



TOWN OF BETHLEHEM

SWPPP APPLICATION REVIEW CHECKLIST

Instructions: This form must be included with an initial submittal of a Site Plan or Subdivision Application.

Use the 'Applicant' column to indicate if the SWPPP contains each of the minimum components. Leave the check box blank if the item is not included in the SWPPP and provide an explanation in the available space.

Project Name:		Site Address:	
Project Applicant:		Contact Person:	
Mailing Address:		Phone Number:	
City, State, Zip:		Email:	
SWPPP Preparer:		Contact Person:	
Mailing Address:		Phone Number:	
City, State, Zip:		Email:	

Do not use the gray 'MS4' column; this is used by the MS4 Reviewer to verify checked items in the SWPPP.

MS4 SWPPP Reviewer:		SWPPP DATE:	
Submittal Date:		Review Date:	
		Approval Date:	

REQUIREMENTS BASED ON SWPPP TYPE:

<u>Applicant</u>	<u>MS4</u>	
<input type="checkbox"/>	<input type="checkbox"/>	Basic SWPPP – those construction activities listed on Table 1 in Appendix B of the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities (GP-0-08-001) or as updated by NYSDEC. (Complete ONLY pages 1-3 in this checklist)
<input type="checkbox"/>	<input type="checkbox"/>	Full SWPPP – those construction activities listed on Table 2 in Appendix B of the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities (GP-0-08-001) or as updated by NYSDEC. (Complete ONLY pages 1-4 in this checklist)
<input type="checkbox"/>	<input type="checkbox"/>	If a Full SWPPP is required, complete and attach the following SWPPP Review Forms: SMP Design Review Worksheet and, when applicable, MS4 Redevelopment Worksheet

GENERAL REQUIREMENTS:

	<u>Applicant</u>	<u>MS4</u>	
1.	<input type="checkbox"/>	<input type="checkbox"/>	Project street address, tax parcel ID(s), and legal descriptions and boundary line surveys
2.	<input type="checkbox"/>	<input type="checkbox"/>	Vicinity Map - showing project boundary, adjacent parcels, streets, and receiving water(s)
3.	<input type="checkbox"/>	<input type="checkbox"/>	Construction drawings and SWPPP with the signature and seal of a 'qualified professional'
4.	<input type="checkbox"/>	<input type="checkbox"/>	Copies of other approvals, agreements, or permits required for construction of the project
5.	<input type="checkbox"/>	<input type="checkbox"/>	Documentation of consultation with NYSHPO about potential impacts to Historic Places, include a printout from the NYSOPRHP website at: www.oprhp.state.ny.us/nr/main.asp
6.	<input type="checkbox"/>	<input type="checkbox"/>	A description of any measures necessary to avoid or minimize said adverse impacts
7.	<input type="checkbox"/>	<input type="checkbox"/>	Completed copy of a NYSDEC and US ACOE Joint Application for Permit, if applicable
8.	<input type="checkbox"/>	<input type="checkbox"/>	Completed and signed copy of DEC Notice of Intent (NOI) for general permit coverage
9.	<input type="checkbox"/>	<input type="checkbox"/>	Completed MS4 SWPPP Acceptance Form , available online: www.townofbethlehem.org
10.	<input type="checkbox"/>	<input type="checkbox"/>	Signed SWM Certification Form: Part A Developer/Applicant & Qualified Professional

BASIC SWPPP:

A) Existing and Proposed Mapping and Site Plans:

(Minimum scale of 1" = 50', or as requested by the MS4, with clear and legible detail)

	<u>Applicant</u>	<u>MS4</u>	
11.	<input type="checkbox"/>	<input type="checkbox"/>	Existing and proposed topography a minimum of 50' beyond the property (min. 2' contours)
12.	<input type="checkbox"/>	<input type="checkbox"/>	Location of adjacent perennial and intermittent streams (NYSDEC classification/naming)
13.	<input type="checkbox"/>	<input type="checkbox"/>	Mapping and description of all soils on the site, including the Hydrologic Soil Group (HSG)
14.	<input type="checkbox"/>	<input type="checkbox"/>	Description and boundaries of the existing predominant vegetative cover on the project site
15.	<input type="checkbox"/>	<input type="checkbox"/>	Boundary of the proposed limits of clearing and, if different, limits of grading on the site
16.	<input type="checkbox"/>	<input type="checkbox"/>	Delineated boundary and acreage of any upstream watersheds draining onto the project site
17.	<input type="checkbox"/>	<input type="checkbox"/>	Location and boundaries of resource protection areas such as lakes, ponds and any other known setback requirements (e.g. stream buffers, water supply wells, septic systems, etc.)
18.	<input type="checkbox"/>	<input type="checkbox"/>	Logs and mapping of borehole or test pit investigations performed on the site to determine soil properties and groundwater elevations (include the geotechnical report, if generated)
19.	<input type="checkbox"/>	<input type="checkbox"/>	Seasonal high groundwater elevation at the locations of sediment and/or detention basins
20.	<input type="checkbox"/>	<input type="checkbox"/>	NYSDEC freshwater wetland and adjacent area boundaries or certification of no wetlands
21.	<input type="checkbox"/>	<input type="checkbox"/>	Boundary of US ACOE wetlands under federal jurisdiction or certification of no wetlands
22.	<input type="checkbox"/>	<input type="checkbox"/>	Location of existing and proposed roadways, lot boundaries, buildings, and other structures
23.	<input type="checkbox"/>	<input type="checkbox"/>	Location of existing and proposed utilities (e.g. water, sewer, gas, electric) and easements
24.	<input type="checkbox"/>	<input type="checkbox"/>	Location of existing and proposed conveyance systems (i.e. swales, MHs, CBs, pipes, etc.)
25.	<input type="checkbox"/>	<input type="checkbox"/>	Flow paths of surface and subsurface stormwater management structures (use flow arrows)
26.	<input type="checkbox"/>	<input type="checkbox"/>	Location of 100-yr floodplain and floodway limits if disturbance proposed in the floodplain
27.	<input type="checkbox"/>	<input type="checkbox"/>	Locations and dimensions of all proposed channel modifications (i.e. bridges & culverts)
28.	<input type="checkbox"/>	<input type="checkbox"/>	Use of TR-20 or TR-55 methodology to compute pre and post-construction peak discharge rates from the site or if soil disturbance is under 1 acre, the Rationale Method is acceptable
29.	<input type="checkbox"/>	<input type="checkbox"/>	Calculations for the acreage of impervious cover created within the proposed disturbances
30.	<input type="checkbox"/>	<input type="checkbox"/>	Time of Concentration (Tc) travel time flow paths for subcatchments within project limits
31.	<input type="checkbox"/>	<input type="checkbox"/>	Curve Number (CN) values and square footage or acreage of evaluated subcatchment areas
32.	<input type="checkbox"/>	<input type="checkbox"/>	Location of Design Points (DPs) for the pre- and post-development hydrological analysis

B) Structural Stormwater Management and Conveyance Practices:

(Representative cross-sections, profiles, and details of storm drains, channels, swales, etc.)

	<u>Applicant</u>	<u>MS4</u>	
33.	<input type="checkbox"/>	<input type="checkbox"/>	Use of Town Standard Specifications for design of the storm drain system (i.e. catch basins, manholes, piping, etc.) – copies are available from the Engineering Division at 439-4955
34.	<input type="checkbox"/>	<input type="checkbox"/>	Use of Town standard rainfall amounts for the 1, 2, 10, 25, 50, 100-year 24-hour rainfall events: 1-yr = 2.5", 2-yr = 2.8", 10-yr = 4.5", 25-yr = 5.0", 50-yr = 5.8", 100-yr = 6.5".
35.	<input type="checkbox"/>	<input type="checkbox"/>	Existing and proposed elevations for storm drain structures (i.e. pipes, CBs, manholes, etc.)
36.	<input type="checkbox"/>	<input type="checkbox"/>	Summary table on sizing of stormwater collection and conveyance structures: must include runoff coefficient, storm intensity, manning's n-value, and peak discharge rate and velocity
37.	<input type="checkbox"/>	<input type="checkbox"/>	Map of contributing drainage areas for all stormwater collection and conveyance structures: illustrating the watershed, land cover, and square footage or acreage of each drainage area
38.	<input type="checkbox"/>	<input type="checkbox"/>	Illustration of the design water surface elevations (WSE) for all applicable rainfall events within any proposed storage or diversion structure (excluding all piping, CBs, and MHs)

BASIC SWPPP:

C) Erosion and Sediment Control (E&SC) Plan:

(Minimum scale of 1" = 50', must include all areas of disturbance within the project)

	<u>Applicant</u>	<u>MS4</u>	
39.	<input type="checkbox"/>	<input type="checkbox"/>	Erosion and sediment control plan satisfying requirements as outlined in the Blue Book
40.	<input type="checkbox"/>	<input type="checkbox"/>	Site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each E&SC practice for all anticipated soil disturbance activities for the entire project
41.	<input type="checkbox"/>	<input type="checkbox"/>	Material specifications, dimensions, and installation details for proposed E&SC practices, including calculations for siting and sizing of any temporary sediment basins and/or traps
42.	<input type="checkbox"/>	<input type="checkbox"/>	If construction activity is utility installation or single family home, use the Town Standard Detail Sheets for Typical E&SC Measures or provide equivalent details and specifications
43.	<input type="checkbox"/>	<input type="checkbox"/>	Typical E&SC measures and specific details for material stockpiling, equipment staging, material storage, borrow/spoil areas, dewatering operations, and spill/waste containment
44.	<input type="checkbox"/>	<input type="checkbox"/>	Description of temporary and permanent structural and vegetative measures for erosion control, runoff control, and sediment control for each stage and/or phase of the project
45.	<input type="checkbox"/>	<input type="checkbox"/>	Specifications for temporary and permanent seeding – note seed types and application rates
46.	<input type="checkbox"/>	<input type="checkbox"/>	Statement requiring soil stabilization on inactive portions of the site in maximum 14 days
47.	<input type="checkbox"/>	<input type="checkbox"/>	Construction phasing plan describing all the major construction activities for the project
48.	<input type="checkbox"/>	<input type="checkbox"/>	Anticipated start and end dates for each phase of the project and the total duration of work
49.	<input type="checkbox"/>	<input type="checkbox"/>	Sequencing schedule for all known soil disturbance activities at the site, including clearing, grubbing, grading, stockpiling, excavation, infrastructure installation, and final stabilization
50.	<input type="checkbox"/>	<input type="checkbox"/>	Include a schedule identifying the timing of initial placement or implementation of each E&SC practice and minimum time frames each practice remains in place or implemented
51.	<input type="checkbox"/>	<input type="checkbox"/>	Maintenance schedule for the continuous and effective operation of all temporary E&SC practices - indicate all expected daily, weekly, pre and post-rainfall, and seasonal activities
52.	<input type="checkbox"/>	<input type="checkbox"/>	Identification of temporary practices to be converted to permanent control measures and any maintenance or inspection actions that are required prior to converting these practices
53.	<input type="checkbox"/>	<input type="checkbox"/>	Descriptions of structural practices used to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from the exposed areas of the site
54.	<input type="checkbox"/>	<input type="checkbox"/>	Description of construction and waste materials expected to be utilized on-site, controls to reduce pollutants from these materials, storage practices to minimize exposure of materials to stormwater, cleanup procedures, and spill prevention and notification for each material
55.	<input type="checkbox"/>	<input type="checkbox"/>	Final landscaping plans - include buffer zones, reforestation, or wetland mitigation areas
56.	<input type="checkbox"/>	<input type="checkbox"/>	Winter month, October 15 to April 15, requirements related to E&SC (i.e. anchoring mulch material, sediment removal from basins/traps, use of winter rye seed, offset silt fence, etc.)
57.	<input type="checkbox"/>	<input type="checkbox"/>	Copy of Contractor Certification Form with a statement equivalent to DEC general permit
58.	<input type="checkbox"/>	<input type="checkbox"/>	Copy of the <i>Owner or Operator</i> Inspection Form satisfying requirements in the Blue Book
59.	<input type="checkbox"/>	<input type="checkbox"/>	Engineer's estimate for the cost of implementing identified components of the E&SC Plan

SWPPP Preparer Comments - explanation for any required items not being provided in the SWPPP

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****STOP HERE if the project does not require installation of a post-construction SMP****

FULL SWPPP:**D) Hydrologic and Hydraulic Analysis:**

(For all structural components of the stormwater system – i.e. channels, swales, SMPs, etc.)

	<u>Applicant</u>	<u>MS4</u>	
60.	<input type="checkbox"/>	<input type="checkbox"/>	Existing condition analysis for time of concentration, runoff rates, volumes, and velocities, and water surface elevations showing methodologies used and supporting calculations, including existing watershed map with design points, catchment IDs, and Tc flow paths
61.	<input type="checkbox"/>	<input type="checkbox"/>	Proposed condition analysis for time of concentration, runoff rates, volumes, and velocities, and water surface elevations showing methodologies used and supporting calculations, including proposed watershed map with design points, catchment IDs, and Tc flow paths
62.	<input type="checkbox"/>	<input type="checkbox"/>	Sizing calculations for all the post-construction stormwater management practices (SMPs) including: contributing drainage area, land use cover, storage volumes, and outlet structures
63.	<input type="checkbox"/>	<input type="checkbox"/>	Stage-discharge table or outlet rating curves and inflow/outflow hydrographs for all SMPs – information must be generated from TR-20 based hydrologic/hydraulic modeling software
64.	<input type="checkbox"/>	<input type="checkbox"/>	Dam Hazard Class determined in conformance with DEC Guidelines for Design of Dams
65.	<input type="checkbox"/>	<input type="checkbox"/>	Detailed comparison and summary of post-development stormwater runoff conditions with pre-development conditions for 1-year, 2-year, 10-year, 100-year 24-hour design storms in accordance with the Unified Sizing Criteria identified in Chapter 4 of the <i>Design Manual</i>
66.	<input type="checkbox"/>	<input type="checkbox"/>	Water Quality volume (WQv) calculations based on the Town 90% rainfall event, P=1.0"
67.	<input type="checkbox"/>	<input type="checkbox"/>	Calculations for WQv and CPv (use Chapter 4, 8, and Appendix B of the <i>Design Manual</i>)
68.	<input type="checkbox"/>	<input type="checkbox"/>	Representative cross sections and plans with dimensions, material specifications, and installation details for each SMP (comparable in detail to Chapter 6 of the <i>Design Manual</i>)
69.	<input type="checkbox"/>	<input type="checkbox"/>	Infiltration and percolation test pit report (performed in accordance with Appendix D of the <i>Design Manual</i> at the required frequency) where required by the SMP Group or the Town
70.	<input type="checkbox"/>	<input type="checkbox"/>	Copy of Geotechnical Evaluation Report conducted for the project, if required by the Town
71.	<input type="checkbox"/>	<input type="checkbox"/>	Copy of Site Inspection Form that satisfies the requirements in <i>GP-0-08-001</i> , or as updated
72.	<input type="checkbox"/>	<input type="checkbox"/>	Statement for inspections to be conducted by the qualified inspector every 7 calendar days
73.	<input type="checkbox"/>	<input type="checkbox"/>	Identification of the expected discharge points to be evaluated during these site inspections

E) SMP Operation and Maintenance Plan:

(Post-construction maintenance schedule ensuring continuous and effective operation of SMPs)

	<u>Applicant</u>	<u>MS4</u>	
74.	<input type="checkbox"/>	<input type="checkbox"/>	Name, address, phone number, and email of party responsible for O&M of all the SMPs
75.	<input type="checkbox"/>	<input type="checkbox"/>	Description and illustration of easements to each SMP from either public or private roads
76.	<input type="checkbox"/>	<input type="checkbox"/>	Description of monitoring and maintenance frequencies for required features of the SMPs (i.e. aquatic/safety benches, buffer zones, outlet structures, spillways, access roads, etc...)
77.	<input type="checkbox"/>	<input type="checkbox"/>	Minimum qualifications of inspector monitoring specific required features of the SMPs - structural features must be inspected by a Professional Engineer licensed to practice in NYS
78.	<input type="checkbox"/>	<input type="checkbox"/>	Inspection checklist with all items to be evaluated (see Appendix G of the <i>Design Manual</i>)
79.	<input type="checkbox"/>	<input type="checkbox"/>	Minimum vegetative cover requirements, based upon specific zones/areas within the SMPs
80.	<input type="checkbox"/>	<input type="checkbox"/>	Noted access and safety issues (i.e. confined spaces, testing/disposal of sediments, etc...) associated with the inspection and/or maintenance of the required features of the SMPs
81.	<input type="checkbox"/>	<input type="checkbox"/>	Draft version of Operation and Maintenance (O&M) Agreement with the Town for SMPs
82.	<input type="checkbox"/>	<input type="checkbox"/>	Detailed estimate of annual costs for the O&M of SMPs as an appendix in the SWPPP titled "Engineer's Opinion of Probably Maintenance Costs" (NYSDOT Equipment Rental Rates)
83.	<input type="checkbox"/>	<input type="checkbox"/>	Description of funding source to ensure long term financing for the O&M of all the SMPs

SUPPLEMENTARY SWPPP REQUIREMENTS:

The information below does not need to be included with the initial submittal of a SWPPP. If specific items are applicable to a project, the Town will request this information for review prior to final approval of the project.

F) Deviations from the Technical Standards

(Requirements for a SWPPP that is **not** in conformance with the *technical standards*)

	<u>Applicant</u>	<u>MS4</u>	
84.	<input type="checkbox"/>	<input type="checkbox"/>	Identify and justify proposed deviation or alternative design from the <i>technical standards</i>
85.	<input type="checkbox"/>	<input type="checkbox"/>	Illustration detailing the area of the project draining to the proposed deviation (quantify)
86.	<input type="checkbox"/>	<input type="checkbox"/>	Demonstration the deviation or alternative design is equivalent to the <i>technical standards</i>

G) Downstream Analysis:

(Requirements for waiving quantity control of Qp (10-yr), and/or Qf (100-yr) storm events)

	<u>Applicant</u>	<u>MS4</u>	
87.	<input type="checkbox"/>	<input type="checkbox"/>	Preparation of downstream analysis report based upon current NYSDEC or MS4 guidelines
88.	<input type="checkbox"/>	<input type="checkbox"/>	Map illustrating the points of analysis or outfalls with direct discharge to a 4 th order stream
89.	<input type="checkbox"/>	<input type="checkbox"/>	Verification of correspondence with downstream municipalities until the 4 th order stream

H) Disturbance greater than 5 acres:

(Requirements for authorization to disturb greater than five acres at any one time)

	<u>Applicant</u>	<u>MS4</u>	
90.	<input type="checkbox"/>	<input type="checkbox"/>	Two inspections to be conducted every seven calendar days when > five acres are disturbed
91.	<input type="checkbox"/>	<input type="checkbox"/>	Statement for soil stabilization measures to be implemented within seven (7) calendar days
92.	<input type="checkbox"/>	<input type="checkbox"/>	Phasing plan with maximum disturbed acreage per phase and a map of the cut and fill areas
93.	<input type="checkbox"/>	<input type="checkbox"/>	Identification of any additional site specific practices to be installed to protect water quality

I) Town Owned SMPs:

(Required documents for projects proposing SMPs to be owned by the Town of Bethlehem)

	<u>Applicant</u>	<u>MS4</u>	
94.	<input type="checkbox"/>	<input type="checkbox"/>	Drainage District Summary Report, that includes at a minimum: description of the SMPs, estimated annual maintenance costs, projected cost for each of the included properties, etc.
95.	<input type="checkbox"/>	<input type="checkbox"/>	Survey map and legal description of the boundaries within the proposed Drainage District
96.	<input type="checkbox"/>	<input type="checkbox"/>	Completed SEQRA Environmental Assessment Form for creation of the Drainage District

J) Performance Guarantee:

(Requirement for all land development activities)

	<u>Applicant</u>	<u>MS4</u>	
97.	<input type="checkbox"/>	<input type="checkbox"/>	Engineer's estimate for the cost of implementing all the components of the approved plans
98.	<input type="checkbox"/>	<input type="checkbox"/>	Irrevocable letter of credit or surety bond to ensure completion and O&M of all identified components of the approved plans for one full year after the final acceptance by the Town
99.	<input type="checkbox"/>	<input type="checkbox"/>	Final version(s) of signed O&M Agreement (s) with the Town for all the constructed SMPs

SWPPP Preparer Comments - explanation for any required items not being provided in the SWPPP

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