3.05
General Plan Requirements

Background

In order to improve the efficiency of the plan review process, the Department is standardizing the formatting, as well as the information contained in the plans themselves. In accordance with the 3 Step plan review and approval process, the Preliminary Sediment & Stormwater Management Plan is submitted at Step 2 and the Sediment & Stormwater Management Plan is submitted at Step 3. Additional information regarding specific elements required for these plans is outlined below.

Elements of the Preliminary Sediment & Stormwater Management Plan

The Preliminary Sediment & Stormwater Management Plan submitted at Step 2 of the plan review and approval process shall include a Schematic Erosion and Sediment Control (ESC) Plan which provides an overview of the general measures to be used to control the site during the construction phase. The Schematic ESC Plan shall consist of the following elements:

1. A single plan sheet scaled such that the entire site can be shown.
2. Site boundary.
3. Existing topography.
4. Existing natural features, such as wooded areas, wetlands, etc.
5. Proposed rough grading.
6. Graphic symbols for all ESC measures shown in their approximate proposed locations.
7. Data for those practices having design data criteria.
8. Legend using the symbols from the current Delaware ESC handbook.

The Preliminary Sediment & Stormwater Management Plan shall also include a Schematic Stormwater Management (SWM) Plan which provides an overview of the general measures to be used to manage the post-construction stormwater runoff. The Schematic SWM Plan shall consist of the following elements:

1. A single plan sheet scaled such that the entire site can be shown.
2. Site boundary.
3. Existing topography.
4. Existing natural features, such as wooded areas, wetlands, etc.
5. Proposed rough grading.
6. Graphic symbols for all SWM measures shown in their approximate proposed locations.

7. Data for those practices based on the design criteria from the appropriate standards and specifications.
8. Legend for the proposed permanent SWM measures.

Elements of the Sediment & Stormwater Management Plan

The Sediment & Stormwater Management Plan submitted at Step 3 of the plan review and approval process shall include detailed information on the measures to control both sediment and non-sediment pollutants during the active construction phase as well as those measures to manage post-construction stormwater. It shall consist of the following elements:

1. Updated Schematic ESC and SWM Plans.
2. Bulk grading and/or final grading conditions, as required by the appropriate Delegated Agency.
3. A legend using the symbols from the current Delaware ESC Handbook.
4. A sequence of construction describing the relationship between the implementation and maintenance of sediment controls, including permanent and temporary stabilization and the various stages or phases of earth disturbance and construction. The sequence of construction shall, at a minimum, include the following activities:
    a. Clearing and grubbing for those areas necessary for installation of perimeter controls;
    b. Construction of perimeter controls;
    c. Remaining clearing and grubbing;
    d. Road grading;
    e. Grading for the remainder of the site;
    f. Utility installation and whether stormdrains will be used or blocked until after completion of construction;
    g. Final grading, landscaping, or stabilization; and
    h. Removal of sediment controls.
5. General ESC notes as specified by the appropriate Delegated Agency.

a. Following documentation of turbid discharges, the Department or delegated agency may request that the Sediment and Stormwater Management Plan be revised accordingly to address use of BAT. (Regs §4.2.2)

b. Following soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within 14 calendar days for all perimeter sediment controls, topsoil stockpiles, and all other disturbed or graded areas on the project site. Temporary stabilization is required if grading will not change for 14 calendar days or more for those areas which are shown on the plan and are currently being used for material storage, or for those areas on which actual earth moving activities are currently being performed. (Regs §4.5.1)

c. If within 60 calendar days permanent or temporary stabilization applied to a disturbed area results in insignificant germination as determined by the Department or delegated agency, a soil test must be completed. Permanent or temporary stabilization shall be re-applied to the disturbed area in accordance with that soil test and the plan requirements within 14 calendar days following the 60-calendar day threshold. The Department or delegated agency shall have the discretion to require soil testing sooner than 60 calendar days if evidence exists that the permanent or temporary stabilization measures were not applied in accordance with the specification provided in the Delaware Erosion and Sediment Control Handbook. (Regs §4.5.2)

6. Detailed information on the location, grading, and construction data for all proposed ESC practices.

7. Details for all proposed ESC practices.

8. Construction Site Pollution Control details.

9. Details of temporary and permanent stabilization measures.

10. Owner’s certification block with signature.

11. Construction details for all permanent stormwater management BMPs. A separate plan sheet shall be provided for each individual SWM BMP. The plan sheet shall include, but not be limited to

    a. Plan view showing proposed grading

b. Section view with proposed elevations

c. Details for any appurtenances

d. Planting and/or stabilization information

e. Sequence of construction

f. Maintenance notes

12. In cases where the Department has developed standardized requirements for a “common look and feel” for specific elements of the Sediment & Stormwater Plan, those requirements shall prevail.

GENERAL EROSION AND SEDIMENT CONTROL SEQUENCE OF CONSTRUCTION

The below sequence of construction is a generalization, and should be enhanced per the specifics of the site, including but not limited to the existing site features; the proposed stormwater management, utilities, and building/lot construction; and the site's phasing.

1. 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 constituents a violation of the approved Sediment and Stormwater Management Plan. ***[Required Sequence Item]***

2. Prior to any clearing, installation of sediment control measures, or grading, schedule and conduct a pre-construction meeting with the Agency Construction Site Reviewer. The landowner/developer representative, site contractor, and Certified Construction Reviewer are required to be in attendance at the pre-construction meeting; the site designer is recommended to attend. ***[Required Sequence Item]***

3. Install the stabilized construction entrance(s) as indicated on the plan, followed by the perimeter controls (i.e., berms, silt fence, compost logs) and inlet protection on any existing inlets. Mark the limits of sensitive areas, such as preserved trees, infiltration areas, and other sections that are not to be disturbed with a physical barrier. Only clear woods that are needed to install the perimeter controls (as needed).

4. Schedule a perimeter control review with the Agency Construction Site Reviewer.

5. All perimeter controls are to be reviewed by the Agency Construction Site Reviewer and approved prior to proceeding with further site disturbance or construction. ***[Required Sequence Item]***

6. Check perimeter controls daily and adjust and/or repair 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. Adjust or alter measures in times of adverse weather conditions, as needed or as directed by the Agency Construction Site Reviewer. ***[Required Sequence Item]***

7. Clear and grub the sediment trap and basin area(s).

8. Notify the person responsible for stormwater system construction review at least three (3) days prior to the start of the stormwater system construction; stormwater facilities must be reviewed throughout their construction. ***[Required Sequence Item]***

9. Construct the sediment trap and/or basin(s), starting with the outlet device and discharge pipe, and stabilize immediately with seed and mulch. For basin construction, see the specific construction sequence for the facility. *[Additional sequence of construction to be provided for all stormwater facilities.]*

10. Stockpile topsoil and excavated subsoils. Stockpiles should be surrounded with a perimeter control, located on land with slight to no slope, and stabilized once inactive.

11. Construct temporary earth dikes, berms, and/or swales needed for sediment and erosion control as indicated on the plan and stabilize immediately as per the vegetation specifications. All conveyance areas, and slopes greater than 3:1, require seeding and matting at a minimum.

12. Perform any demolition work, and clear, grub, and rough grade the site's roadways. Stockpile appropriately.

13. Construct roadside ditches and temporarily stabilize. Stone check dams shall be installed at this time. *[As Applicable]*

14. Clear and grub remaining areas within the limits of disturbance for the phase of construction. Stockpile appropriately.

15. Construct the stormwater conveyance system, starting at the lowest elevation within the network and working upwards. Install necessary inlet protection as shown on plan. Install any remaining non-infiltration stormwater management facilities, following its respective sequence of construction. *[Additional sequence of construction to be provided for all stormwater facilities.]*

16. Install remaining roadway utilities. *[As Applicable]*

17. Install the curb and gutter *[as applicable]*, followed by the sub-base and base course sections of the roadways to design grades. Install any sidewalks.

18. Rough grade lot or building areas and individual utility connections. Temporary stabilization is to be applied in accordance with the stabilization notes and details.

19. Commence building construction. *[As Applicable]*

20. Final grade swales or ditches, and apply permanent stabilization as soon as final grade is achieved.

21. Final grade lot or building areas and apply permanent stabilization.

22. Flush out the stormwater pipes for any accumulated sediment, and remove sediment from within any forebays, with inspection by the Certified Construction Reviewer and/or the Agency Construction Site Reviewer. Upon approval of the Agency Construction Site Reviewer, convert the sediment basin to final pond design as specified on the pond conversion notes, and/or fill in any sediment traps. Provide permanent stabilization as per the vegetation specifications.

23. When all upstream contributing areas have been stabilized, commence construction of any infiltration stormwater management facilities. Care should be taken to prohibit compaction of the underlying soils during construction. Provide permanent stabilization. *[As Applicable]*

24. Install topcoat to the roadways.

25. The erosion and sediment control devices should be removed only after work in an area has been completed and stabilized, with written approval from the Agency Construction Site Reviewer. ***[Required Sequence Item]*** Coordinate the inspection, and after the written approval, remove the remaining construction site controls.

26. If any individual lots are sold and developed, provide on-site erosion and sediment controls for that lot (perimeter controls and a stabilized construction entrance, at a minimum). *[As Applicable]*

27. Prior to commencing a new phase of construction, receive written approval from the Agency Construction Site Reviewer that the previous phase has been sufficiently stabilized. ***[Required Sequence Item, As Applicable]***

28. Terminate coverage of the Construction General Permit, which requires 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, acceptance of the final Operation and Maintenance Plan, and submittal of the Notice of Termination. ***[Required Sequence Item]***

Project Name

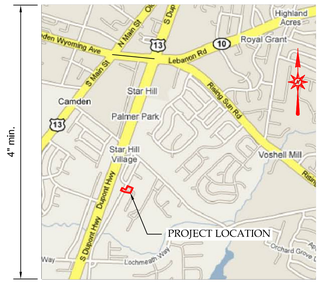
Sediment and Stormwater Management Plans

XXXX Hundred

XXXX Watershed

Tax Parcel[s]: XXXX

[City/Town of XXXX,] XXXX County, Delaware



LOCATION MAP
1" = 1/2 mile
4" min.

2"x3" Clear Area for Sediment and Stormwater Approval Stamp

PROJECT NOTES:

1. PARCEL DATA:
   TAX MAP #:
   PLUS #: (if applicable)
   DNREC SEDIMENT AND STORMWATER PROGRAM # (OR RELEVANT DELEGATED AGENCY) :
   ADDRESS (OR DISTANCE TO NEAREST INTERSECTING STREET) :
   LATITUDE/LONGITUDE:
   EXISTING SITE AREA:
   PROPOSED SITE AREA:
   EXISTING WETLAND AREA:
   PROPOSED CONDITION:
   PROPOSED DISCHARGE LOCATION(S):
   PROPOSED LIMIT OF DISTURBANCE PER DISCHARGE LOCATION:
2. OWNER DATA:
   OWNER'S NAME, TITLE
   COMPANY/LLC
   STREET ADDRESS
   TOWN, STATE, ZIP CODE
   PHONE #
   FAX #
3. LAND DEVELOPER DATA:
   DEVELOPER'S NAME, TITLE
   COMPANY/LLC
   STREET ADDRESS
   TOWN, STATE, ZIP CODE
   PHONE #
   FAX #
4. DESIGNER DATA:
   DESIGNER'S NAME, TITLE
   COMPANY/LLC
   STREET ADDRESS
   TOWN, STATE, ZIP CODE
   PHONE #
   FAX #
5. REVIEW AGENCY DATA:
   REVIEWER'S NAME, TITLE
   AGENCY NAME
   STREET ADDRESS
   TOWN, STATE, ZIP CODE
   PHONE #
   FAX #

SEDIMENT AND STORMWATER CONSTRUCTION NOTES:

1. THE DNREC SEDIMENT AND STORMWATER MANAGEMENT PROGRAM MUST BE NOTIFIED IN WRITING FIVE (5) DAYS PRIOR TO COMMENCING WITH CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
2. 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 SEDIMENT AND STORMWATER REGULATIONS, NOR SHALL IT RELIEVE THE CONTRACTOR FROM ERRORS OR OMISSIONS IN THE APPROVED PLAN.
3. IF THE APPROVED PLAN NEEDS TO BE MODIFIED, ADDITIONAL SEDIMENT AND STORMWATER CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY DNREC.
4. 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.
5. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL COMPLY WITH THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
6. 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 SHALL BE APPROVED BY THE DNREC WELL PERMITTING BRANCH.
7. APPROVED PLANS REMAIN VALID FOR 3 YEARS FROM THE DATE OF APPROVAL.
8. POST CONSTRUCTION VERIFICATION DRAWINGS ARE TO BE SUBMITTED TO THE DISTRICT WITHIN 60-DAYS OF STORMWATER MANAGEMENT FACILITY COMPLETION.
9. APPROVAL OF A SEDIMENT AND STORMWATER 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.
10. THE NOTICE OF INTENT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER A NPDES GENERAL PERMIT FOR THIS PROJECT IS #_____ . AT ANY TIME THE OWNERSHIP FOR THIS PROJECT CHANGES, A TRANSFER OF AUTHORIZATION OR A CO-PERMITTEE APPLICATION MUST BE SUBMITTED TO DNREC. THE PERMITTEE OF RECORD SHALL NOT BE RELIEVED OF THEIR RESPONSIBILITIES UNTIL A NOTICE OF TERMINATION HAS BEEN PROCESSED BY DNREC.
11. THE OWNER SHALL BE FAMILIAR WITH AND COMPLY WITH ALL ASPECTS OF THE NPDES CONSTRUCTION GENERAL PERMIT ASSOCIATED WITH THE PROJECT, INCLUDING, BUT NOT LIMITED TO, PERFORMING WEEKLY SITE INSPECTIONS DURING CONSTRUCTION AND AFTER RAIN EVENTS, AND MAINTAINING WRITTEN LOGS OF THESE INSPECTIONS.
12. 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.
13. THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OF DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SIDE. PERIMETER CONTROLS SHALL BE CHECKED DAILY AND ADJUSTED AND/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 SITE REVIEWER.
14. BEST AVAILABLE TECHNOLOGY (BAT) SHALL BE EMPLOYED TO MANAGE TURBID DISCHARGES IN ACCORDANCE WITH REQUIREMENTS OF 7. DEL C. CH 60, *REGULATIONS GOVERNING THE CONTROL OF WATER POLLUTION* , SECTION 9.1.02, KNOWN AS SPECIAL CONDITIONS FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES AND DEPARTMENT POLICIES, PROCEDURES, AND GUIDANCE.
15. 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 DELEGATED AGENCY TO VERIFY THAT THE PERMANENT OR TEMPORARY STABILIZATION HAS BEEN COMPLETED IN ACCORDANCE WITH THE APPROVED PLAN AND THE STANDARDS AND SPECIFICATIONS OF *THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK*, LATEST EDITION. THE DEPARTMENT OF THE DELEGATED AGENCY SHALL HAVE THE DISCRETION TO REQUIRE ADDITIONAL SOIL TESTING AND REAPPLICATION OF PERMANENT OR TEMPORARY STABILIZATION IN ACCORDANCE WITH THE SPECIFICATION PROVIDED WITHIN *THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK,* LATEST EDITION.

Example Legend

Property Line
Adjacent Property Line
Benchmark Symbol
Lot Line/Right-of-Way
Easement Line (Utility, Drainage, Stormwater, Access, etc)
Buffer Line (Wetland, Wellhead Protection, etc)
Contours
Wetland Line
Treeline
Soils Divide Line
Drainage Divide Line
Time of Concentration Path
Utility Lines and Symbols (Storm Pipe, Catchbasin, Water Main, Fire Hydrant, etc)
Soil Type Abbreviation Legend

Note:
1. *The above list is not exhaustive and should be adapted for each site.*
2. *The features should be distinguished as existing or proposed.*
3. *A legend for all Construction Site Stormwater Controls symbols and lines shall appear on the Construction Site Stormwater Management Plan(s).*

SHEET INDEX:

1. COVERSHEET AND GENERAL NOTES
2. OVERALL CONSTRUCTION SITE PHASING PLAN
3. OVERALL PRE-CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN
4. PRE-CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN 1
5. PRE-CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN 2
6. OVERALL CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN
7. CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN 1
8. CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN 2
9. CONSTRUCTION SITE DETAILS AND NOTES
10. OVERALL POST CONSTRUCTION STORMWATER MANAGEMENT PLAN
11. POST CONSTRUCTION STORMWATER MANAGEMENT PLAN - FACILITY #1
12. POST CONSTRUCTION STORMWATER MANAGEMENT PLAN - FACILITY #2
13. CONTRIBUTING DRAINAGE AREA PLAN
14. PRE-LIMIT OF DISTURBANCE DRAINAGE AREA PLAN
15. POST LIMIT OF DISTURBANCE DRAINAGE AREA PLAN

OWNER'S CERTIFICATION:

"I, THE UNDERSIGNED, CERTIFY THAT ALL LAND CLEARING, CONSTRUCTION AND DEVELOPMENT SHALL 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 ON-SITE REVIEWS, AND I UNDERSTAND MY RESPONSIBILITIES UNDER THE NPDES CONSTRUCTION GENERAL PERMIT, AS REFERENCED ON THIS COVERSHEET."

_____

OWNER'S NAME, TITLE DATE
COMPANY/LLC
STREET ADDRESS
TOWN, STATE, ZIP CODE
PHONE #
FAX #

WETLAND CERTIFICATION:

THIS PROPERTY, TAX MAP #xxxx, 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 #xxxx AND/OR ARMY CORPS JD #xxxx [as applicable].

_____

WETLAND DELINEATOR'S NAME, TITLE DATE
COMPANY/LLC
STREET ADDRESS
TOWN, STATE, ZIP CODE
PHONE #
FAX #

SITE DESIGNER CERTIFICATION:

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.

_____

SITE DESIGNER'S NAME, TITLE DATE
COMPANY/LLC
STREET ADDRESS
TOWN, STATE, ZIP CODE
PHONE #
FAX #

REVISIONS

REVISION	DATE	DESCRIPTION

DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
Division of Soil and Water Conservation
Drainage Program

Dover Office
89 Kings Highway
Dover DE, 19901
Phone: (302) 739 - 9921
Fax: (302) 739 - 6724

Georgetown Office
21389 Berlin Rd, Unit 6
Georgetown DE, 19947
Phone: (302) 855 - 1930
Fax: (302) 677 - 7059

[Seal]

Designer's Name
License #XXXXXX

COVER SHEET & GENERAL NOTES
PROJECT NAME
SEDIMENT AND STORMWATER MANAGEMENT PLANS
XXXX Hundred
XXXX Watershed
Tax Parcel[s]: XXXX
[City/Town of XXXX,] XXXX County, Delaware

Scale:	As Shown
Designed:	XXX
Planned:	XXX
Drawn:	XXX
Approved:	XXX

Sheet No. 1 / X