

COVER SHEET

Submittal/Resubmittal Date: _____ **Review No. (circle one)** 1 2 3 4 5 or more

Project Name: _____

Project Address: _____

Project Owner: _____ **Phone:** _____

Address: _____

Applicant: _____ **Phone:** _____

Address: _____ **Company Name:** _____

Property Zoning: _____ **Variance Requested (circle):** Yes No

Variance Description: _____

Seal/Signature of TN Registered Professional Engineer responsible for plan preparation.

For City of Maryville Use Only

This checklist presents the required elements of a stormwater management plan (SWMP). A completed checklist must be submitted to the City of Maryville Engineering and Public Works Department with the SWMP. Each element listed must be checked "Yes", "No", or "N/A", as applicable for the proposed development. Checks placed under the "No" column and must be justified in a written statement attached to this checklist.

All maps shall be shown to scale (with scale provided), with accurate bearings and distances.

Yes	No	N/A	STORMWATER MANAGEMENT PLAN CHECKLIST	
TABLE OF CONTENTS				
			1	All report pages, including all appendices, numbered sequentially
			2	List of all tables and illustrations
INTRODUCTION				
			3	Location map showing the project in relation to adjacent properties, streets, and nearby watercourses
			4	Description of the existing and proposed land use/project, drainage patterns, natural water courses, drainage problems, and floodplain status within the development
			5	Summary of any previous hydrologic/hydraulic studies or other information which pertain to the development or property
			6	Effect of proposed grading and/or construction on major drainage conveyances
OBJECTIVES AND PROCEDURES SECTION				
			7	Brief summary of the purpose of the report in relation to the project (e.g., subdivision, single-lot residential, single-lot non-residential, etc.)
			8	Description of the methodologies, assumptions, and procedures used in preparing the report
			9	Description of all applicable development standards, policies, stormwater requirements, and floodplain regulations to which the proposed development must adhere
PRE-DEVELOPMENT HYDROLOGY MAP SECTION <i>The pre-development hydrology map(s) define EXISTING condition hydrology and drainage patterns for the purposes of identifying potential constraints to the location and design of Stormwater Control Measures (SCMs) and the onsite stormwater conveyance system. They also support visualization and location of Low Impact Development (LID) practices, which can reduce the volume and peak discharges of the development. Collect and overlay the data that is readily available. Site survey, geotechnical tests, and similar intensive investigations are not required for these maps.</i>				
			10	Property boundaries
			11	Land cover identifying existing building footprints, pavement, gravel surfaces, woods, meadow, turf grass, maintained landscape, agriculture, and unvegetated (bare) soil
			12	Topography, with slopes greater than 15% labeled
			13	Hydrologic soil groups (label natural areas as A, B, C, or D, and label areas that are previously developed, compacted, or filled as "urban soil")
			14	Natural water features (streams, rivers, lakes, ponds, wetlands, seeps, springs, bogs, etc.)
			15	Sinkholes (known or suspected) and known areas of soluble bedrock, shallow bedrock, high water table, hardpan, clay lenses, or similar hydrologically limiting conditions
			16	Known areas of frequent flooding or prolonged wet conditions
			17	Known or suspected areas with geotechnical or structural concerns (contractive/expansive soils, etc.)
			18	100-year floodplain boundary
			19	Locations of known or suspected soil pollution
			20	Water supply, wellhead protection, or groundwater recharge areas
			21	Vegetated buffers, conservation, or protected areas
			22	Utility, access, drainage, and other public easement boundaries, labeled

Yes	No	N/A	STORMWATER MANAGEMENT PLAN CHECKLIST	
			23	Areas of cultural, historical, or archeological significance
			24	Areas of ecological significance, such as endangered species habitat
<p>PROPOSED DEVELOPMENT HYDROLOGY SECTION <i>These maps, reports, and narratives describe the PROPOSED condition hydrology and drainage patterns and the location and design of Low Impact Development (LID) practices, Stormwater Control Measures (SCMs), and the onsite stormwater conveyance system. They also are used to confirm that said designs are compliant with local government stormwater standards. Supporting data, such as onsite survey, geotechnical tests, and engineering analyses and calculations, are required as described below. Additional information on local government standards and SCM design criteria is provided in the Stormwater Management Manual.</i></p>				
			25	Drainage maps (drawn to scale) for post-development conditions which clearly depict contributing watersheds, sub-basins, runoff concentration points, site outfalls, flow patterns, measured flow lengths, and topographic elevations and contours
			26	Hydrologic data sheets, for post-development conditions for each runoff concentration point including time of concentration calculations, rainfall intensities, runoff coefficients or curve numbers, and peak discharges
			27	Summary table listing all runoff concentration points, corresponding drainage areas, calculated peak discharges for pre- and post-development conditions, and differences in discharges
HYDRAULICS SECTION				
			28	Open channel design and capacity computations
			29	Design computations for all culverts, storm drains, inlets, and street sections. Storm drain design shall include a labeled schematic of the storm drain network, design discharges, pipe capacities, profiles, outlet velocity, and hydraulic grade line
			30	All supporting data, printouts, tables, nomographs, etc., which are referenced in the report
STORMWATER MANAGEMENT SYSTEM SECTION				
			31	Site plan (to scale) which clearly shows the locations and dimensions of all proposed Stormwater management system components that will be constructed in order to comply with the stormwater system criteria defined in the Water Quality and Vegetated Buffers Ordinance and Land Development/Public Works Standards. This includes stormwater management facilities utilized for stormwater quality treatment, channel protection, overbank flood protection, and extreme flood protection. At a minimum, the site plan shall include the following:
			31a	- Location, dimensions, elevations, contours, characteristics, cross sections, profiles, and details for all existing and proposed drainage facilities, retaining walls, and SCM other protective devices
			31b	- Location, size, and type(s) of inflow and outflow structures
			31c	- Cross-sections of all open channels and stormwater management facilities basins, including design water surface elevation(s)
			31d	- SCM design details and cross-sections. Capacity, discharge(s), spillways, and the 100-year flood elevation for all stormwater management facilities. Shading of the area inundated by the 100-year flood elevation is recommended
			31e	- Location and size of all drainage, water quality, and other easements
			31f	- Maximum water surface elevations, limits of ponding, and typical facility cross-section(s)

STORMWATER MANAGEMENT PLAN CHECKLIST			
Yes	No	N/A	
			31g - Flow arrows, drainage divides, contours, and finished grades
			32 Description of how the overall SCM design will comply with City water quality, channel protection, overbank flooding, and extreme flooding design criteria
			33 Water quality volume (WQv) information and calculations for each SCM that provides stormwater quality treatment. This will include identification of each SCM, its tier and corresponding rainfall, the SCM drainage area, the method used to determine WQv, the design WQv for the drainage area before and after consideration of any applicable WQv reductions, the SCM capacity relative to the design WQv, and the water quality peak flow (Q_{wq}) and Q_{wq} routing calculations. <i>SCM Treatment Trains only:</i> Identify each treatment train, its SCMs (including MTDs), their location in the train (upstream and downstream), and the direction of flow. Include compliance calculations to confirm treatment of the required WQv (based on the downstream SCM). For treatment trains that include an MTD, include total % TSS removal calculations.
			34 <i>Manufactured Treatment Devices (MTDs) only:</i> For each MTD to be located onsite, provide the make, model, and size/capacity, and any additional identifying names or numbers. Also describe its purpose [i.e., pretreatment or primary treatment]. Provide all construction notes, specifications, and design details (to scale) of each MTD. <i>MTDs proposed for primary stormwater quality treatment:</i> The NJDEP certification letter, <u>in its entirety</u> . The certification must be for the <u>exact</u> make and model of MTD proposed. MTD design shall be compliant with the design conditions established in the NJDEP certification letter.
			35 SCM Vegetation Plan showing the information listed below. Vegetation requirements for SCMs are specified in Chapter 7 of the City of Maryville Stormwater Management Manual.
			35a - Labeled plans/details (to scale) depicting the plants to be installed, their numbers, and locations. Plan notes shall show the plant schedule and installation instructions.
			35b - Location of water source to be used for plant watering until fully established
			35c - Documentation of plant warranties, if required
			36 Completed WQv Reduction Form, one for each WQv reduction
			37 Channel protection volume (CPv) calculations performed in accordance with the design criteria stated City of Maryville Stormwater Management Manual
			38 Calculations to show compliance with overbank flood protection (Q_{p2} thru Q_{p50}) and extreme flood protection (Q_{p100}) design criteria, including detention volume computations, if applicable
			39 Sinkhole Drainage Calculations (Refer to Maryville Sinkhole Development Policy)
			40 Summary and Conclusions
			41 Appendices
STORMWATER SITE PLAN			
			42 Date(s) of preparation and any revision(s)
			43 Seal/signature of the responsible engineer
			44 Vicinity map including:
			44a - North arrow
			44b - Scale

STORMWATER MANAGEMENT PLAN CHECKLIST				
Yes	No	N/A		
			44c	- Adjacent roadways
			44d	- Boundary lines of site
			44e	- On-site and nearby watercourses
			44f	- Other necessary information to locate the site development
			45	Maps (to scale) which clearly show:
			45a	- Property boundaries
			45b	- Right-of-way lines of streets and/or Joint Public Easements
			45c	- Utility access or other easements
			46	The location of the:
			46a	- 100-year floodplain
			46b	- 500-year floodplain
			46c	- 100-year regulatory floodway
			46d	- Required minimum floor elevations (MFEs)
			47	Water quality buffers:
			47a	Location, width, top-of-bank (streams) or normal pool elevation (lakes, wetlands), inner zone boundary, and outer zone boundary
			47b	The statement "Water Quality Buffer. Do Not Disturb.", clearly shown
			47c	A description of the existing and proposed (if different from existing) vegetation in the water quality buffer areas must be included on the site plan, or as a separate description. For example, a statement on the site plan such as "forest vegetation, predominantly trees" or "early successional forest, predominantly immature trees" is sufficient for the inner zone of a stream buffer provided that the existing vegetation, in fact, meets one of these descriptions.
			48	Plan and profile view of proposed closed system drainage and post-construction SCM installations. Profile views should include any existing or proposed utilities that may be in conflict with the proposed stormwater infrastructure
			49	Plan sheets showing any existing or proposed drainage swales and stormwater detention areas
			50	Pipe and structure tables showing pipe material, length, diameter, slope, invert, and structure material with top elevations
			51	Construction notes, specifications, and design details for any existing or proposed stormwater system components
			52	Include City of Maryville Detail Sheet
SCM MAINTENANCE REPORT <i>This report must describe the inspection and maintenance requirements for each proposed SCM. This report will be used by the property owner to guide SCM management after construction.</i>				
			53	A map that accurately identifies each SCM and its location on the property relative to property boundaries, buildings, driveways and parking areas, etc., such that persons responsible for SCM inspection and maintenance can visually locate it. For each SCM, include also the locations of each inlet and outlet, and its associated easements. SCMs shall be identified by proper name as established in Chapter 5 of the Water Quality SCM Manual.
			54	The SCM maintenance guidance and inspection checklist(s) for each proposed SCM.

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				For SCMs constructed onsite, this information is provided in the <i>SCM Maintenance Manual</i> , which can be found on the local government's stormwater webpage. For MTDs and manufacturer/vendor supplied SCMs (e.g., cisterns, green roofs), the maintenance and inspection information developed by the manufacturer must be provided. Design professionals may provide additional SCM maintenance and inspection information as appropriate for the expected conditions of the proposed development.
			55	An executed copy of the SCM Maintenance Covenants, if required by the local government.
EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) PLAN				
For site developments disturbing 1 acre or more, the SWPPP prepared for the TDEC Notice of Coverage (NOC) shall be used as the EPSC Plan submittal for the proposed site plan.				
			56	Date of EPSC plan and date of any revision(s) on plan sheets
			57	Seal/signature of responsible plan preparer
			58	Operator contact information, if different from the owner
			59	Land use and drainage
			60	- Description of the existing and proposed land use/project or the reason for grading
			61	- Drainage patterns
			62	- Drainage problems
			63	Maps (to scale) which clearly show the following items:
			63a	- A priority construction activity notation, if applicable. If the site is considered a priority construction activity, the following statement must be included on all map pages: "This site is a Priority Construction Activity."
			63b	- Existing and proposed topographic contours
			63c	- Wetlands
			63d	- Watercourses
			63e	- Water bodies
			63f	- Sinkholes
			63g	- Springs
			63h	- Intermittent conveyances
			63i	- EPSC measures for each phase of grading
			63j	- Location(s) of any existing and proposed stormwater management structures or facilities
			63k	- Limits of proposed clearing, grading, filling an/or other land disturbing activities
			63l	- Location(s) of vegetated areas and areas that will be preserved/conserved after construction as buffers or natural space
			63m	- Outfall points for stormwater discharges from the site
			64	Depictions and descriptions (preferably as plan notes) of measures to be employed during construction to protect SCMs (including MTDs) from construction sediment and activities, once installed. <i>Note: unless the SCM is used as a sediment basin/trap during construction, SCM inlets must be blocked to prevent inflows of stormwater until its drainage area is fully and permanently stabilized.</i>

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			65	Seeding and stabilization specifications, including temporary and permanent ground covers, mulch and mulching rates, soil amendments, and methods for anchoring mulch.
			66	A general description of the method(s) used to ensure that natural areas and buffers that will be preserved after construction will remain undisturbed during grading and construction.
			67	A copy of the Tennessee Construction General Permit Notice of Coverage and Stormwater Pollution Prevention Plan (if not the same as the EPSC Plan) submitted to TDEC for the land disturbing activities detailed in the EPSC plan.
			68	Any other information deemed necessary and appropriate by the permit applicant, owner or operator or as requested by the Director of Engineering and Public Works or his/her designee.
			69	The following statement is required on all EPSC plans: <i>“Adequate drainage, erosion and sediment control measures, best management practices, and/or other stormwater management facilities shall be provided and maintained at all times during construction. Damages to adjacent property and/or the construction site caused by the contractor’s or property owner’s failure to provide and maintain adequate drainage and erosion/sediment control for the construction area shall be the responsibility of the grading permittee.”</i>
OTHER INFORMATION, if requested by the City				
			70	A copy of correspondence with the US Fish and Wildlife office concerning any identified Endangered Species on the property
			71	A Special Pollutant Abatement Plan, if required
			72	Other (describe):
			73	Other (describe):
			74	Other (describe):
			75	Other (describe):
SUBMITTED BY:				

Print Name: _____

Company Name: _____

Address: _____

Phone Number: _____ **Email:** _____

Signature: _____