



## **Step 2: Preliminary Sediment & Stormwater Management Plan Review Checklist**

DATE RECEIVED: \_\_\_\_\_ PROJECT NUMBER: \_\_\_\_\_

PROJECT NAME: \_\_\_\_\_

Checklists are required to be signed and sealed.

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) \_\_\_\_\_ Completed application signed by the owner, review fee, one set of plans and reports, and a completed checklist. Submit electronic plan and report 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) \_\_\_\_\_ Copy of the notice to DelDOT, a municipality, or a private entity (i.e., neighboring Homeowner's Association) for the intent to discharge or connect to their stormwater system. The notice should indicate the proposed condition and that any comments regarding the discharge should be returned within 60 calendar days. If no comments are received, then consent to discharge is assumed. If directly copied on the notice, indicate the date of the notice and the reviewer copied:  
\_\_\_\_\_.
- 3) \_\_\_\_\_ Hydraulic and hydrology computations, reflecting the proposed site conditions.
- 4) \_\_\_\_\_ All plans scaled to 24" x 36" (minimum) sheets unless otherwise approved.
- 5) \_\_\_\_\_ 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.
- 6) \_\_\_\_\_ North arrow.
- 7) \_\_\_\_\_ All plan views to a defined scale with a scale bar.
- 8) \_\_\_\_\_ Names of adjacent property owners.
- 9) \_\_\_\_\_ Existing and proposed contours (if provided) 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).
- 10) \_\_\_\_\_ 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.
- 11) \_\_\_\_\_ Location of site in NAD 83 horizontal datum

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- 12) \_\_\_ Contact information for the person or entity responsible for preparing the plans and report, including name, company, address and telephone number. Locate on both the plans and report.
- 13) \_\_\_ Plan signed, dated, and sealed by a Licensed Professional in the State of Delaware.
- 14) \_\_\_ Preliminary Sediment and Stormwater Management plans in the following order and title. The sheet list should appear on the coversheet, 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
  - b) \_\_\_ Schematic Pre-Construction Site Stormwater Management Plan
  - c) \_\_\_ Schematic Construction Site Stormwater Management Plan
  - d) \_\_\_ Overall BMP Contributing Drainage Area Plan
  - e) \_\_\_ BMP Contributing Drainage Area Plan
  - f) \_\_\_ Pre-Developed Subarea Limit of Disturbance Drainage Area Plan

**II. Coversheet:**

- 15) \_\_\_ Project Header:
  - a) \_\_\_ Project Name (and Phase, if applicable; to duplicate in the title block on each sheet).
  - b) \_\_\_ Title of Plan Set: Preliminary 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).
- 16) \_\_\_ Legend indicating plan symbols and lines, including but not limited to, soils, drainage area information, grading, and site information.
- 17) \_\_\_ 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.
- 18) \_\_\_ 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)

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- vi) \_\_\_ Existing Site Area
- vii) \_\_\_ Proposed Site Area
- viii) \_\_\_ Existing Wetland Area
- ix) \_\_\_ Proposed Discharge Location(s)
- x) \_\_\_ 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
- 19) \_\_\_ 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.
- 20) \_\_\_ List of all sheets and their corresponding sheet number for all Preliminary Sediment and Stormwater Management Plans.

### **III. Schematic Construction Site Stormwater Management Plans:**

The purpose of the Schematic Construction Site Stormwater Management Plan is to provide a preliminary design of the site's phasing in relation to the site's existing conditions and its construction and stormwater facility locations. It will eventually be further developed into the Pre-Construction and Construction Site Stormwater Management Plans for the full plan submittal.

- 21) \_\_\_ Subsequent Schematic Pre-Construction and Schematic Construction Site Stormwater Management Plans should include the following:
  - a) \_\_\_ 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.).
  - b) \_\_\_ Approximate limit of disturbance per phase of construction and legend indicating the total disturbed acreage per limit of construction.
  - c) \_\_\_ Legend indicating the lines and symbols used to define the site and construction stormwater controls, corresponding to the current *Delaware Erosion and Sediment Control Handbook*.
- 22) \_\_\_ Schematic Pre-Construction Site Stormwater Management Plan (as determined at the SAS review meeting):
  - a) \_\_\_ 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.).
  - b) \_\_\_ Proposed contours when available or flow arrows showing the drainage intent with sample spot elevations.
- 23) \_\_\_ Schematic Construction Site Stormwater Management Plan:

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- a) \_\_\_\_ Preliminary site plan view overlaid with the existing conditions, including all lot and/or building outlines, rights-of-way and/or paved areas (whichever is less constrictive), and proposed stormwater locations including facilities, structures, and pipes.
- b) \_\_\_\_ Location of all construction site stormwater controls, including perimeter controls, sediment controls, water controls, and pollution prevention controls. (i.e., silt fence, stabilized construction entrances, temporary swales, sediment basins, etc.). Graphic symbols representing the practice can be used (i.e., sediment basins do not need to be graded out).
- c) \_\_\_\_ Proposed contours when available or flow arrows showing the drainage intent with sample spot elevations.

### **IV. Drainage Area Plans:**

The drainage area plans should provide a graphic portrayal of the information that is contained within the DURMM worksheets

#### 24) \_\_\_\_ Overall BMP Contributing Drainage Area Plan

- a) \_\_\_\_ For sites that cannot be shown in their entirety at the maximum scale of 1"=100'.
- b) \_\_\_\_ Type and location of stormwater BMP(s) including the BMP drainage area boundary.
- c) \_\_\_\_ Total area of each sub-drainage area.
- d) \_\_\_\_ Summary table indicating the sub-areas and their respective point of analysis, total area, and RCN.

#### 25) \_\_\_\_ Subsequent BMP Contributing Drainage Area Plans and Pre-Developed Subarea Limit of Disturbance Drainage Area Plans including the following:

- a) \_\_\_\_ Soils mapping on the plan, using the latest NRCS soil information, with a general description of each soil. Include the Hydrologic Soils Group (HSG), i.e., A, B, C or D.
- b) \_\_\_\_ Legend indicating the various land covers per soil type classification (a hatch should be provided for each type of land cover; i.e., grass-B soils, impervious-D soils).
- c) \_\_\_\_ Summary table indicating the sub-areas and their respective point of analysis, total area, and RCN.

#### 26) \_\_\_\_ BMP Contributing Drainage Area Plan

- a) \_\_\_\_ Plan correlating to the DURMM Contributing Area RCN worksheet (post development model for the entire drainage area) for each subarea (subareas may be combined onto the same sheet, so long as they are clearly distinguishable).
- b) \_\_\_\_ LOD and the OLOD contributing areas, separated per their respective land cover and soil type classification and the area of each designation.
- c) \_\_\_\_ Location, type, and sizing information for each BMP including a representative cross section.
- d) \_\_\_\_ Tc path for the area outside the LOD as used in the OLOD worksheet.
- e) \_\_\_\_ Tc path for any other areas that require further analysis using other H&H software.

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- 27) \_\_\_ Pre-Developed Subarea Limit of Disturbance Drainage Area Plan
- a) \_\_\_ Plan correlating to the Pre-Developed LOD information requested in the DURMM LOD worksheet (location of woods/meadow and impervious conditions within the LOD per sub-area prior to disturbance) for each subarea (subareas may be combined onto the same sheet, so long as they are clearly distinguishable).
  - b) \_\_\_ Areas of woods/meadow and impervious condition per soil type classification and the area of each designation
  - c) \_\_\_ Any additional hydraulic, hydrologic computations, drainage area maps or watershed plans to show compliance with the *Delaware Sediment and Stormwater Regulations* (i.e., to satisfy the Cv and Fv requirements). These plans are not prescribed but should follow similar guidelines, clearly indicate the parameters used within the calculations, and be contained within the Preliminary Sediment and Stormwater Management Plan set.

### **V. Stormwater Management Report:**

- 28) \_\_\_ Information in the report should be in the following order:
- a) \_\_\_ Coverpage
  - b) \_\_\_ Table of Contents
  - c) \_\_\_ Site Narrative:
    - i) \_\_\_ Introduction
    - ii) \_\_\_ Existing Conditions describing the drainage patterns, land use(s), and existing features. Include 2017 site aerial and photos of the site conditions and at all discharge locations.
    - iii) \_\_\_ Existing Soils description per the current NRCS mapping data including the hydrologic soil group.
    - iv) \_\_\_ Post Development Conditions, including summary of the proposed development, the proposed drainage system, indication of why the standards or performance approach was used, methods for RPv, Cv, and Fv compliance, requests for variances and/or offsets, etc.
    - v) \_\_\_ Construction Site Conditions, describing methods to prevent sediment and pollution discharge and illicit transportation.
    - vi) \_\_\_ Conclusion (Note: It is not the objective to provide in depth information on practices that might change in the future due to the preliminary state of the submittal. The narrative can be elaborated for future submittals once the design becomes finalized; however, the intent of the construction and post construction practices should be described, indicating how the site will be handled with any potential concerns documented.)
  - d) \_\_\_ DURMM computations and a schematic of the drainage subareas and stormwater practices.
  - e) \_\_\_ Additional hydraulic and hydrologic computations, such as supporting calculations for performance based approach for the Cv and Fv events. Detailed information subject to change.

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- f) \_\_\_\_ Supplementary construction site computations (i.e., temporary sediment basin sizing, anti-seep collar sizing, forebay sizing, etc.). *[Provide place holder for future information; does not need to be included for Preliminary submittal].*
- g) \_\_\_\_ Soil report(s) including boring locations, log reports, and infiltration testing results as applicable in accordance with Appendix A-1 Soil Investigation Procedures.
- h) \_\_\_\_ Appendix containing any supplemental information.
- 29) \_\_\_\_ Drainage calculations for the RPv, Cv, and Fv events using the latest DURMM model and other approved H&H software as appropriate.
- 30) \_\_\_\_ All inputted data supported by surveys, Lidar information, photos, aerials, maps, etc. and referenced in the report and/or drainage area plans. Information previously included within the Stormwater Assessment Study submittal is acceptable and does not need to be duplicated although it should be referenced accordingly.
- 31) \_\_\_\_ Computations based on the NRCS 24-hour rainfall event, using either NRCS Type II or appropriate NOAA Rainfall Distribution Curve for both pre and post development conditions. For projects south of the Chesapeake and Delaware (C&D) Canal, the Delmarva Unit Hydrograph should be used for computing peak discharges.
- 32) \_\_\_\_ Pre-development condition based off of the 2017 aerial photography provided by the State of Delaware, through Stormwater Assessment Study GIS Web Application. This may not directly correlate to current site conditions if the land use has changed; however, the 2017 land use should be used even if more or less conservative than the current land use.
- 33) \_\_\_\_ Pre-development condition computed assuming that all existing land uses in the site are in good hydrologic condition.
- 34) \_\_\_\_ Sizing information for the BMP(s) meeting sizing guidelines according to Post Construction Stormwater BMP Standards and Specifications.
- 35) \_\_\_\_ BMP capacity information for any detention practices to be used.

*Note: For any language that contains “[for 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 [for 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.*