Delaware

Sediment and Stormwater Program

Technical Document

Article 5.

Maintenance of Permanent Stormwater Management Systems

5.01
Maintenance of Permanent Stormwater Management Systems

The stormwater management systems, including maintenance of these systems to ensure proper function, and all associated easements shall run with the land and be binding upon the landowner and any successors in interest. Maintenance of these systems shall ensure that the stormwater management system is performing in accordance with the approved engineered design, within the tolerances of the accepted post construction verification documents, and in compliance with these regulations. Proper function of any system is independently determined at the discretion of each local Delegated Agency or DNREC and communicated through the maintenance review report. The local delegated agencies may have more stringent guidelines than outlined in this document; the more stringent guidelines must be adhered to. For each stormwater management system there shall be an Operations and Maintenance Plan detailing each component of the system.

Each delegated agency has a policy describing the turnover of the post construction stormwater management systems into maintenance. Most importantly, the turn over process of the stormwater management system is incorporated with the construction completion process and the termination of the National Pollutant Discharge Elimination System permit. It is required that the owner/developer of any project with a stormwater management system contact the local delegated agency to ensure that they are meeting all the requirements for turnover and project completion within the agency's jurisdiction.

The owner, as designated on the approved Sediment and Stormwater Plan owner's certification, is responsible for ensuring that the O&M Plan is part of the approved Sediment and Stormwater Plan

Owner responsibilities:

- Perform all maintenance items as listed in the Operations and Maintenance Plan
- Perform maintenance as guided in the maintenance review report submitted to the owner by either DNREC or the delegated agency
- Adhere to the Delaware Sediment and Stormwater Regulations which requires an owner to allow access to stormwater management system, within all easements, to DNREC and/or the delegated agency for the purpose of providing technical assistance or conducting maintenance reviews

- Comply with the Delaware Sediment and Stormwater Law (Chapter 40, Title 7, Delaware Code) and the Delaware Sediment and Stormwater Regulations
- Provide the local delegated agency with the contact information for the current person responsible for receiving maintenance review reports. This can be conveyed in the form of a maintenance obligation statement from the owner.
- Submit any scope of work for non-routine maintenance to the Department or delegated agency for approval prior to implementation
- Consult with the Department or Delegated Agency prior to any changes to the stormwater management system

Operation and Maintenance (O&M) Plan Elements

An Operation and Maintenance Plan is submitted with the initial designed set of plans for approval. Prior to project construction completion, a revised O&M Plan including post construction verification documentation is reviewed and accepted by the Department or Delegated Agency to ensure that any revisions during construction have been included on the final O&M Plan. The Department or Delegated Agency must verify that the owner is represented on the owner's certification on the O&M Plan, or at a minimum, a maintenance obligation form. The owner is responsible for maintenance reviews of the stormwater management system at the frequency stated on the O&M Plan. A submitted O&M Plan shall include all stormwater facilities listed on the Operation and Maintenance Checklist.

Maintenance Review Requirements

In addition to the owner performing maintenance reviews of the stormwater management system, each stormwater facility will be reviewed by the Department or Delegated Agency. Maintenance reviews will be conducted on a regular basis by the Department or Delegated Agency, or as specified by Federal permitting requirements. The Department or Delegated Agency will generate a maintenance review report for each site even if there is no required maintenance or actions stated in the report. Maintenance review reports will be distributed to the property owner in cases where maintenance is required. In the circumstance of joint ownership, such as a homeowners' association or maintenance corporation, the review report will be sent to the appropriate individual of the overseeing board.

Copies of the regular maintenance reviews conducted by the owner shall be made available to the Department or Delegated Agency upon request. In cases where special certifications are required to perform necessary maintenance reviews, the owner is responsible for providing the maintenance review report to the Department or Delegated

Agency. The frequency of maintenance review for proprietary systems shall be in accordance with the manufacturer's recommendations and must be included on the O&M Plan.

Maintenance review reports will specify maintenance and modifications required in order for the stormwater management system to function properly. One review report will be generated for each stormwater facility of the system and will include the following elements:

- Site name
- Type of stormwater management facility
- Internal tracking reference number
- Review date
- Stormwater management facility location
- General condition of the stormwater management facility
- Updated contact information for property owner
- A narrative of the observations
- Prescriptive instructions on how to rectify any issue
- A completion date within which corrective actions must be met
- Photo documentation (optional)

Maintenance BMP Review Forms for each type of stormwater facility can be accessed on the Department's web page along with other general maintenance information.

Minimum Maintenance Guidelines

The maintenance of the stormwater management system and all associated easements shall run with the land and be binding upon the landowner and any successors in interest, ensuring proper function. Proper function shall minimally include:

- Mowed access path to the stormwater management system including all inlets and outlets Access in order for both routine and non-routine maintenance to occur (including areas within easements)
- No excessive sediment deposition
- Well stabilized slopes that are not contributing sediment to the stormwater management system
- No scour in swales or other vegetated areas
- Trash racks, inlets, outlets, and low flow orifices (where applicable) clear of trash, debris, and sediment
- No woody vegetation impeding the performance of any structural component of the stormwater management system

- Additional maintenance items to ensure longevity of all structural components as required by the local delegated agency on the regular maintenance review
- Other references for maintenance are available at Appendix 5.01.1 Standard Guidelines for Operation and Maintenance of Stormwater BMPs.

Proper function does not include:

- Aesthetic improvements
- Issues that do not affect performance of the stormwater management system

Implementation of Required Maintenance

After corrective actions have been met by the property owner, a follow-up review will be conducted by the Department or Delegated Agency to ensure compliance. Technical assistance will be made available to property owners through the Department or Delegated Agency.

Standard Guidelines for
Operation and Maintenance of Stormwater BMPs

DNREC
Sediment and Stormwater Program
August 2009

Wet Pond

Function:	Stormwater wet ponds always contain a permanent pool of water. They collect stormwater and allow sediment to settle out before water is released into the streams.
Inspection:	Self inspect semi-annually (Spring and Fall) and after storm events of 2 inches or more.
Trash and Debris:	Remove trash and debris on a regular basis. It is especially important to remove debris from all inlets and outfall structures. Ensure that trash racks and low flow orifices (where applicable) are free of trash and debris.
Soil:	Soils on side slopes of pond should be tested annually to ensure proper pH and fertility including: organic matter, magnesium (Mg), phosphorus (P_2O_5), nitrogen (N), Potassium (K2O), and soluble salts. If required, fertilizers should only be applied in the fall.
Erosion:	If bare soil exists on pond side slopes or embankment, reseed and/or replant as required based upon inspection findings. Stabilize applicable eroded areas with rolled erosion control products (RECP) or turf reinforcing mats (TRM), as required. If RECP is applied, it is recommended to use truly biodegradable products to aid in mowing maintenance and deter wildlife entanglement. These products can be recognized as having "BN" for bionetting or "B" for biodegradable.
Mowing:	Mow weekly during peak growing season (April – November). Mow 10-foot wide access path to all inlet and outlet structures, also mowing around these structures regularly. Use mulching mower to ensure that nutrients are recycled. For warm season grasses, the previous season's stalks should be cut down to 8-12 inches in early spring (mid March), before new season's growth emerges.
Buffers:	Leaving a buffer (no mow zone) is optional, and recommended to be at least 10 to 15-feet wide. If a buffer is preferred, mow at least once a year to deter growth of saplings. Mow between September 1 and 30 to allow for re-growth of winter cover while avoiding potential negative effects on nesting birds.

Fencing:	Fencing is not recommended and not required; however, if a fence is preferred, ensure that it is in good repair and provides access for maintenance and inspections.
Special considerations:	Consult the Delaware Department of Agriculture for licensing requirements pertaining to the application of chemicals to water, including stormwater ponds. Do not plant trees on pond embankments. Remove saplings on embankments of ponds and around perimeter, including outlet/inlet structures.
Hire a professional:	Repair of severe erosion; replacement of deteriorating pipes or structural components; if mosquitoes are suspected to be problematic; reconstruction of embankment and outlet structure; removal of accumulated sediment; aquatic vegetation control (chemical application) if licensing required by DE Department of Agriculture; if dredging (sediment removal) is required.

Dry Extended Detention (Dry Pond)

Function:	Dry extended detention (dry ponds) collect stormwater and allow for a slower release of water into streams. Dry ponds do not provide for any water quality benefit, are a means of temporary water storage, and should not hold water for more than 48 hours.
Inspection:	Self inspect semi-annually (Spring and Fall) and after storm events of 2 inches or more.
Trash and Debris:	Remove trash and debris on a regular basis. It is especially important to remove debris from all inlets and outfall structures. Ensure that trash racks and low flow orifices (where applicable) are free of trash and debris.
Soil:	Soils on side slopes of pond should be tested annually to ensure proper pH and fertility including: organic matter, magnesium (Mg), phosphorus (P_2O_5), nitrogen (N), Potassium (K2O), and soluble salts. If required, fertilizers should only be applied in the fall.
Erosion:	If bare soil exists on pond side slopes or embankment, reseed and/or replant as required based upon inspection findings. Stabilize applicable eroded areas with rolled erosion control products (RECP) or turf reinforcing mats (TRM), as required. If RECP is applied, it is recommended to use truly biodegradable products to aid in mowing maintenance and deter wildlife entanglement. These products can be recognized as having "BN" for bionetting or "B" for biodegradable.
Mowing:	Mow weekly during peak growing season (April – November). Mow 10-foot wide access path to all inlet and outlet structures, also mowing around these structures regularly. Use mulching mower to ensure that nutrients are recycled. For warm season grasses, the previous season's stalks should be cut down to 8-12 inches in early spring (mid March), before new season's growth emerges.
Buffers:	NA
Fencing:	Fencing is not recommended and not required; however, if a fence is preferred, ensure that it is in good repair and provides access for maintenance and inspections.

Special considerations:	Do not plant trees on pond embankments. Remove saplings on embankments of ponds and around perimeter, including outlet/inlet structures.
Hire a professional:	If facility does not drain within 48 hours; repair of severe erosion; replacement of deteriorating pipes or structural components; if mosquitoes are suspected to be problematic; reconstruction of embankment and outlet structure; removal of accumulated sediment; aquatic vegetation control (chemical application) if licensing required by DE Department of Agriculture; if dredging (sediment removal) is required.

Infiltration Basins

Function:	These stormwater facilities are designed to infiltrate stormwater and should not hold water for more than 48 hours.
Inspection:	Self inspect semi-annually (Spring and Fall) and after storm events of 2 inches or more.
Trash and Debris:	Remove trash and debris on a regular basis. It is especially important to remove debris from all inlets and outfall structures.
Soil:	Soils on side slopes of pond should be tested annually to ensure proper pH and fertility including: organic matter, magnesium (Mg), phosphorus (P_2O_5), nitrogen (N), Potassium (K2O), and soluble salts. If required, fertilizers should only be applied in the fall.
Erosion:	If bare soil exists on pond side slopes or embankment, reseed and/or replant as required based upon inspection findings. Stabilize applicable eroded areas with reinforcing erosion control products (RECP) or turf reinforcing mats (TRM), as required. If RECP is applied, it is recommended to use truly biodegradable products to aid in mowing maintenance and deter wildlife entanglement. These products can be recognized as having "BN" for bionetting or "B" for biodegradable.
Mowing:	Mow around basin weekly during peak growing season (April – November). Mow 10-foot wide access path to all inlet and outlet structures, also mowing around these structures regularly. Use mulching mower to ensure that nutrients are recycled. For warm season grasses, the previous season's stalks should be cut down to 8-12 inches in early spring (mid March), before new season's growth emerges.
Buffers:	NA
Fencing:	Fencing is not recommended and not required; however, if a fence is preferred, ensure that it is in good repair and provides access for maintenance and inspections.
Special considerations:	Infiltration basins are designed to infiltrate water and remove pollutants from stormwater. Do not compact facility in any way.

	This includes the use of heavy equipment or machinery. Compaction may lead to system failure.
Hire a professional;	If facility does not drain within 48 hours; repair of severe erosion; replacement of deteriorating pipes or structural components; if mosquitoes are suspected to be problematic; reconstruction of embankment and outlet structure; removal of accumulated sediment; aquatic vegetation control (chemical application) if licensing required by DE Department of Agriculture; if dredging (sediment removal) is required.

Sand Filter

Function:	Sand filters provide water quality treatment to stormwater from impervious areas by allowing heavy sediment to settle, and by filtering to remove fine sediment and other pollutants.
Inspection:	Semi-annual (Spring and Fall) and after storm events of 2 inches or More or when water ponds around the sand filter.
Trash and Debris:	Remove trash and debris on a regular basis.
Soil:	NA
Erosion:	NA
Mowing:	NA
Buffers:	NA
Fencing:	NA
Special Considerations:	Replace top few inches of sand periodically, as it contains the most contaminants. Perform complete replacement as needed.
Hire a professional:	Removal of accumulated sediment/pollutants in sedimentation chamber; replacement of sand and filter on as needed basis; replacement of structural components (greater than 20 years if properly maintained).

Filter Strip

Function:	Filter strips spread runoff uniformly over a filtering surface of vegetation, providing infiltration and pollutant removal. Filter strips can provide substantial treatment as long as they are not overwhelmed by sediment and runoff.
Inspection:	Semi-annual (Spring and Fall) & after storm events of 2 inches or more.
Trash and Debris:	Remove trash and debris on a regular basis.
Soil:	Soil should be tested annually to ensure proper pH and fertility including: organic matter, magnesium (Mg), phosphorus (P_2O_5), nitrogen (N), Potassium (K2O), and soluble salts. If required, fertilizer should only be applied in the fall.
Erosion:	If bare soil exists within any area of filter strip, reseed and/or replant as required based upon inspection findings. Stabilize applicable eroded areas with rolled erosion control products (RECP) or turf reinforcing mats (TRM), as required. If RECP is applied, it is recommended to use truly biodegradable products to aid in mowing maintenance and deter wildlife entanglement. These products can be recognized as having "BN" for bionetting or "B" for biodegradable.
Mowing:	Mow, annually, between September 1 and 30 to allow for regrowth of winter cover while avoiding potential negative effects on wildlife such as nesting birds. Use mulching mower to ensure that nutrients are recycled. For warm season grasses, the previous season's stalks should be cut down to 8-12 inches in early spring (mid March), before new season's growth emerges. The approved plan will specify the mow height. Filter strip vegetation should be maintained at a height of 2 times the depth of flow during the quality storm.
Buffers:	NA
Fencing:	NA
Special Considerations:	Excessive sediment at the lip of the level spreader should be cleaned by hand with rake and flat shovels every spring and fall

	and after storm events of 2 inches or more. Sediment may need to be removed more frequently if it causes water to back up and not discharge into the swale. Consult the Delaware Department of Agriculture for licensing requirements pertaining to the application of chemicals.
Hire a professional:	Repair of severe erosion; vegetation control (chemical application) if licensing required by DE Department of Agriculture.

Biofiltration Swales

Function:	Swales convey stormwater to a stormwater facility or downstream. Bioswales are specially designed to absorb water and remove pollutants.
Inspection:	Semi-annual (Spring and Fall) and after storm events of 2 inches or more.
Trash and Debris:	Remove trash and debris on a regular basis.
Soil:	Soil should be tested annually to ensure proper pH and fertility including: organic matter, magnesium (Mg), phosphorus (P_2O_5), nitrogen (N), Potassium (K2O), and soluble salts. If required, fertilizer should only be applied in the Fall.
Erosion:	Stabilize applicable eroded areas with rolled erosion control products (RECP) or turf reinforcing mats (TRM), as required. If RECP is applied, it is recommended to use truly biodegradable products to aid in mowing maintenance and deter wildlife entanglement. These products can be recognized as having "BN" for bionetting or "B" for biodegradable.
Mowing:	If turf cover is used mow regularly (weekly from April to November). Mow no lower than 6 inches to maintain desired design height. The vegetation height should be 2 times the depth of flow during the quality storm. The vegetation height should be specified on the plan. For native grasses: Cut down standing stalks to 12 inches in Spring (mid-March), just before new growth emerges. Selectively hand-apply an appropriate herbicide with a cut stump applicator or directed foliar sprays. For large projects a professional contractor is recommended. Reseed and/or replant as required based upon inspection findings.
Buffers:	NA
Fencing:	NA
Check dams:	Remove materials that accumulate on the upstream face of the check dams. Remove all vegetation that extends roots within the

check dams manually and apply herbicides as necessary to eliminate herbaceous species with persistent roots.
If fines have accumulated within the filter stone, power-washing or pressure jet equipment shall be used to remove the fines. The nozzle of such equipment shall be inserted between the rear face stones of the check dam to force the accumulated fines back out the front of the check dam. If accumulation is extensive, it may be necessary to open up the gabion top, remove the face stone and enough filler stone to permit access by pressure washing equipment.

Sediment forebays: Where sediment forebays are provided, remove sediments accumulated in the forebay once they are half filled or to the designated depth. A depth marker should be provided in the forebay to guide the inspection requirements. If forebays are not provided, remove visible accumulations of sediment with rake and flat shovel.

Special considerations: Consult the Delaware Department of Agriculture for licensing requirements pertaining to the application of chemicals.

Hire a professional: If ponding is observed; if facility does not drain within 48 hours; replacement of deteriorating pipes or structural components; facility reconstruction; repair of severe erosion; aquatic vegetation control (chemical application) if licensing required by DE Department of Agriculture.

Bioretention Facilities

Function:	Bioretention facilities remove contaminants from runoff by filtering through an engineered media and infiltrate water into the ground.
Inspection:	Semi-annual (Spring and Fall) & after storm events of 2 inches or more.
Trash and Debris:	Remove trash and debris on a regular basis. It is especially important to remove debris from all inlets and outfall structures.
Soil:	Soil should be tested annually to ensure proper pH and fertility including: organic matter, magnesium (Mg), phosphorus (P_2O_5), nitrogen (N), Potassium (K2O), and soluble salts. If required, fertilizer should only be applied in the Fall.
Erosion:	If bare soil exists on side slopes, reseed and/or replant as required based upon inspection findings. Stabilize applicable eroded areas with rolled erosion control products (RECP) or turf reinforcing mats (TRM), as required. If RECP is applied, it is recommended to use truly biodegradable products to aid in mowing maintenance and deter wildlife entanglement. These products can be recognized as having "BN" for bionetting or "B" for biodegradable.
Mowing:	Mow around facility weekly during peak growing season (April – November). Mow 10-foot wide access path to all inlet and outlet structures, also mowing around these structures regularly. Use mulching mower to ensure that nutrients are recycled. For warm season grasses, the previous season's stalks should be cut down to 8-12 inches in early spring (mid March), before new season's growth emerges.
Buffers:	NA
Fencing:	NA
Landscape vegetation:	Maintain as a landscape island and manage vegetation accordingly. Cut down standing stalks of herbaceous materials to 12 inches just before growth emerges in Spring (mid-March). Selective application of herbicides may require licensed professional. Reseed or replant as required based upon inspection findings. Inspect woody material for pest and ice damage. Prune

trees and shrubs in the fall. Plants are specially selected to tolerate variable conditions such as severe drought and flooding, in addition to salty conditions as a result of road salt (winter conditions). Replace plantings as necessary.

Mulch: Add double or triple-shredded hardwood mulch, as needed, to maintain 3 inch depth for facilities with mulch topdressing.

Special considerations: Bioretention facilities are designed to infiltrate water and remove pollutants from stormwater. Do not compact facility in any way. This includes the use of heavy equipment or machinery. Compaction may lead to system failure.

Hire a professional: If facility does not drain within 48 hours; removal of accumulated sediment is needed; replacement of biosoil mix (every 15-20 years); repair of severe erosion; vegetation control (chemical application) if licensing required by DE Department of Agriculture.

Infiltration Trench

Function:	These stormwater facilities are designed to infiltrate stormwater.
Inspection:	Semi-annual (Spring and Fall) and 48 hours after storm events of 2 inches or more.
Trash and Debris:	Remove trash and debris on a regular basis.
Soil:	NA
Erosion:	If topsoil cover is eroded, the geotextile should be repaired as needed, topsoil replaced, and turf cover reseeded.
Mowing:	NA
Buffers:	NA
Fencing:	NA
Special considerations:	A log should be kept of the water level remaining in the observation port (well) after each runoff event observed. If water level is persistent at two consecutive inspections, hire a professional.
Hire a professional:	Topsoil or geotextile replacement; if facility does not drain within 48 hours.

Operation and Maintenance Plan Review Checklist

DATE RECEIVED: _____ **PROJECT NUMBER:** _____

PROJECT NAME: _____

1. _____ The Operation and Maintenance Plan (as drafted from the Post Construction Stormwater Management Plan prepared during Sediment and Stormwater Management Plan approval), shall be submitted and approved for final close-out of a project. One set of plans and a completed checklist shall be submitted for each review. An electronic hardcopy of the plan (i.e., PDF) shall also be transmitted for final approval. Electronic program files (i.e., AutoCAD, MicroStation, or equal) may be required upon agency request.
2. _____ The Post Construction Verification drawing of each facility must be shown on the Operation and Maintenance Plan, and one plan shall be prepared per facility. (Reference the Post Construction Verification document checklist per type of facility for additional information. This completed facility checklist shall be included if not already submitted for review and approval.) The below information shall also be included on each O&M plan.
3. _____ Provide the following project information:
   a. _____ Overall project name, location, tax parcel and/or plat information.
   b. _____ Facility name.
   c. _____ Facility location (either key map with location indicated on a site plan view, or provide an overall site plan sheet locating all facilities).
   d. _____ Facility latitude and longitude in degree decimal format.
   e. _____ Indicate the year the facility initiated and finalized constructed (if different).
   f. Contact Data:
      i. Contact Name, Title: ____ Owner ____ Maintainer ____ Designer ____ Agency
      ii. Company/LLC: ____ Owner ____ Maintainer ____ Designer ____ Agency
      iii. Full Street Address: ____ Owner ____ Maintainer ____ Designer ____ Agency
      iv. Phone Number: ____ Owner ____ Maintainer ____ Designer ____ Agency
      v. Fax Number ____ Owner ____ Maintainer ____ Designer ____ Agency
4. _____ Provide the following information on the Post Construction Verification drawing information:
   a. _____ Provide the drawing in NAD83 horizontal datum.
   b. _____ Provide the drawing in NAVD 88 vertical datum.
   c. _____ Show the project benchmark and identify the vertical and horizontal location.
   d. _____ Provide a north arrow.
   e. _____ Provide a scale bar corresponding the plan view of the facility, with a maximum scale of 1”=30’.
5. _____ Provide Operation and Maintenance (O&M) notes and/or details:
   a. _____ “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.”
   b. _____ “The DNREC Sediment and Stormwater Program [or the relevant Delegated Agency] shall be notified within 30 business days if the property ownership is transferred to a new person or entity.”
   c. _____ “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*.”
   d. _____ “The DNREC Sediment and Stormwater Program [or, the relevant Delegated Agency] shall be contacted if a concern arises regarding a stormwater management facility, before any non-routine maintenance, or if modifications to the facility are desired.”

e. _____ "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]."

f. _____ "For all stormwater easement areas (i.e., access, maintenance, or offsite) and minimum 10-foot accessways to stormwater facilities and all of their structural components, regular mowing shall be performed to keep the grass 6" or less; no trees or shrubs shall be planted, and any found growing shall be removed; and no permanent structures, such as fences or sheds, shall be located within the easement or accessway."

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

h. _____ "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 off-site shall still be utilized or disposed of in an approved DNREC manner."

i. _____ "Before any earthwork or excavation takes place, the contractor shall call Miss Utility at 811 or 1.800.282.8555 at least 48 hours prior to construction, to have all existing utilities marked onsite."

j. _____ Include the O&M notes specified for the type of facility proposed, as per Appendix 5.01.2 of the Technical Document, *Routine Maintenance Requirements*.

k. _____ Include 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

i. _____ The notes shall indicate the frequency of the maintenance inspections.

ii. _____ O&M specifications for proprietary systems must be included on the plans.

iii. _____ Any details necessary to complete the O&M procedures must be included.

6. _____ The plan shall indicate any easements, rights-of-way, and/or demarcation of where public maintenance responsibility ends and private maintenance begins within or around the facility, and clearly distinguish who is responsible for the maintenance in each area.

7. _____ Include any landscaping plans for the facility, indicating the planting, mowing, seeding specifications, as applicable.

8. _____ Include the following Owner's Certification: "I, the undersigned, understand the maintenance and operational responsibilities for the stormwater management facility and will perform all required actions. If a concern arises, modifications desired, or non-routine maintenance scheduled, I am to notify the DNREC Sediment and Stormwater Program [or the relevant Delegated Agency] prior to any actions performed . In addition, I grant the DNREC Sediment and Stormwater Program and/or the relevant Delegated Agency, the right to conduct on-site reviews." This must be signed and dated in ink with the printed name of the signee.

9. _____ Provide the seal of a Licensed Professional in the State of Delaware who prepared the plan.

Note: For any language that contains "[or the relevant Delegated Agency]", the preparer shall 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 shall 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.

Delaware

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Technical Document

Appendix 5.01.3: Maintenance Review Checklists