a defined scale, both through the width and length of the spillway, indicating any/all water surface elevations; location of liners; slopes; embankment specifications; stabilization specifications; outfall details; existing and proposed grade; etc. Extend the view to include the opposite side of any outfall ditch, and location of any wetlands, as applicable.

e) ____ Plan and section views to a defined scale for any structures within the facility including any/all construction specifications, inverts, water surface elevations, etc.

f) ____ Notes and specifications for the facility, including, but not limited to, seed and stabilization type and locations, de-watering specifications, groundwater/subsurface information, construction information and facility specific information (i.e., type of liner, biosoil, stone, etc.).

g) ____ Landscape Plan indicating the species type, number and planting locations, and be signed by a licensed Landscape Architect in the State of Delaware.

h) ____ Easements, rights-of-way, and/or demarcation of where public maintenance responsibility ends and private maintenance begins within or around the facility, with responsible entity for the maintenance in each area.

i) ____ Directional stormwater flow arrows for all existing and proposed channels, pipes, etc.

j) ____Details, cross-sections and specifications (including appropriate channel lining, type of vegetation, or type of stabilization) for any diversions, ditches, swales, etc., not classified as a facility but are being proposed or accepting discharge.

k) ____Stormwater design in accordance with standards developed and/or approved by the DNREC Sediment and Stormwater Program.

l) ____Maintenance set aside areas for disposal of sediments removed from stormwater management facilities that provide a forebay. Set aside areas should accommodate the volume of 50% of the collective forebay volume, maximum depth of the set aside volume should be one foot, and the slope of the set aside area should not exceed 5%.

m) ____Design checklists for the specific type of facility as provided by DNREC.

n) ____Sequence of Construction specific to the facility, indicating the methods for excavation, construction of structures or other controls, stabilization, dewatering, temporary or permanent sediment controls, etc.

o) ____Operation and Maintenance (O&M) notes and/or details (if more than one sheet is required per facility, then the O&M requirements should all be combined on the same sheet). Inclustion of applicable items i through xi below satisfy the O&M Plan requirements for this stage of plan review. Once the facility is constructed, a full O&M Plan will be prepared for approval prior to project closeout, including the post construction verification documentation and any additional O&M notes deemed necessary.

i) ____ Specify whose responsibility it will be to operate and maintain each Post Construction Stormwater Management facility.

ii) ____ "The DNREC Sediment and Stormwater Program and/or the relevant Delegated Agency reserves the right to enter private property for purposes of periodic site reviews."

iii) ____ "The DNREC Sediment and Stormwater Program [or the relevant Delegated Agency] should be notified within 30 business days if the property ownership is transferred to a new person or entity."

iv) ____ "The DNREC Sediment and Stormwater Program and/or the relevant Delegated Agency may seek enforcement action against any owner deemed negligent in fulfilling the Operation and Maintenance requirements of the Delaware Sediment and Stormwater Regulations."

v) ____ "The DNREC Sediment and Stormwater Program [or, the relevant Delegated Agency] should be contacted if a concern arises regarding a stormwater management facility, before any non-routine maintenance, or if modifications to the facility are desired."

vi) ____ "Any design modifications made to the stormwater system shall require the creation of a new Post Construction Stormwater Management Plan and/or Operations and Maintenance Plan, with approval of the plan(s) by the DNREC Sediment and Stormwater Program [or the relevant Delegated Agency]."

vii) ____ "For all stormwater easement areas (i.e., access, maintenance, or offsite) and the minimum 15-foot wide accessways to all stormwater facilities and their structural components, regular mowing should be performed to keep the grass 6 inches or less; no trees or shrubs should

be planted, and any found growing should be removed; and no permanent structures, such as fences or sheds, should be located within the easement or accessway."

viii) ____ "Trees should not be planted, and should be removed if found growing, on and within 15 feet of all pond embankments, on pond slopes or safety benches, and within 10 feet of structural components, such as pipe inlets."

ix) ____ "When the facility is excavated to remove accumulated sediment, the disposal area shall be permanently stabilized so that it does not recreate an erosion problem. Any material taken offsite shall still be used or disposed of in an approved DNREC manner."

x) ____ "Before any earthwork or excavation takes place, the contractor should call Miss Utility at 811 or 1-800-282-8555 at least 48 hours prior to construction, to have all existing utilities marked onsite."

xi) ____ Any facility specific routine or non-routine maintenance, and/or operational requirements not listed in the above-mentioned standard requirements for the type of facility. May include, but is not limited to any mowing, sediment removal, pipe inspections, watering, re-seeding/planting, trash removal, etc.

(1) ____ Notes indicating the frequency of the maintenance inspections.

(2) ____ Any O&M specifications for proprietary systems included on the plans.

(3) ____ Any details necessary to complete the O&M procedures.

42) ____ For stormwater management practices incorporating infiltration, the following apply:

a) ____ Infiltration practices meet all recommended setbacks in accordance with Appendix A-8 Setbacks.

b) ____ Areas draining to these practices should be stabilized and vegetative filters established prior to runoff entering the system. If individual lot construction is to drain towards an already established infiltration area, the facility should be protected with perimeter controls around the top of bank.

c) ____ Infiltration practices shall be designed so that the RPv infiltrates within 48 hours.

d) ____ Infiltration practices shall be designed so that they will:

i) ____ Infiltrate the Fv within 72 hours, or

ii) ____ Dewater the Fv within 72 hours, or

iii) ____ Manage the Fv on site with no adverse impact.

e) ____ The bottom of the infiltration practice at least 2 feet above the seasonal high water table unless a BMP specification indicates otherwise and/or higher level site investigation is performed as defined in Appendix A-1 Soil Investigation Procedures.

f) ____ Infiltration practices are limited to soils having a field tested infiltration rate of at least 1 inch per hour with a design infiltration rate half of the field tested infiltration rate. Onsite soil borings and

textural classification to verify site conditions and seasonal high water table submitted with the plan.

g) ____Infiltration practices not installed in fill material.

Note: For any language that contains "[or the relevant Delegated Agency]", the preparer should substitute the name of the appropriate Delegated Agency in place of the DNREC Sediment and Stormwater Program. For example, if the Sussex Conservation District is the Delegated Agency for the project, the checklist item "I am to notify the DNREC Sediment and Stormwater Program [or the relevant Delegated Agency]" would be prepared as "I am to notify the Sussex Conservation District". Any "and/or" statements should remain as prescribed. For example, "I grant the DNREC Sediment and Stormwater Program and/or the relevant Delegated Agency" can be copied verbatim, and grants either agency the right to enter the property as may become necessary throughout the duration of the project.