
ARTICLE 1383
Stormwater Management Standards

1383.01 General Requirements	1383.03 Volume Controls
1383.02 Exemptions/Modifications	1383.04 Rate Controls

1383.01. GENERAL REQUIREMENTS

- A. For all Regulated Activities, unless specifically exempted in Section 1383.02:
- (1) Preparation and implementation of an approved SWM Site Plan is required.
 - (2) No Regulated Activities shall commence until the City of Franklin issues written approval of a SWM Site Plan, which demonstrates compliance with the requirements of this Ordinance.
 - (3) The SWM Site Plan shall demonstrate that adequate capacity will be provided to meet the Volume and Rate Control Requirements, as described under Sections 1383.04 and 1383.05 of this Ordinance.
 - (4) The SWM Site Plan approved by the City of Franklin, shall be on-site throughout the duration of the Regulated Activities.
- B. For all Regulated Earth Disturbance Activities, erosion and sediment control BMPs shall be designed, implemented, operated, and maintained during the Regulated Earth Disturbance Activities (e.g., during construction) to meet the purposes and requirements of this Ordinance and to meet all requirements under Title 25 of the Pennsylvania Code (including, but not limited to Chapter 102 Erosion and Sediment Control) and the Clean Streams Law. Various BMPs and their design standards are listed in the Erosion and Sediment Pollution Control Program Manual (E&S Manual), No. 363-2134-008 (April 15, 2000), as amended and updated.
- C. For all Regulated Activities, stormwater BMPs shall be designed, installed, implemented, operated, and maintained to meet the purposes and requirements of this Ordinance and to meet all requirements under Title 25 of the Pennsylvania Code and the Clean Streams Law, conform to the State Water Quality Requirements, meet all requirements under the Storm Water Management Act and any more stringent requirements as determined by the municipality.
- D. The municipality may, after consultation with Pennsylvania DEP, approve measures for meeting the State Water Quality Requirements other than those in

this Ordinance, provided that they meet the minimum requirements of, and do not conflict with state law, including, but not limited to, the Clean Streams Law.

- E. All Regulated Activities shall include, to the maximum extent practicable, measures to:
- (1) Protect health, safety, and property.
 - (2) Meet the water quality goals of this Ordinance by implementing measures to:
 - (a) Minimize disturbance to floodplains, wetlands, natural slopes, existing native vegetation and woodlands.
 - (b) Create, maintain, or extend riparian buffers and protect existing forested buffers.
 - (c) Provide trees and woodlands adjacent to impervious areas whenever feasible.
 - (d) Minimize the creation of impervious surfaces and the degradation of Waters of the Commonwealth and promote groundwater recharge.
 - (e) Protect natural systems and processes (drainageways, vegetation, soils, and sensitive areas) and maintain, as much as possible, the natural hydrologic regime.
 - (f) Incorporate natural site elements (wetlands, stream corridors, mature forests) as design elements.
 - (g) Avoid erosive flow conditions in natural flow pathways.
 - (h) Minimize soil disturbance and soil compaction.
 - (i) Minimize thermal impacts to Waters of the Commonwealth.
 - (j) Disconnect impervious surfaces by directing runoff to pervious areas, wherever possible and decentralize and manage stormwater at its source.

- F. Impervious Areas:
- (1) The measurement of impervious areas shall include all of the impervious areas in the total proposed development, even if development is to take place in stages.
 - (2) For developments taking place in stages, the entire development plan must be used in determining conformance with this Ordinance.
 - (3) For projects that add impervious area to a developed parcel, to the maximum extent practicable and at the discretion of the Municipal Engineer, the total impervious area on the parcel may be subject to the requirements of this Ordinance.
- G. If diffused flow is proposed to be concentrated and discharged onto adjacent property, the Applicant must document that adequate downstream conveyance facilities exist to safely transport the concentrated discharge, or otherwise prove that no erosion, sedimentation, flooding, or other harm will result from the concentrated discharge.
- (1) Applicant must provide an executed easement for proposed concentrated flow across adjacent properties to a drainage way or public right-of-way.
 - (2) Such stormwater flows shall be subject to the requirements of this ordinance.
- H. Stormwater drainage systems shall be provided in order to permit unimpeded flow along natural watercourses, except as modified by stormwater management facilities or open channels consistent with this Ordinance.
- I. Where watercourses traverse a development site, drainage easements (with a minimum total width of 20 feet) shall be provided conforming to the line of such watercourses. The terms of the easement shall prohibit excavation, the placing of fill or structures, and any alterations that may adversely affect the flow of stormwater within any portion of the easement. Also, maintenance, including mowing of vegetation within the easement may be required, except as approved by the appropriate governing authority.
- J. When it can be shown that, due to topographic conditions, natural drainageways on the site cannot adequately provide for drainage, open channels may be constructed conforming substantially to the line and grade of such natural drainageways. Work within natural drainageways shall be subject to approval by Pennsylvania DEP under regulations at 25 PA Code Chapter 105 through the Joint Permit Application process, or, where deemed appropriate by Pennsylvania DEP, through the General Permit process.
- K. Any stormwater management facilities or any facilities that constitute water obstructions (e.g., culverts, bridges, outfalls, or stream enclosures, etc.) that are regulated by this Ordinance, that will be located in or adjacent to Waters of the

Commonwealth (including wetlands), shall be subject to approval by Pennsylvania DEP under regulations at 25 PA Code Chapter 105 through the Joint Permit Application process, or, where deemed appropriate by Pennsylvania DEP, the General Permit process. When there is a question whether wetlands may be involved, it is the responsibility of the Applicant or his agent to show that the land in question cannot be classified as wetlands; otherwise, approval to work in the area must be obtained from Pennsylvania DEP.

- L. Should any stormwater management facility require a dam safety permit under Pennsylvania DEP Chapter 105, the facility shall be designed in accordance with Chapter 105 and meet the regulations of Chapter 105 concerning dam safety.
- M. Any stormwater management facilities regulated by this Ordinance that will be located on, or discharged onto, State highway rights-of-ways shall be subject to approval by the Pennsylvania Department of Transportation (PENNDOT).
- N. Minimization of impervious surfaces and infiltration of runoff through seepage beds, infiltration trenches, etc., are encouraged, where soil conditions and geology permit, to reduce the size or eliminate the need for detention facilities.
- O. Infiltration BMPs should be dispersed throughout the site, made as shallow as practicable, and located to maximize use of natural on-site infiltration features while still meeting the other requirements of this Ordinance.
- P. Roof drains shall not be connected to streets, sanitary or storm sewers, or roadside ditches in order to promote overland flow and infiltration/percolation of stormwater where it is advantageous to do so. When it is more advantageous to connect directly to streets or storm sewers, then the City of Franklin shall permit it on a case-by-case basis.
- Q. Applicants are encouraged to use Low Impact Development Practices to reduce the costs of complying with the requirements of this Ordinance and the State Water Quality Requirements.
- R. When stormwater management facilities are proposed within 1,000 feet of a downstream municipality, the Developer shall notify the downstream municipality and provide a copy of the SWM Plan, upon request, for review and comment.

1383.02. EXEMPTIONS/MODIFICATIONS

- A. Under no circumstance shall the Applicant be exempt from implementing such measures as necessary to:
- (1) Meet State Water Quality Standards and Requirements.
 - (2) Protect health, safety, and property.
 - (3) Meet special requirements for High Quality (HQ) and Exceptional Value (EV) watersheds.
- B. The Applicant must utilize the following BMPs to the maximum extent practicable to receive consideration for the exemptions:
- (1) Design around and limit disturbance of floodplains, wetlands, natural slopes over 15%, existing native vegetation, and other sensitive and special value features.
 - (2) Maintain riparian and forested buffers.
 - (3) Limit grading and maintain non-erosive flow conditions in natural flow paths.
 - (4) Maintain existing tree canopies near impervious areas.
 - (5) Minimize soil disturbance and reclaim disturbed areas with topsoil and vegetation.
 - (6) Direct runoff to pervious areas.
- C. The Applicant's proposed development/additional impervious area may not adversely impact the following:
- (1) Capacities of existing drainageways and storm sewer systems.
 - (2) Velocities and erosion.
 - (3) Quality of runoff if direct discharge is proposed.
 - (4) Existing known problem areas.
 - (5) Safe conveyance of the additional runoff.
 - (6) Downstream property owners.

- D. An Applicant proposing Regulated Activities, after demonstrating compliance with Sections 1383.02 (A) through (C), may be exempted from various requirements of this Ordinance according to the following table:

New Impervious Area ^{1,2} (square footage)	Applicant Must Provide
0-1,000	---
1,000 – 2,500	Documentation of Impervious Area ³
2,500 – 5,000	Volume Controls
> 5,000	Rate Controls, Volume Controls & SWM Site Plan

NOTES:

- ¹ New Impervious Area since the date of adoption of this Ordinance.
- ² Gravel in existing condition shall be considered pervious and gravel in proposed condition shall be considered impervious.
- ³ The Small Project Stormwater Management Application may be used for projects under 5,000 square feet of proposed impervious surface. The Small Project SWM application allows documentation of new impervious surface, credits through disconnection of impervious surfaces and tree planting, and sizing of Volume Control BMPs that may be required.

- E. Single family residential activities are exempt from these requirements provided the construction:

- (1) Complies with Sections 1383.01(G), 1383.02(A), 1383.02(B), 1383.0(C), and
- (2) Having building setback 75 feet from downstream property lines, and
- (3) Driveways:
 - (a) Runoff must discharge onto pervious surface with a gravel strip or other spreading device or provide other sheet flow to pervious areas.
 - (b) No more than 1,000 square feet of pervious surface may discharge to any one point.
 - (c) The length of flow on the pervious must exceed the length of paved surface flow.
- (4) The first page of the Small Project Stormwater Management Application must be provided to document the proposed impervious area.
- (5) The municipality can require more information or require mitigation of certain impacts through installation of stormwater management BMPs if there is a threat to property, health, or safety.

- F. An applicant proposing Regulated Activities, after demonstrating compliance with Sections 1383.02 (A) through (C), may be exempted from various requirements of this Ordinance if documentation can be provided that a downstream manmade water body (i.e., reservoir, lake, or manmade wetlands) or SWM BMP have been

designed or modified to address the potential stormwater flooding impacts of the proposed development.

- G. The purpose this section is to ensure consistency of stormwater management planning between local ordinances and NPDES permitting (when required) and to ensure that the Applicant has a single and clear set of stormwater management standards to which the Applicant is subject. The City of Franklin may accept alternative stormwater management controls under this section provided that:
 - (1) The alternative controls are documented to be acceptable to Pennsylvania DEP, for NPDES requirements pertaining to post construction stormwater management requirements.
 - (2) The alternative controls are in compliance with all other sections of this ordinance, including, but not limited to, Sections 1383.01 (D) and 1383.02 (A) through (C).
- H. Agricultural activities are exempt from requirements of this Ordinance provided the activities are performed according to the requirements of 25 PA Code Chapter 102.
- I. Forest management and timber operations are exempt from the Rate and Volume Control requirement and SWM Site Plan preparation requirement of this Ordinance provided the activities are performed according to the requirements of 25 PA Code Chapter 102.

1383.03. VOLUME CONTROLS

- A. The Low Impact Development Practices provided in the BMP Manual shall be utilized for all Regulated Activities to the maximum extent practicable.
- B. Stormwater runoff Volume Controls shall be implemented using the Design Storm Method or the Simplified Method as defined below. For Regulated Activities areas greater than one (1) acre, or which require detailed design of stormwater management facilities, the Design Storm Method shall be followed. For Regulated Activity areas equal or less than one (1) acre that do not require hydrologic routing to design the stormwater facilities, this Ordinance establishes no preference for either method; therefore, the Applicant may select either method on the basis of economic considerations, the intrinsic limitations on applicability of the analytical procedures associated with each methodology, and other factors.

- (1) The Design Storm Method (CG-1 in the BMP Manual) is applicable to any sized Regulated Activity. This method requires detailed modeling based on site conditions and shall be completed by a Qualified Professional to include the following elements:
 - (a) Do not increase the post-development total runoff volume when compared to the pre-development total runoff volume for the 2-year/24-hour storm event.
 - (b) For hydrologic modeling purposes:
 - (i) Existing non-forested pervious areas must be considered meadow (good condition) for pre-development hydrologic calculations.
 - (ii) Twenty (20) percent of existing impervious area, when present within the proposed project site, shall be considered meadow (good condition) for pre-development hydrologic calculations for re-development.
- (2) The Simplified Method (CG-2 in the BMP Manual) is independent of site conditions and should be used if the Design Storm Method is not followed. This method is not applicable to Regulated Activities greater than one (1) acre or for projects that require detailed design of stormwater storage facilities. For proposed impervious surfaces:
 - (a) Stormwater facilities shall capture at least the first two (2) inches of runoff from all new impervious surfaces.
 - (b) At least the first one (1) inch of runoff from proposed impervious surfaces shall be permanently removed from the runoff flow, i.e. it shall not be released into surface Waters of the Commonwealth. Removal options include reuse, evaporation, transpiration, and infiltration.
 - (c) Wherever possible, infiltration facilities should be designed to accommodate infiltration of the entire permanently removed runoff; however, in all cases at least the first one-half (0.5) inch of the permanently removed runoff should be infiltrated.
 - (d) Actual field infiltration tests at the location of the proposed elevation of the stormwater BMPs are required. Infiltration test shall be conducted in accordance with the BMP Manual. A minimum 48-hour notification to the City of Franklin shall be provided to allow witnessing of the testing.

(3) In cases where it is not possible or desirable to use infiltration-based best management practices to partially fulfill the requirements in either Section 1383.03 (B)(1) or 1383.03 (B)(2), the following procedure shall be performed and documented by a Qualified Professional:

- (a) At a minimum, the following documentation shall be provided to justify the decision to not use infiltration BMPs:
 - (i) Description of and justification for field infiltration/permeability testing with respect to the type of test and test locations.
 - (ii) An interpretive narrative describing existing site soils and their structure as these relate to the interaction between soils and water occurring on the site. In addition to providing soil and soil profile descriptions, this narrative shall identify depth to seasonal high water tables and depth to bedrock, and provide a description of all subsurface elements (fragipans and other restrictive layers, geology, etc.) that influence the direction and rate of subsurface water movement.
 - (iii) A qualitative assessment of the site's contribution to annual aquifer recharge shall be made, along with identification of any restrictions or limitations associated with the use of engineered infiltration facilities.
 - (iv) The provided documentation must be signed and sealed by the Qualified Professional.

- (b) The following water quality pollutant load reductions will be required for all disturbed areas within the proposed development:

Pollutant Load	Units	Required reduction (%)
Total Suspended Solids (TSS)	Pounds	85
Total Phosphorous (TP)	Pounds	85
Total Nitrate (NO3)	Pounds	50

- (c) The performance criteria for water quality best management practices shall be determined from the BMP Manual.

C. The applicable worksheets from the BMP Manual must be used in calculations to establish Volume Control.

1383.04 RATE CONTROLS

- A. For lands contained within Venango County that have not had release rates established under an approved Act 167 Stormwater Management Plan:
 - (1) Post-development discharge rates shall not exceed the pre-development discharge rates for the 1-year, 2-year, 10-year, 25-year, 50-year, and 100-year storms.

- B. For lands contained within Venango County that have had release rates established under an approved Act 167 Stormwater Management Plan:
 - (1) The post-development peak discharge rates shall be in accordance with the approved release rate map for the individual watershed.