

## Chapter 135

### STORMWATER MANAGEMENT

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[HISTORY: Adopted by the Borough Council of the Borough of Mansfield 4-12-1995 by Ord. No. 374. Amendments noted where applicable.]

#### GENERAL REFERENCES

Sewers — See Ch. 128.  
Street drains — See Ch. 138, Art. III.

Subdivision and land development — See Ch. 141.

#### § 135-1. Statement of findings.

The governing body of the Borough finds that:

- A. Inadequate management of accelerated runoff of stormwater resulting from development within the Borough increases flood flows and velocities, contributes to erosion and sedimentation, overtaxes the carrying capacity of streams and storm sewers, greatly increases the cost of public facilities to carry and control stormwater, undermines floodplain management and flood control efforts in the Borough and threatens public health and safety.
- B. A comprehensive program of stormwater management, including reasonable regulation of development and activities causing accelerated erosion, is fundamental to the public

health, safety and welfare and the protection of the people of the Borough and all the people of the commonwealth, their resources and the environment.

### **§ 135-2. Purpose.**

The purpose of this chapter is to promote the public health, safety and welfare by minimizing the damages described in § 135-1A of this chapter by provisions designed to:

- A. Control accelerated runoff and erosion and sedimentation problems at their source by regulating activities which cause such problems.
- B. Utilize and preserve the desirable existing natural drainage systems.
- C. Maintain the existing flows and quality of streams and watercourses in the Borough and the commonwealth.
- D. Provide for proper maintenance of all permanent stormwater management structures which are constructed in the Borough.
- E. Protect the adequacy of existing and proposed culverts, storm sewers and bridges.

### **§ 135-3. Statutory authority.**

The Borough is empowered to regulate these activities by the authority of the Act of July 31, 1968, P.L. 805, the Pennsylvania Municipalities Planning Code,<sup>1</sup> and the Act of February 1, 1966, P.L. 1656 (Act 581), the Borough Code.<sup>2</sup>

### **§ 135-4. Scope.**

The following activities are included within the scope of this chapter:

- A. Land development.
- B. Subdivision.
- C. Earthmoving involving 1/2 acre or more.
- D. Construction of new or additional, impervious or semipervious surfaces (driveways, parking lots, etc.).
- E. Construction of new buildings or additions to existing buildings.
- F. Diversion or piping of any natural or man-made stream channel.
- G. Installation of stormwater systems or appurtenances thereto.

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1. Editor's Note: The Municipalities Planning Code was reenacted December 21, 1988 by P.L. 1329, Act No. 170. See 53 P.S. § 10101 et seq.

2. Editor's Note: See 53 P.S. § 45101 et seq.

**§ 135-5. Construal of provisions.**

Permits and approvals issued pursuant to this chapter do not relieve the applicant of the responsibility to secure required permits or approvals for activities regulated by any other applicable code, rule, act or ordinance. If more stringent requirements concerning regulation of stormwater or erosion and sedimentation control are contained in the other code, rule, act or ordinance, the more stringent regulation shall apply.

**§ 135-6. Definitions.**

As used in this chapter, the following terms shall have the meanings indicated:

**ACCELERATED EROSION** — The removal of the surface of the land through the combined action of man's activities and natural processes at a rate greater than would occur because of the natural processes alone.

**BOROUGH** — The Borough of Mansfield, Tioga County, Pennsylvania.

**CISTERN** — An underground reservoir or tank for storing rainwater.

**CONSERVATION DISTRICT** — The Conservation District serving Tioga County.

**CULVERT** — A pipe, conduit or similar structure, including appurtenant works, which carries surface water.

**DER** — Pennsylvania Department of Environmental Resources or its successors.<sup>3</sup>

**DESIGN STORM** — The magnitude of precipitation from a storm event measured in probability of occurrence (e.g., ten- or one-hundred-year storm) and duration (e.g., 24 hours) and used in computing stormwater management control system.

**DETENTION BASIN** — A basin designed to retard stormwater runoff by temporarily storing the runoff and releasing it at a predetermined rate. A "detention basin" can be designed to drain completely after a storm event or it can be designed to contain a permanent pool of water.

**DEVELOPER** — A person or persons, partnership, association, corporation or other entity, or any responsible person therein or agent thereof, that undertakes the activities covered by this chapter.

**DIVERSION TERRACE** — A channel and a ridge constructed to a predetermined grade across a slope and designed to collect and divert runoff from slopes which are subject to erosion.

**DRAINAGE EASEMENT** — A right granted by a landowner to a grantee, allowing the use of private land for stormwater management purposes.

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3. Editor's Note: Pursuant to Act No. 18-1995, the Department of Environmental Resources was divided into two separate Departments, the Department of Environmental Protection and the Department of Conservation and Natural Resources. Throughout this chapter, references have been updated accordingly.



EROSION — The removal of soil particles by the action of water, wind, ice or other geological agents.

IMPERVIOUS SURFACE — A surface which prevents the percolation of water into the ground.

INFILTRATION STRUCTURES — A structure designed to direct runoff into the ground, e.g., french drains, seepage pits or seepage trench.

LAND DEVELOPMENT —

A. The improvement of one lot or two or more contiguous lots, tracts or parcels of land for any purpose involving a group of two or more buildings, or the division or allocation of land or space between or among two or more existing or prospective occupants by means of or for the purpose of streets, common areas, leaseholds, condominiums, building groups or other features.

B. A subdivision of land.

LAND DISTURBANCE — Any activity involving grading, tilling, digging or filling of ground, or stripping of vegetation, or any other activity which causes land to be exposed to the danger of erosion.

PEAK DISCHARGE — The maximum rate of flow of water at a given point and time resulting from a specified storm event.

RUNOFF — That part of precipitation which flows over the land.

SCS — Soil Conservation Service, United States Department of Agriculture.

SEDIMENT — Solid material, both mineral and organic, that is in suspension, is being transported or has been moved from its site of origin by water.

SEDIMENT BASIN — A barrier, dam, retention or detention basin designed to retain sediment.

SEEPAGE PIT and/or SEEPAGE TRENCH — An area of excavated earth filled with loose stone or similar material and into which surface water is directed for infiltration into the ground.

SEMIPERVIOUS SURFACE — A surface such as stone, rock, concrete or other material which permits some vertical transmission of water.

SOIL-COVER COMPLEX METHOD — A method of runoff computation developed by SCS and found in its publication Urban Hydrology for Small Watersheds, Technical Release No. 55, SCS, January 1975, or other method approved by the Borough Engineer.

STORM SEWER — A system of pipes or other conduits which carries intercepted surface runoff, street water and other wash waters or drainage, but excludes domestic sewage and industrial wastes.

**STORMWATER MANAGEMENT PLAN** — The plan for managing stormwater runoff adopted or to be adopted by Tioga County as required by the Act of October 4, 1978, P.L. 864 (Act 167), and known as the "Stormwater Management Act."<sup>4</sup>

**SUBDIVISION** — The division or redivision of a lot, tract or parcel of land by any means into two or more lots, tracts, parcels or other divisions of land, including changes in existing lot lines for the purpose, whether immediate or future, of lease, transfer of ownership or building or lot development.

**SWALE** — A low-lying stretch of land which gathers or carries surface water runoff.

**§ 135-7. Methods of stormwater flow attenuation.**

- A. A variety of stormwater management facilities can attenuate increased post-activity covered by this chapter, storm flows to or below preactivity levels, such as detention ponds, recharge basins, artificial wetlands, and rooftop storage. The choice of control techniques is not limited to the above.
- B. The use of other control methods which meet the criteria of this chapter will be permitted when approved by the Borough Engineer.
- C. Various combinations of methods should be tailored to meet the particular requirements of the type of land disturbance activity and the topographic features of the activity area.

**§ 135-8. Design of stormwater management facilities.**

- A. Stormwater management facilities shall be designed to provide an emergency spillway to control the one-hundred-year peak post-activity contemplated by this chapter. The height of embankment must provide 1.0 foot of freeboard above the top of the spillway flow when conveying the one-hundred-year peak post-activity flow.
- B. The stormwater management facility shall be designed such that the spillway is not activated in a twenty-five-year storm event.
- C. Provisions to limit access to the stormwater management facility may be required by the Borough.
- D. Criteria for design and construction of stormwater management facilities are not the same criteria that are used in the permitting of dams under the Department of Environmental Protection Dam Safety Program. Depending upon the physical characteristics of a dam, a dam permit may be required and the design will have to meet the provisions of Chapter 105 of the Dam Safety and Encroachments Act.
- E. Calculation methodology.
  - (1) The design of stormwater detention facilities intended to meet the performance standards of this chapter shall be verified by routing a full design storm hydrograph through the proposed facility to estimate outflows. Peak discharge and

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4. Editor's Note: See 32 P.S. § 680.1 et seq.

runoff volumes shall be computed using the Soil-Cover Complex Method as set forth in the latest edition of Urban Hydrology for Small Watersheds, Technical Release No. 55, as published by SCS, or by any other method approved by the Borough Engineer.

- (2) Outlet structures for stormwater management facilities shall be designed to meet the performance standards of this chapter using any generally accepted hydraulic analysis technique or method.
- (3) Impacts of post-activity stormwater flows to downstream areas and stormwater conveyance systems shall be evaluated. Critical points downstream of the proposed activity shall be analyzed, and peak pre- and post-activity stormwater flows shall be estimated and compared to the hydraulic capacity of the existing conveyance system.

#### **§ 135-9. Stormwater conveyance.**

##### **A. Calculation methodology.**

- (1) For drainage areas less than 20 acres, peak stormwater discharges may be computed using the Rational Equation as set forth in Section 10.4 of the Pennsylvania Department of Transportation's Design Manual, Part 2, Highway Design, Publication 13, January 1990 Edition, or by any other method approved by the Borough Engineer.
- (2) For drainage areas equal to or above 20 acres, peak stormwater discharges shall be computed using the Soil-Cover Complex Method as set forth in the latest revision of Urban Hydrology for Small Watersheds, Technical Release No. 55, as published by SCS, or by any other method approved by the Borough Engineer.
- (3) Manning's Equation shall be used for hydraulic computations and to determine the capacity of open channels, culverts and storm sewers.
- (4) Swales and ditches shall be designed in such a manner that nonerosive velocities will not be exceeded when design peak stormwater flows are conveyed.

##### **B. Upgrading of existing stormwater conveyance system. The applicant may be required to upgrade existing downstream stormwater conveyance systems to provide adequate capacity to accommodate post-activity stormwater flows.**

#### **§ 135-10. Criteria for stormwater conveyance systems.**

- A. Stormwater runoff from any activity covered by this chapter shall be controlled such that after the activity the land disturbed will generate, as a maximum, no greater peak flow than prior to activity for a two-, ten-, and twenty-five-year twenty-four-hour storm, considered individually. Further reductions in the magnitude of post-activity peak flows may be required to prevent exceeding the capacity of existing downstream conveyance systems.



- B. Runoff conveyance systems. Storm sewers and other stormwater conveyance systems shall be able to convey peak post-activity stormwater flows from a ten-year design storm for drainage areas of less than 20 acres and from a twenty-five-year design storm for drainage areas in excess of 20 acres. In addition, provisions for safe conveyance of stormwater flows from a one-hundred-year storm through the activity area shall be provided (generally over the top of the conveyance system). Roadway cross culverts shall be able to convey stormwater flows from a twenty-five-year design storm for drainage areas of less than 20 acres and a fifty-year design storm for drainage areas of 20 acres or more. A minimum 1.0 foot of freeboard shall be provided below the lowest point of the roadway profile.
- C. Erosion and sedimentation. All land disturbance activities shall be conducted in such a way as to minimize accelerated erosion and resulting sedimentation. Measures to control erosion and sedimentation shall at a minimum meet the standards of the Conservation District and Chapter 102 (Erosion Control) of Title 25, Rules and Regulations of the Pennsylvania Department of Environmental Protection. Adequate erosion protection shall be provided along all open channels, at points of stormwater discharge and for all land disturbed areas.

**§ 135-11. Plan requirements.**

- A. Prior to the commencement of any activity regulated by this chapter, the owner, subdivider, his agent or other responsible party must have a stormwater management plan approved by the Borough.
- B. The following activities are specifically exempt from these planning provisions:
  - (1) Land disturbances associated with existing one- and two-family dwellings.
  - (2) Land disturbances affecting less than 200 square feet of ground surface or impervious surface.
  - (3) Use of land for gardening for home consumption.
- C. The plan must include the following:
  - (1) All existing and proposed structures, land disturbances and impervious surfaces.
  - (2) All temporary and permanent stormwater management controls.
  - (3) All erosion and sedimentation controls.
  - (4) Maintenance responsibilities of permanent stormwater management control facilities.
  - (5) All streams or other bodies of water, swales and drainageways.
  - (6) All hydraulic and hydrologic calculations.

**§ 135-12. Plan submission and approval.**

- A. Completed plans, accompanied by the requisite fees as set forth in § 135-18, are to be submitted to the Borough for approval. The plan shall not be considered as complete until all requisite fees are received by the Borough.
- B. The Borough shall forward a copy of the plan to the Tioga County Planning Commission for review and comments.
- C. The Borough Engineer and Borough Planning Commission shall review the plan and comments from the Tioga County Planning Commission and shall recommend whether the plan be approved or disapproved.
- D. The Borough shall notify the applicant within 45 days from receipt of a complete plan submission of its decision.
- E. A disapproval shall contain the reasons for disapproval.
- F. Failure of the Borough to render a decision within the forty-five-day time limit shall be deemed an approval.

**§ 135-13. Land disturbance permit requirements.**

All land disturbance activities as specified in § 135-11A, except those specifically exempt from permit requirement by § 135-11B, shall be conducted only after the issuance of a land disturbance permit.

**§ 135-14. Application for permit.**

All applications for permits required by this chapter shall be made on forms supplied by the Borough. Such application shall provide a brief description of the stormwater management controls and the land disturbance activity. This application shall become part of the plan submission required by § 135-11 of this chapter.

**§ 135-15. Expiration and renewal of permits.**

- A. All land disturbance permits shall expire 24 months from the date of issuance unless construction is commenced prior to this date.
- B. A renewal of an expired land disturbance permit may be issued by the Borough following a resubmittal of the permit application form and its approval by the Borough Engineer.
- C. The refusal of the Borough to reissue an expired land disturbance permit shall contain the reasons for such refusal.

**§ 135-16. Suspension and revocation of permit.**

- A. Any permit issued under this chapter may be suspended or revoked by the Borough for:



- (1) Noncompliance with or failure to implement any provision of the permit.
  - (2) A violation of any provision of this chapter or any other applicable law, ordinance, rule or regulation relating to the project.
  - (3) The creation of any condition or the commission of any act during construction or development which constitutes or creates a hazard or nuisance or which endangers the life or property of others.
- B. A suspended permit shall be reinstated by the Borough when:
- (1) The Borough Engineer has inspected and approved the corrections to the stormwater management control measure(s) or the elimination of the hazard or nuisance; and/or
  - (2) The Borough is satisfied that the violation of the ordinance, law, or rule and regulation has been corrected.
- C. A permit which has been revoked by the Borough cannot be reinstated. The applicant may apply for a new permit under the procedures outlined in this chapter.

**§ 135-17. Inspections.**

- A. The Borough Engineer or his designee shall inspect all phases of development of the site, including but not limited to:
- (1) Completion of rough grading, but prior to placing topsoil, permanent drainage or other site development improvements and ground covers.
  - (2) Construction of the permanent stormwater facilities at such times as specified by the Borough Engineer.
  - (3) Upon completion of any final grading, vegetative control measures or other site restoration work done in accordance with the approved plan and permit.
- B. No work shall begin on a subsequent stage until the preceding stage has been inspected and approved by the Borough Engineer.
- C. It is the responsibility of the permittee to notify the Borough Engineer 96 hours in advance of the completion of each identified phase of development.
- D. Any portion of the work which does not comply with the approved plan must be corrected by the permittee within 96 hours. No work may proceed on any subsequent phase of the stormwater management plan, the subdivision or land development or building construction until the required corrections have been made.

**§ 135-18. Fees and expenses.**

Land disturbance permit fees covering costs to the Borough for plan reviews, permit issuance and inspections shall be established by resolution of the Borough Council. No permit to begin any work on the project shall be issued until the requisite fees have been paid.

**§ 135-19. Expenses covered by fees.**

The fees payable by an applicant shall at a minimum cover:

- A. The review of the stormwater management plan.
- B. The site inspection.
- C. The inspection of required controls and improvements during construction.
- D. The final inspection upon completion of the controls and improvements required in the plan.
- E. Any additional work required to enforce the permit provisions, correct violations and assure the completion of stipulated remedial actions.

**§ 135-20. Performance guaranties.**

- A. In order to guarantee the full and proper installation of all the required stormwater management control facilities as specified in the approved plan, the applicant shall provide, prior to the initiation of construction, a performance bond, escrow account certification or irrevocable letter of credit from an appropriate financial or surety institution which guarantees satisfactory and complete installation of such facilities.
- B. The security shall be in an amount determined by the Borough.
- C. The applicant shall be released from the guaranty when the Borough Engineer has determined that all stormwater management control facilities are completed and satisfactory.

**§ 135-21. Maintenance of facilities.**

- A. All stormwater management facilities installed pursuant to this chapter shall be maintained by the owner or owners of the property upon which the facilities are located and a statement to this effect shall be incorporated as part of the deeds to the property executed after the initiation of construction of such facilities.
- B. If the Borough determines at any time that any permanent stormwater management control facility has been eliminated, altered or improperly maintained, the owner of the property upon which the facility is situate shall be advised of corrective measures required and given a reasonable period of time to take necessary action. If such action is not taken by the property owner the Borough may cause the work to be done and lien all costs against the property or in the alternative seek other relief as set forth in § 135-24.

**§ 135-22. Right of entry.**

Upon presentation of proper credentials, duly authorized representatives of the Borough may enter at reasonable times upon any property within the Borough to investigate or ascertain the condition of the subject property in regard to any aspect regulated by this chapter.

**§ 135-23. Notification of noncompliance.**

In the event that an owner, subdivider, developer or his agent fails to comply with the requirements of this chapter or fails to conform to the requirements of any permit issued thereunder, the Borough shall provide written notification of violation. Such notification shall set forth the nature of the violations and establish a time limit for correction of these violations. Upon failure to comply within the time specified, the owner, subdivider, developer or his agent shall be subject to the penalty provisions of this chapter contained in § 135-24 or other penalty provisions contained in the Subdivision and Land Development Ordinances<sup>5</sup> of the Borough where applicable.

**§ 135-24. Violations and penalties.**

Anyone violating the provisions of this chapter shall be guilty of a misdemeanor and upon conviction shall be subject to a fine of not more than \$300 for each violation, recoverable with costs, or imprisonment of not more than 30 days, or both. Each day that the violation continues shall be a separate offense. In addition, the Borough may institute injunctive, mandamus or any other appropriate action or proceeding at law or in equity for the enforcement of this chapter. Any court of competent jurisdiction shall have the right to issue restraining orders, temporary or permanent injunctions, mandamus or other appropriate forms of remedy or relief.

**§ 135-25. Appeal to Borough Council.**

Any person aggrieved by any action of the Borough or its agent may appeal to the Borough Council within 30 days of that action.

**§ 135-26. Appeal to Court of Common Pleas.**

Any person aggrieved by any decision of the Borough Council may appeal to the Court of Common Pleas of Tioga County within 30 days of that decision.

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5. Editor's Note: See Ch. 141, Subdivision and Land Development.



