

TOWNSHIP OF MOON

ORDINANCE NO. 559

AN ORDINANCE OF THE TOWNSHIP OF MOON, ALLEGHENY COUNTY, PENNSYLVANIA, AMENDING CHAPTER 180 OF THE MOON TOWNSHIP CODE, STORMWATER MANAGEMENT, TO COMPLY WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PHASE II FEDERAL STORMWATER MANAGEMENT REGULATIONS, THE PENNSYLVANIA STORMWATER MANAGEMENT ACT, AND TO SET FORTH REGULATIONS RELATED THERETO.

WHEREAS, the Municipalities Planning Code, 53 P.S. §10101 *et seq.*, authorizes the Township of Moon (the "Township") to regulate land development in the Township; and

WHEREAS, Section 2704 of the Second Class Township Code, 53 P.S. § 67704, authorizes the Township to enact stormwater management ordinances; and

WHEREAS, Section 2704 of the Second Class Township Code, 53 P.S. § 67704, authorizes the Township to require persons conducting earthmoving activities to obtain approval from the Township Board of Supervisors for those activities; and

WHEREAS, Chapter 180 of the Moon Township Code, Stormwater Management, regulates stormwater drainage from developments and property within the Township; and

WHEREAS, the Board of Supervisors of the Township of Moon desires to amend Chapter 180 of the Moon Township Code, Stormwater Management, in order to comply with the National Pollution Discharge Elimination System (NPDES) Phase II Federal Stormwater Management regulations and the Pennsylvania Stormwater Management Act, 32 P.S. § 680.1 *et seq.*, and to set forth regulations related thereto.

NOW, THEREFORE, the Board of Supervisors of the Township of Moon hereby ordains and enacts as follows:

SECTION 1. Chapter 180 of the Moon Township Code, Stormwater Management, is amended by inserting the underlined text and deleting the stricken text:

CHAPTER 180
STORMWATER MANAGEMENT

- § 180-1. Title.
- § 180-2. Purpose.
- § 180-3. Disclaimer of liability.
- § 180-4. Authority.
- § 180-5. Applicability.
- § 180-6. Exemptions.
- § 180-7. Compliance with other provisions.
- § 180-8. Greater restrictions to apply.
- § 180-9. Liability.
- § 180-10. Definitions.
- § 180-11. Plan review procedure.
- § 180-12. Commencement of work.
- § 180-13. Approved plan required; modifications.
- § 180-14. Plan modifications.
- § 180-15. Dedication of facilities.

§ 180-16. Small developments.

§ 180-17. Plan contents.

§ 180-18. Districts.

§ 180-19. Performance standards.

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§ 180-20. Stormwater Management Act (Act 167) Watersheds.

§ 180-21. General Watershed standards.

§ 180-22. Construction requirements.

§ 180-23. Construction Standard Details.

§ 180-24. Maintenance requirements.

§ 180-25. Inspections of Stormwater Management Controls.

§ 180-26. Permits.

§ 180-27. Fees.

§ 180-28. Bonds.

§ 180-29. Administrator.

§ 180-30. Adherence to plan.

§ 180-31. Prohibition Against Non-Stormwater Discharges

§ 180-~~32~~4. Enforcement.

§ ~~180-32~~. Hearing for stop work order.

§ 180-33. Revocation of permit.

§ 180-34. Appeals.

§ 180-35. Violations and penalties.

Appendix A: Release Rates for Flaugherty Run Watershed

Appendix B: Release Rates for Montour Run Watershed

(2) Flaugherty Run.

(3) General

(a) Narrows Run

(b) Thorn Run.

(c) McCabe Run.

(d) Moon Run.

(e) Shouse Run.

B. One (1) or more of these districts may be further subdivided into subareas which have similar hydrological characteristics and drain to a common point.

C. The location and boundaries of the stormwater management districts and subareas are adopted as overlay districts to the Township Zoning Map and are shown on the Zoning Map and Watershed Maps which are available in the Township offices.

§ 180-19. Performance standards.

The following provisions shall be considered the overriding performance standards against which all proposed stormwater control measures shall be evaluated, and they shall apply in all stormwater management districts in the Township:

A. Any landowner and any person engaged in the alteration or development of land which may affect stormwater runoff characteristics shall implement such measures as are reasonably necessary to prevent injury to health, safety or other property. Such measures shall include but not be limited to such actions as are required to:

(1) Assure that the maximum rate of stormwater runoff is no greater after development than prior to development activities including adjustments for release rates as per Section §180.20 of this Chapter Ordinance; and

(2) Manage the quantity, velocity and direction of resulting stormwater runoff in a manner which will not adversely impact the health on or value of any affected properties.

B. Design storms.

(1) Stormwater management facilities within a development shall be designed to handle the peak rate of runoff from the two-, five-, and ten- and twenty-five-year frequency storms. Whenever the provisions of federal and state law impose a greater design storm frequency, as for example, particularly in areas where drainage systems may cross highways, the stricter standards shall prevail.

(2) All stormwater retention/detention facilities shall be designed with emergency overflow facilities for the one hundred-year, twenty-four-hour duration storm, unless positive measures are installed to control the inflow so as not to exceed the safe capacity of the retention/detention facility.

(3) The retention volume required for all stormwater retention/detention facilities shall be that volume necessary to handle runoff of a twenty-five-year storm in any development, less that volume discharged during the same storm period used to calculate the volume of rainfall, at the approved release rate.

(4) The SCS Type II Rainfall Distribution shall be used for all analyses. The design storm frequencies for the watershed are as follows:

Design Storm	Rainfall Depth (inches)	
	24 Hours	1 Hour
2-year	2.6	1.25
5-year	3.3	1.60
10-year	3.8	2.00
25-year	4.4	2.40
100-year	5.0	3.10

C. The stormwater management plan must consider all of the stormwater runoff flowing over the project site including runoff from upland and off-site areas. Runoff calculations shall be made to ensure that runoff from the fully developed upstream watershed area (based on the Township Comprehensive Land Use Plan) can be accommodated by the pipes, drainage easements, watercourses, etc., on the site.

D. Joint development of control systems. Stormwater control systems may be planned and constructed in coordination with two (2) or more developments, provided that they are in compliance with the applicable provisions of this chapter.

E. Method of computation. All computations used in conjunction with the analysis and design of stormwater management facilities shall be based on one (1) or more of the following methods:

- (1) TR-55: Soil Conservation Service Technical Release No.55.
- (2) TR-20: Soil Conservation Service Technical Release No.20.
- (3) Modified Rational Method.
- (4) Penn State Runoff Model.

(a) These methods for determining peak discharge shall be used to determine pre-development runoff conditions; to analyze the impact of development; and to perform calculations in the design of any detention/retention facilities used in controlling runoff. These methods of runoff computation developed and used by the Soil Conservation Service and other authorities are hereby adopted by the Township.

(b) The use of the Basic Rational Method in estimating runoff must be employed in the design of the storm sewer system within the development. The storm sewer system shall be interpreted as the conduits, channels, culverts, inlets and appurtenances featured for the conveying of stormwater to, through or from a development site to the point of final discharge or control facility. The Rational Method shall not be used in the analysis of stormwater runoff from the development in its entirety or in conjunction with the design of any retention/detention facilities or other runoff control measures.

F. Release of detained stormwater. The approved peak release rate of stormwater from all retention/detention facilities for any storm event shall be that which is experienced prior to development for the same storm event up to and including the twenty-five-year storm. Therefore, all retention/detention facilities shall provide staged release of the two-, five-, ten- and twenty-five-year storms.

G. Design of the stormwater management facilities outlined in the plan requires that runoff calculations be made for the site and areas which contribute drainage to the site. These calculations should be based on land use, time of concentration and other standard aspects of hydraulic analysis.

- (1) Temporary control measures/facilities. Runoff calculations of the site's condition during development will be used to size temporary control measures.

(2) Permanent control measures/facilities. In most cases, permanent control measures/facilities shall be designed to assure that the maximum rate of stormwater runoff is no greater after development than prior to development activities, utilizing the twenty-five-year storm as a basis for calculations.

H. Where the existing storm sewers are reasonably accessible, proposed developments will be required to connect with the storm sewer system unless insufficient capacity or other reasons can be demonstrated to prevent the connection. If insufficient capacity is determined, the Township may require enlargement of existing sewers based upon the Township Engineer's recommendation.

I. Runoff calculations must also include complete hydrology and hydraulic analysis of all erosion control facilities, including but not limited to:

(1) Velocities of flow, slopes, capacity and roughness coefficient of conduits and grassed waterways.

(2) Capacity of sediment basins and permanent holding ponds.

J. Single-family lots.

(1) Retention facilities shall be constructed for all existing single-family lot developments or single-family lots located in land developments which for terrain reasons cannot utilize the development's retention systems. Retention facilities shall consist of gravel filled sumps, ponds, tanks or other approved facilities, sized in accordance with standard details, which are on file at the Township Office, attached hereto.⁴ All runoff from roof areas shall be discharged into these facilities. Refer to Figure 1 for minimum storage volume size per single residence roof area, which is on file at the Township Office.⁵

(2) Storage volumes for roof areas greater than five thousand (5,000) square feet shall be calculated using the methods outlined in Subsection E above.

(3) All stormwater retention facilities shall be located at least five (5) feet from foundation walls (location to be approved by the Township Stormwater Management Officer). All pipe from roof drains to a point five (5) feet from the structure shall be minimum Schedule 40 PVC pipe or an approved equal.