

**MEMORANDUM**

**TO:** Tommy Ryan, Township Manager  
**FROM:** Joseph J Nolan, P.E., Township Engineer  
**DATE:** November 9, 2015  
**SUBJECT:** Worcester Township Stormwater Management Ordinance

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Enclosed for your review is the first draft of the proposed Worcester Township "stand-alone" Stormwater Management Ordinance (hereinafter "SMO"). Updated stormwater management regulations incorporating NPDES General Permit (PAG-13) post-construction operation and maintenance requirements for stormwater management facilities/BMPs, must be adopted by the Township by the end of Year 1 of the current term of the General Permit.

The Township is located within the Skippack, Wissahickon, and Stony Creek/Saw Mill Run watersheds, none of which have Act 167 Plans approved later than 2005; therefore, the SMO incorporates the requirements of the MS4 model Operation and Maintenance Ordinance pursuant to the Notice of Intent for Coverage under NPDES General Permit (PAG-13) submitted by the Township. The SMO also incorporates pertinent (but not all) provisions of model ordinances for recently approved Act 167 Stormwater Management Plans (approved after 2005, such as for the Neshaminy Creek Watershed), pertinent provisions of adopted stormwater management ordinances of other nearby municipalities, and includes other recommended administrative and technical provisions, not specifically required by the NPDES General Permit PAG-13, but which might be beneficial for management of regulated activities and stormwater runoff in the Township. The water quality and stormwater runoff volume provisions of the proposed SMO will reduce sediment, thus helping satisfy sediment TMDLs assigned to the Township for both the Wissahickon Creek and Skippack Creek watersheds.

This Ordinance is to replace, in their entirety, stormwater management provisions of Section 24 of Chapter 130 (Subdivision and Land Development Ordinance) of the Worcester Township Code. The "stand-alone" Stormwater Management Ordinance is preliminarily identified as Chapter 129 of the Township Code. Please consider the following as part of your review of this document:

1. Enclosed with this memorandum is a flow chart which summarizes the major components/requirements of the SMO as follows:
  - A. There are several development activities, including the creation of impervious or semi-pervious surface area, that are now defined as "regulated" and subject to the terms of the SMO. A subdivision and land development are considered regulated activities.

- B. Creation of less than 500 square feet of new impervious surface area is not regulated.
- C. Creation of impervious surface area between 500 and 1,200 square feet is considered a regulated activity but is exempt from provisions of the SMO (and does not require stormwater controls/BMPs), but the developer is required to make a contribution to a Stormwater Management Capital Fund. The owner/developer is required to submit a Stormwater Permit Application, application fee, and obtain approval of a Stormwater Exemption from the Township. This exemption does not apply to a subdivision or land development.
- D. Creation of impervious surface area greater than 1,200 square feet, which meets the exemption criteria of SMO (Section 129-5.C), is also exempt from certain provisions of the SMO but such development activity is required to install a predesigned infiltration basin consistent with a design/construction detail to be given to the developer by the Township. This "partial" exemption allows the control of stormwater runoff from a regulated activity without the land owner having to engage an engineer for potentially costly calculations and design. As written, depending on lot area and distance of new impervious surface to the downgrade property boundary, regulated activities on a single lot, proposing up to 7,500 square feet of impervious surface area, may be eligible for exemption from provisions of the SMO. The owner/developer is required to submit a Stormwater Permit Application, application fees/escrow, and Simplified Stormwater Management Site Plan (SSMSP) which identifies the required dimensions and location of the predesigned infiltration basin (an electronic detail of the basin can be made available by the Township to give to applicants for use in preparing the plan). Soil analysis and infiltration testing is not required for the predesigned infiltration basin. Installation of the predesigned infiltration basin(s) must be inspected by the Township and costs for same must be reimbursed by the applicant as part of the fees/escrow required in conjunction with the permit application. This exemption does not apply to a subdivision or land development.
- E. If a regulated activity does not meet the exemption criteria of the SMO (Sections 129-5.B and 129-5.C), full compliance with the SMO is required. All regulated activities proposing greater than 7,500 square feet of impervious surface area (and those not exempted by Sections 129-5.B and 129-5.C) must fully conform to the requirements of the SMO including:
  - (1) Stormwater Management Permit application.
  - (2) Stormwater Management Site Plan (SMSP).
  - (3) Infiltration and water quality BMP installation.

- (4) Application fees and escrow.
  - (5) Stabilize existing eroded streambanks on the project site (this is only applicable to subdivisions and land developments).
  - (6) Site soil evaluation and infiltration testing.
  - (7) Inspection of BMP installation by Township with reimbursement to the Township of incurred fees.
  - (8) Operation and Maintenance Plan for Stormwater BMPs, recorded with the Montgomery County Recorder of Deeds.
  - (9) Stormwater facilities Operation and Maintenance Agreement (with The Township), recorded with the Montgomery County Recorder of Deeds.
  - (10) Performance Guarantee (Escrow) for required stormwater facilities equal to the estimated cost of such facilities.
  - (11) As-Built Plan of required stormwater facilities and Certification of Completion of stormwater facilities/BMPs by a qualified, licensed professional.
2. The SMO includes provision for payment of a Stormwater Capital Contribution for regulated activities meeting certain exemption requirements (Refer Item 1, above). A contribution is not required for regulated, exempt activities that are required to install a predesigned infiltration basin. If not already existing, the Township should establish a Stormwater Capital Contribution Fund and Fee Resolution consistent with surrounding municipalities. This office can prepare the language of such a resolution and suggest an appropriate contribution.
  3. The SMO includes detailed design and construction requirements for stormwater management facilities and BMPs. Other Township Codes/Ordinances must be revised where applicable to either eliminate conflicting requirements (preferably) or revise same for consistency with the SMO.
  4. The SMO indicates that all development activities requiring a Grading and Excavating Permit are considered regulated activities. Many surrounding municipalities require a Grading and Excavating Permit as well as a Stormwater Management Permit. Others require only a Grading and Excavating Permit that addresses the requirements of the Stormwater Management Ordinance. Other municipalities have consolidated provisions for both into one ordinance. The Township should consider whether it would be appropriate to incorporate the provisions of the Grading and Excavations Ordinance into the SMO.
  5. A new application form will be required for the Stormwater Management Permit and Stormwater Management Permit Exemption required in conjunction with the

SMO. This office can prepare the required application form utilizing similar forms from Act 167 model ordinances.

6. A predesigned infiltration basin construction detail, including simplified design procedure must be prepared in conjunction with the SMO, for regulated activities qualifying for partial exemption of the SMO but required to install a predesigned infiltration basin. This office can prepare such a construction detail and design guidelines based on those utilized by surrounding municipalities. The electronic (CADD) detail for this BMP can be given to prospective applicants for use in preparing a Simplified Stormwater Management Site Plan for their regulated activity. Size of the basin will be as identified on a table of proposed impervious surface area and soil permeability, prepared by this office, included with the printed copy of the infiltration basin construction detail. Engineering calculations and infiltration testing of a project site will not be required for the predesigned basin. Infiltration rate utilized by the applicant for basin sizing may be based on readily available information such as nearby septic system percolation testing or average infiltration rates based on the Soil Survey of Montgomery County.
7. The Township should consider establishing a Cash Escrow Agreement to guarantee reimbursement of expenses incurred by the Township for review of Stormwater Management Site Plans and Simplified Stormwater Management Site Plans and cost incurred for construction inspection/administration of stormwater facilities and BMPs required in conjunction with the aforementioned plans. This office can prepare such an agreement based on that utilized by surrounding municipalities.
8. The NPDES General Permit model Operation and Maintenance Ordinance includes provisions for perpetual maintenance and inspection of BMPs (private and those owned by the Township) as well as reporting of inspections of private facilities, to the municipality. The model ordinance is written in a way such that these inspections and reports are not mandatory. The SMO includes similar provisions but are also written so that they are not mandatory for either the private facility owner or the Township. The inspection requirements and frequency as written in the SMO are slightly less than the model ordinance. Stormwater ordinances approved by PADEP for some surrounding municipalities have established slightly different inspection requirements from those identified by Act 167 model ordinances, such as for the Neshaminy Creek. For this reason, it is possible the Township can gain approval by PADEP of the SMO, even with slightly more lenient inspection and reporting provisions. The Township should carefully review Section 129-43 and Appendix D (Maintenance Agreement) of the SMO so that the requirements as written will be consistent with the Township's interests and capacity to administer/oversee (on some level) maintenance and inspections of private BMPs installed in the Township.
9. The Township fee schedule must be revised to account for fees and escrows that will be required as part of this proposed ordinance adoption. If requested, this office can prepare suggested fee schedule and escrows for the various applications, plans and permits required as part of this ordinance. It should be

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noted that costs incurred for review of a Stormwater Management Plan submitted in conjunction with a subdivision or land development would be reimbursed as part of the fees and escrows required with those applications.

If you have any questions concerning the above, please do not hesitate to contact me.

JJN

