

**CHAPTER 26**

**WATER**

**PART 1**

**STORMWATER MANAGEMENT**

**A. General Provisions.**

**§ 101. Title.**

**§ 102. Statement of Findings.**

**§ 103. Purpose.**

**§ 104. Authority.**

**§ 105. Right of Entry.**

**§ 106. Compatibility with Other Permits and Ordinances.**

**§ 107. Municipal Liability.**

**B. Definitions.**

**§ 111. Definitions.**

**C. Permit Procedures and Requirements.**

**§ 121. General Prohibition.**

**§ 122. Exceptions and Variances.**

**§ 123. Application Procedure.**

**§ 124. Appeals.**

**§ 125. Contents of Application.**

**§ 126. Stormwater Management Plan Contents.**

**§ 127. Maps or Schematic Plans.**

**§ 128. Written Report.**

**§ 129. Modification of Plans.**

**§ 130. Waiver.**

**§ 131. Expiration of Permit.**

**§ 132. Issuance of Permits.**

**§ 133. Performance Bond and Security.**

**§ 134. Liability Insurance.**

**§ 135. Public Maintenance Program.**

**D. Design Standards.**

**§ 141. General Design Recommendations.**

**§ 142. Design Standards.**

- E. Administration.**
- § 151. Basin Construction Standards.**
- § 152. Inspections.**
- § 153. Suspension of Permit.**
- § 154. Revocation of Permit.**
- § 155. Notification of Suspension or Revocation.**
- § 156. Penalties.**
- § 157. Civil Penalties.**

**PART 1**  
**STORMWATER MANAGEMENT**

**A. General Provisions.**

**§ 101. Title. [Ord. 64, 4/21/1997, § 101]**

This Part shall be known as the "St. Marys Stormwater Management Ordinance."

**§ 102. Statement of Findings. [Ord. 64, 4/21/1997, § 102]**

St. Marys City Council finds that:

- A. Inadequate management of stormwater runoff increases downstream flooding, erodes or silts stream channels, pollutes water, overloads existing drainage facilities and reduces the ground water table.
- B. A comprehensive and reasonable program of stormwater management regulations is fundamental to the public health, safety and welfare and the protection of property and the environment.

**§ 103. Purpose. [Ord. 64, 4/21/1997, § 103]**

The purpose of this Part is to promote the public health, safety and welfare by minimizing problems of stormwater runoff by provisions designed to:

- A. Manage stormwater runoff, soil erosion and sedimentation by regulating activities which cause such problems.
- B. Utilize and preserve existing natural drainage.
- C. Encourage recharge of ground waters.
- D. Maintain and improve the existing flows and quality of streams and watercourses within the City.
- E. Preserve and restore the flood carrying capacity of streams.
- F. Provide for proper maintenance of all stormwater management structures.

**§ 104. Authority. [Ord. 64, 4/21/1997, § 104]**

This Part is adopted pursuant to the Pennsylvania Stormwater Management Act, Act of October 4, 1978, (P.L. 864), No. 167 and the St. Marys Home Rule Charter.

**§ 105. Right of Entry. [Ord. 64, 4/21/1997, § 105]**

Upon presentation of proper credentials, duly authorized representatives of the City may enter at reasonable times upon any property within the City to investigate and ascertain the condition of the subject property with regard to any aspect regulated by this Part.

**§ 106. Compatibility with Other Permits and Ordinances. [Ord. 64, 4/21/1997, § 106]**

The provisions of this Part are deemed to be incorporated into any subdivision and land development ordinance or regulations of the City now in effect or hereafter adopted. To the extent that the provisions of this Part impose greater requirements, the provisions of this Part shall prevail. Permits issued pursuant to this Part do not relieve the applicant of the responsibility to secure permits or approvals for activities regulated by any other applicable ordinances or regulations.

**§ 107. Municipal Liability. [Ord. 64, 4/21/1997, § 107]**

The issuance of any permit under this Part shall not be deemed to relieve the developer or property owner of any responsibility for the adverse effects of any drainage of water. The issuance of a permit does not impose upon the City any responsibility to either the developer or any other property owner affected by drainage of water.

**B. Definitions.****§ 111. Definitions. [Ord. 64, 4/21/1997, § 201]**

**APPLICANT** — A landowner, as herein defined, or agent of the landowner, who has filed an application for a stormwater management permit.

**BUILDING** — Any structure, either temporary or permanent, designed or used for shelter of any person, animal or property and occupying more than 100 square feet of land.

**CHANNEL** — A natural or artificial watercourse with a definite bed and banks which confine and conduct flowing water continuously or periodically.

**DEDICATION** — The deliberate designation of property by its owner for general public use.

**DETENTION BASIN** — A reservoir which temporarily contains stormwater runoff and releases its gradually into a watercourse or stormwater drainage system.

**DEVELOPER** — Anyone who undertakes activities which affect stormwater runoff.

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

**EROSION** — The processes by which soil particles are detached and transported by action of natural forces.

**IMPERVIOUS SURFACE** — A surface made of materials which prevent the percolation of water into the ground.

**LAND DEVELOPMENT** — The improvement of one lot or two or more contiguous lots, tracts or parcels of land for any purpose involving residential or nonresidential buildings or subdivision for sale or lease.

**LANDOWNER** — A legal, beneficial or equitable owner of land, including the holder of an option or contract to purchase (whether or not such option or contract is subject to any conditions), a lessee (if he is authorized under the lease to exercise the rights of the landowner) or any other person having a proprietary interest in land.

**RETENTION BASIN** — A reservoir designed to retain stormwater runoff with its primary release of water being through the infiltration of said water into the ground.

**SEDIMENTATION BASIN** — A reservoir designed to retain sediment.

**SEMI-IMPERVIOUS SURFACE** — A surface such as stone, rock, concrete or other material which prevents some percolation of water into the ground.

**STORMWATER MANAGEMENT FACILITIES** — Those controls, measures and structures (e.g., storm sewers, berms, terraces, bridges, dams, basins, infiltration systems, swales, watercourses and floodplains) used to effect stormwater management program.

**STREET** — A highway, road, street or alley, whether publicly or privately owned, which includes a cartway with an impervious or semi-impervious surface.

**WATERCOURSE** — A permanent or intermittent stream, river, brook, creek, run, pond, lake or other body of water, whether natural or man-made, for gathering or carrying surface water.

### **C. Permit Procedures and Requirements.**

#### **§ 121. General Prohibition. [Ord. 64, 4/21/1997, § 301]**

No person shall construct, install or alter any stormwater management facility within the City without first obtaining a stormwater management permit under this Part.

**§ 122. Exceptions and Variances. [Ord. 64, 4/21/1997, § 302]**

1. A stormwater management permit shall not be required for the construction or installation of stormwater management facilities involving the construction or alteration of a single family or two-family dwelling on a single lot; provided, that the construction or installation does not alter any stormwater conditions beyond the boundaries of the lot or alter provisions of a previously approved stormwater management plan for the lot or the encompassing subdivision.
2. No permit shall be required where the total impervious area resulting from a land development is less than 5,000 square feet. However, when the total impervious area in a land development subsequently exceeds 5,000 square feet, a permit must then be obtained and the stormwater management plan must include all facilities and development which has occurred on the tract since the time of adoption of this Part.
3. The City Manager shall have the power to grant variances from the application procedures and plan requirements for minor land development where the City Manager determines that it would be uneconomical or unreasonable to require full compliance with the provisions of this Part. The grant of such a variance shall not excuse the landowner from installing and maintaining stormwater management controls and facilities consistent with this Part. If, after granting such a variance, the City Manager later determines that, because of site conditions or other physical circumstances, additional compliance with the provisions of this Part is in the public interest, the City Manager may require the applicant to comply with the procedural and plan requirements of this Part.

**§ 123. Application Procedure. [Ord. 64, 4/21/1997, § 303]**

1. An application for a stormwater management permit shall be submitted to the Code Enforcement Officer on a form provided by the City.
2. The Code Enforcement Officer may review the application with the City Engineer or City Solicitor and any other municipal officials prior to taking action on the application. The cost of review of an application and plan by the City Engineer or City's consulting engineer shall be paid by the applicant prior to the issuance of a permit.
3. Within 30 days after receipt of the application, the Code Enforcement Officer shall take action on the application, which may consist of the following:
  - A. Where the stormwater management facility involves a subdivision and land development, referral of the application to the City Planning Commission and City Council for approval or disapproval as a part of the subdivision and land development process.
  - B. In all other cases:

- (1) Approval of the permit.
- (2) Approval of the permit subject to defined conditions.
- (3) Denial of the Application. The denial shall be in writing and shall cite the reasons for denial.

**§ 124. Appeals. [Ord. 64, 4/21/1997, § 304]**

1. Any person aggrieved by a decision of the Code Enforcement Officer may appeal from such action in writing to the City Planning Commission within 30 days after the action is taken by the Code Enforcement Officer.
2. Any person aggrieved by any action of St. Marys City Council under this Part shall have a right of appeal as provided by law within 30 days after the action is taken by St. Marys City Council.

**§ 125. Contents of Application. [Ord. 64, 4/21/1997, § 305]**

An application for a stormwater management permit shall be made on a form provided by the City and shall include:

- A. Four copies of the proposed stormwater management plan.
- B. The application fee, as determined from time to time by resolution of City Council.

**§ 126. Stormwater Management Plan Contents. [Ord. 64, 4/21/1997, § 306]**

Maps or schematic plans shall be prepared to the following standards:

- A. General.
  - (1) The map scale shall not be less than one inch equals 50 feet. If the land development is larger than 20 acres, the map scale shall not be less than one inch equals 100 feet.
  - (2) Sheet sizes no smaller than 17 inches by 22 inches and no larger than 34 inches by 44 inches.
  - (3) Name or identifying title of project.
  - (4) Name and address of landowner, applicant and individual or firm who prepared the plan.
  - (5) Plan date and date of latest revision plan.
  - (6) North arrow.

- (7) All permits required by the Pennsylvania Department of Environmental Protection, Pennsylvania Department of Transportation, U.S. Army Corps of Engineers, the Federal Emergency Management Agency and the Elk County Conservation District, or their successor agencies, and any other regulatory agencies with jurisdiction.
  - (8) Location map which shows relationship of tract to the two nearest public streets.
  - (9) Note on plan indicating any area that is not to be offered for dedication, along with a statement that the City is not responsible for construction or maintenance of any area not dedicated for public use.
  - (10) A statement, signed by the landowner, acknowledging the stormwater management system is to be maintained in accordance with an approved ownership and maintenance program and remain a permanent fixture which can be altered or removed only after the approval of a revised plan by the City.
  - (11) Certificate, signed and sealed by an individual registered in the Commonwealth of Pennsylvania and qualified to perform such duties, indicating compliance with the provisions of this Part.
- B. Existing Features.
- (1) Tract boundaries showing distances, bearing and curve data as located by field survey or deed plotting and total acreage of tract.
  - (2) Existing Topographical Data. This information shall be provided by field survey and shall indicate the natural drainage patterns of the site, along with the approximate grades of all slopes. Contour lines shall be provided at two-foot vertical intervals for slopes of 4% or less and at vertical intervals of five feet for more steeply sloping land. The bench mark and the datum used shall also be indicated.
  - (3) The plan must show existing features at least 50 feet beyond the perimeter of the tract to show the eventual disposition of stormwater off the tract.
  - (4) Names of all owners of all immediately adjacent lands, names of all proposed or existing developments immediately adjacent and locations and dimensions of any streets or easement shown thereon.
  - (5) Names, locations and dimensions of all existing buildings, streets, railroads, utilities, watercourses, drainage facilities, floodplain and other significant features within the property.
  - (6) Soils types as designated by the U.S. Department of Agriculture, Soil Conservation Service.

**C. Proposed Features.**

- (1) Proposed land use, total number of lots and dwelling units and extent of commercial, industrial and other nonresidential uses.
- (2) Locations and dimensions of all proposed streets, sidewalks, lot lines, building locations, parking compounds, impervious and semi-impervious surfaces, sanitary sewer facilities, water facilities and areas proposed for public dedication.
- (3) Proposed changes to land surface and vegetative cover including areas to be cut or filled.
- (4) Proposed Topographical Data. This information shall be provided by contour lines, indicating the natural drainage patterns of the site, along with the approximate grades of all slopes. Contour lines shall be provided at two-foot intervals for slopes of 4% or less and at vertical intervals of five feet for more steeply sloping land.
- (5) Plans and profiles of proposed stormwater management facilities including horizontal and vertical location, size and type of material. This information shall be of the quality required for construction of all facilities.
- (6) Plans and profiles of all erosion and sedimentation control measures, temporary as well as permanent.

**§ 127. Maps or Schematic Plans. [Ord. 64, 4/21/1997, § 307]**

The stormwater management plan documents shall include:

- A. Maps or schematic plans and drainage area maps showing the extent of the subwatershed.
- B. Written report.

**§ 128. Written Report. [Ord. 64, 4/21/1997, § 308]**

The stormwater management plan shall also include a written report containing the following items:

- A. A written narrative describing the assumption and criteria used in the design of stormwater management facilities, along with calculations used in the establishment of the calculated predevelopment and postdevelopment peak discharge.
- B. For all proposed detention basins and retention basins, except temporary sedimentation basins, required storage volume shall be designed by hydrograph routings. This information shall be based upon standard storage routing equations and the detailed calculations shall be submitted.

- C. For all proposed detention and retention basins which hold 2 1/2 acre feet or more of water and have an embankment that is eight feet or more in height, soil structures and characteristics shall be investigated. Plans and data prepared by a registered professional experienced and educated in soil mechanics shall be submitted. These submissions shall provide design solutions for frost heave potential, spring-swell potential, soil bearing strength, water infiltration, soil settling characteristics, fill and back filling procedures and soil treatment techniques required to protect the improvements or structures.
- D. Description of all erosion and sedimentation control measures, temporary as well as permanent, including the staging of earth moving activities, sufficient in detail to clearly indicate their function.
- E. Expected project time schedule, including anticipated start and completion dates.
- F. Description of an ownership and maintenance program, in a recordable form, that clearly sets forth the ownership and maintenance responsibility for all temporary and permanent stormwater management facilities, including the following:
- (1) Description of the method and extent of the maintenance requirements.
  - (2) When maintained by a private entity, identification of a responsible individual, corporation, association or other entity for ownership and maintenance.
  - (3) When maintained by a private entity, a copy of the legally binding document which provides that the City shall have the right to:
    - (a) Inspect the facilities at any time.
    - (b) Require the private entity to take corrective measures and assign the private entity reasonable time periods for any necessary action.
    - (c) Authorize maintenance to be done and a municipal assessment to be imposed against the properties benefitted by the facilities or a municipal claim to be filed against the private entity responsible for maintenance, or both, for the cost of the maintenance.
  - (4) Establishment of suitable easements for access to stormwater management facilities.
- G. The effect of the project on runoff volume, time to peak and rate of flow on adjacent property and upon existing City stormwater drainage systems when such will be utilized.

**§ 129. Modification of Plans. [Ord. 64, 4/21/1997, § 309]**

The Code Enforcement Officer may authorize minor modification to an approved stormwater management plan where the modifications do not alter the stormwater management facilities in a manner which significantly affects the discharge of stormwater to an adjacent property or significantly relocates a major stormwater management facility within the project. Otherwise, no person shall modify an approved stormwater management facility without first obtaining a stormwater management permit under the procedures and requirements of this Part.

**§ 130. Waiver. [Ord. 64, 4/21/1997, § 310]**

1. The provisions of this Part are intended as minimum standards for the protection of the public health, safety and welfare. The City may grant a waiver from literal compliance with the mandatory provisions of this Part if the applicant can demonstrate either (A) that compliance would cause undue hardship as it applies to a particular property, or (B) that an alternative proposal will allow for equal or better results.
2. Applications for waiver shall be granted or denied by City Council, which may impose such conditions as will, in its judgment, substantially meet the intent and spirit of this Part.

**§ 131. Expiration of Permit. [Ord. 64, 4/21/1997, § 311]**

1. A permit issued under this Part shall be valid for a period of one year from the date of its issuance.
2. A permit may be extended by filing a written request with the Code Enforcement Officer. The extension shall be granted if the Code Enforcement Officer finds that the subject property or affected surrounding area has not been altered in a manner which requires alteration of the stormwater management plan.
3. The refusal of an extension of time shall cite the reasons for such refusal.
4. An existing permit shall not expire while a request for an extension is pending.

**§ 132. Issuance of Permits. [Ord. 64, 4/21/1997, § 312]**

No permit shall be issued under this Part until the applicant has filed with the Code Enforcement Officer:

- A. A performance bond, with appropriate security, as required by § 133 of this Part.
- B. Where applicable, liability insurance in accordance with § 134 of this Part.

**§ 133. Performance Bond and Security. [Ord. 64, 4/21/1997, § 313]**

1. Where a stormwater management plan includes a detention basin or retention basin or other drainage facility which may adversely affect adjacent properties or streets or other public improvements, the applicant shall submit a performance bond in a form satisfactory to the City.
2. The performance bond shall be supported by financial security in an amount sufficient to cover 110% of the cost of installation of the proposed stormwater management facilities. The amount of financial security required shall be based upon an estimate of the cost of completion of the requirement improvements submitted by an applicant or developer and prepared by a professional engineer licensed as such in this Commonwealth and certified by such engineer to be a fair and reasonable estimate of such cost. The City may refuse to accept such estimate for good cause shown. Without limitation as to other types of financial security which the City may approve, which approval shall not be unreasonably withheld, Federal or Commonwealth chartered lending institution irrevocable letters of credit and restrictive or escrow accounts in such lending institutions shall be deemed acceptable financial security for the purposes of this Section. If the developer requires more than one year from the date of posting of the financial security to complete the required facilities, the amount of financial security may be increased by an additional 10% for each additional year required for completion.
3. Within 30 days after the Code Enforcement Officer certifies that the stormwater management facilities have been completed, the City shall release the developer or applicant from the performance bond and return any security held by the City under the bond. If the Code Enforcement Officer refuses to certify completion, he shall provide the developer or applicant with written notice of refusal, which shall contain the reasons therefor.

**§ 134. Liability Insurance. [Ord. 64, 4/21/1997, § 314]**

1. Where, in the opinion of the City Manager, based upon a consultation with the City Engineer, the nature of the work is such that it may create a hazard to life or property, the City Manager may, before issuing a permit, require the applicant to file a certificate showing that the applicant maintains insurance against claims for personal injury or property damage by reason of surface water flow which has been altered on the site. The liability insurance shall be in an amount designated by the City Manager and relative to the nature of the risk involved. The policy shall name the City as an additional insured.
2. The failure of the City Manager to insist upon a certificate of liability insurance shall not relieve any person from responsibility for damages otherwise imposed by law or impose any liability upon the City, its officers or employees, for any such damages.

**§ 135. Public Maintenance Program. [Ord. 64, 4/21/1997, § 315]**

Where, under § 128(F) of this Part, the applicant proposes that the stormwater management facilities be maintained by the City:

- A. The plans shall clearly specify those lands from which the stormwater management facilities will receive any run off.
- B. The applicant shall, prior to the issuance of a permit, enter into a written agreement, in recordable form, with the City providing that the City shall have the right, annually or more often, to assess the lands so designated as being served by the facility with the cost of maintenance of the facility.
- C. All deeds or other documents of conveyance of any interest in any lands subject to the foregoing assessment shall contain a notice or covenant that said lands are subject to assessment for the cost of maintaining the facility.
- D. Where the City undertakes maintenance responsibility for such stormwater management facility, it shall annually or more often cause to be assessed against the lands benefited from said facility, the cost of maintaining the facility in such shares as the City shall deem reasonable and just.

**D. Design Standards.****§ 141. General Design Recommendations. [Ord. 64, 4/21/1997, § 401]**

1. In the interest of (A) reducing the total area of impervious surface, (B) preserving existing features which are critical to stormwater management and (C) reducing the concentration of stormwater flow, the designer should consider alternate design concepts and the design flexibility provided by the waiver process.
2. Maximum use should be made of the existing onsite natural and man-made stormwater management facilities.
3. Innovative stormwater management and recharge facilities may be proposed (e.g., rooftop storage, parking lot ponding, recreation area ponding, diversion structures, aeration of lawns, porous pavements, holding tanks, infiltration systems, stream channel storage, in-line storage in storm sewers and grading patterns); provided, they are accompanied by detailed engineering plans showing performance capabilities, along with a suitable plan for landscaping.

**§ 142. Design Standards. [Ord. 64, 4/21/1997, § 402]**

The standards contained in this Section shall apply as minimum design standards, however, Federal, State and local regulations may impose additional standards subject to their jurisdiction.

- A. All projects shall be designed so that the peak discharge of the calculated post-development runoff to an adjacent property does not exceed the peak discharge of the calculated predevelopment runoff for the two-, ten- and one-hundred-year frequency storm events.
- B. The design plan and construction schedule shall incorporate measures to minimize soil erosion and sedimentation.
- C. The following assumptions shall apply when establishing water shed conditions prior to development.
  - (1) Woodland or meadow in good condition shall be used for all undeveloped area.
  - (2) Average antecedent moisture conditions as defined by the Soil Conservation Service shall be used.
  - (3) Drainage area reductions equal to the area of undrained depressions or pond factor adjustments in accordance with SCS TR-55 procedures shall be applied in determining predeveloped peak discharges when applicable.
- D. Runoff calculations shall be based upon the USDA Soil Conservation Service Soil-Complex Method, the rational formula of  $Q=CIA$  or any other method acceptable to the City Engineer. Acceptable coefficient values for use in the rational method and permissible curve numbers for TR-55, maximum velocities and suggested roughness coefficients and permissible velocities for channels are identified in Appendix A.<sup>1</sup> Time of concentration and travel time computations shall be based on the SCS Segmental Approach (TR-55 latest version). The time of concentration flow path should be shown on the drainage area map.
- E. Consideration shall be given to the relationship of the subject property to the drainage pattern of the watershed.
- F. Stormwater shall not be transferred from one watershed to another, unless
  - (1) the watersheds are a subwatershed of a common watershed which join together within the perimeter of the property,
  - (2) the effect of the transfer does not alter the peak discharge onto adjacent lands or
  - (3) easements from the affected landowner are provided.

---

<sup>1</sup>Editor's Note: Appendix "A" is on file in the City office.

- G. A concentrated discharge of stormwater to an adjacent property shall be within an existing watercourse or enclosed in an easement or the discharge must be returned to a predevelopment condition.
- H. The proposed stormwater discharge at the perimeter of the site shall not be beyond the capacity of any existing, immediately contiguous stormwater management facility into which it flows.
- I. Detention basins, except sedimentation basins, shall be designed to safely discharge the peak discharge of a post-development one-hundred-year frequency storm event through an emergency spillway and all other outlets combined in a manner which will not damage the integrity of the basin.
- J. Detention basins and water carrying facilities shall be stabilized promptly.
- K. Detention basins shall be designed and maintained to insure the design capacity after sedimentation has taken place.
- L. Basins which are not designed to release all stormwater shall be specifically identified as retention basins or permanent pond basins. All other basins shall have provisions for dewatering, particularly the bottom and shall not create swampy or unmaintainable conditions. Low flow channels and tile fields may be used to dewater the bottom of a basin.
- (1) Permanent pond basins existing as of the date of adoption of this Part may be incorporated into stormwater management facilities; however, no new permanent pond basins shall be created or incorporated into any stormwater management facilities.
  - (2) All retention basins and infiltration facilities shall be designed to drain down within 72 hours following the end of a storm event. Design methods and selected alternatives shall have the prior approval of the City Engineer.
- M. Detention basins which are designed with earth fill dams shall incorporate the following minimum standards.
- (1) The height of the dam shall not exceed 15 feet, unless approved by waiver of the City Manager.
  - (2) The minimum top width of dams up to 15 feet in height shall be equal to 2/3 of the dam height, but in no case shall the top width be less than five feet.
  - (3) The side slopes of the settled earth fill shall not be less than 2 1/2 horizontal to one vertical.
  - (4) A cutoff trench of relatively impervious material shall be provided under all dams, except for those dams with side slopes of three

horizontal to one vertical or flatter. The dam with flatter sides shall be provided with a key trench.

- (5) All pipes and culverts through dams shall have properly spaced concrete cutoff collars or factory welded antiseep collars.
  - (6) A minimum one-foot freeboard above the design elevation of the water surface at the emergency spillway shall be provided.
  - (7) In order to ensure proper drainage, the bottom slope shall be a minimum grade of 2%. This slope may be reduced to 1% where a low flow channel is provided.
- N. The capacities of pipes, gutters and swales shall be calculated by the Manning Equation or any other method of equal caliber which is acceptable to the City. Additionally, consideration shall also be given to all hydraulic conditions which may apply.
- O. Storm sewers shall be provided with manholes at a maximum intervals of 600 feet. Manholes shall also be provided at points of abrupt change in the horizontal or vertical directions except for pipes with at least a thirty-six-inch diameter or height. Inlets may be substituted for manholes where they will serve a useful purpose.
- P. Curved pipes, tee joints, elbows and wyes are prohibited except for pipes with at least a thirty-six-inch diameter or height.
- Q. The maximum velocity of stormwater runoff shall be maintained at levels which results in a stable channel both during and after channel construction. The following are characteristics of a stable channel.
- (1) It neither aggrades nor degrades beyond tolerable limits.
  - (2) The channel banks do not erode to the extent that the channel cross-section is changed appreciably.
  - (3) Excessive sediment bars do not develop.
  - (4) Excessive erosion does not occur around culverts and bridges or elsewhere.
  - (5) Gullies do not form or enlarge due to the entry of uncontrolled stormwater runoff.
- R. When stormwater management plans are for a portion of a larger project, a generalized stormwater management plan for the project shall be submitted. This generalized plan shall demonstrate how the stormwater of the proposed section will relate to the entire development. If temporary facilities are required for construction, such facilities shall be included in the submitted plans. In the event temporary measures cannot adequately handle the

stormwater runoff, the main outfall line shall be included as part of the construction of the proposed section.

- S. The applicant must comply with all applicable erosion and sedimentation control regulations in effect at the time any work is done on the stormwater management facilities. Any required permits shall be in place before a permit is granted under this Part. In addition, the applicant shall also meet the following standards:
- (1) Stripping of vegetation, grading or other soil disturbances shall be done in a manner which will minimize soil erosion.
  - (2) Whenever feasible, natural vegetation shall be retained and protected.
  - (3) The extent of the disturbed area and the duration of its exposure shall be kept to a minimum, within practical limits.
  - (4) Either temporary seeding, mulching or other suitable stabilization measures shall be used to protect exposed critical areas during construction.
  - (5) Drainage provisions shall accommodate the stormwater runoff both during and after construction.
  - (6) Soil erosion and sedimentation facilities shall be installed prior to any onsite grading.
  - (7) Temporary fencing shall be installed around all sedimentation basins until such basins are permanently converted to detention basins.

#### **E. Administration.**

##### **§ 151. Basin Construction Standards. [Ord. 64, 4/21/1997, § 501]**

1. A quality control program is critical for embankment fills. Therefore, whenever embankment fill material is to be used, each layer of compacted fill shall be tested to determine its density per ASTM D 1556, ASTM 2922 or ASTM D 3017. The density of each layer shall be 99% of a standard Proctor analysis per ASTM D 698.
2. Compaction tests reports shall be kept on file at the site and be subjected to review at all times with copies being forwarded to the City Engineer.
3. When rock is encountered during the excavation of a pond, it shall be removed to an elevation of at least 12 inches below the proposed basin floor. (For a manufactured liner, 24 inches to 30 inches.)

4. Temporary or permanent grasses or stabilization measures shall be established on the sides and base of all earthen basins within 15 days of construction.

**§ 152. Inspections. [Ord. 64, 4/21/1997, § 502]**

1. The developer shall notify the Code Enforcement Officer at least 48 hours before beginning any installation of any stormwater management facilities.
2. The Code Enforcement Officer shall inspect the installation activities at the following intervals.
  - A. Upon completion of preliminary site preparation, including stripping of vegetation, stock piling topsoil and construction of temporary stormwater management facilities.
  - B. Upon completion of rough grading, but prior to placing topsoil, permanent drainage or other site development improvements and ground cover.
  - C. During construction of the permanent stormwater management facilities at such times as specified by the Code Enforcement Officer.
  - D. Upon completion of permanent stormwater management facilities, including establishment of ground covers and plantings.
  - E. Upon completion of any final grading, vegetative control measures or other site restoration work done in accordance with the permit.
3. No work shall begin on a subsequent phase until the preceding phases have been inspected and approved by the Code Enforcement Officer.
4. In order to avoid delays for inspections, it is the responsibility of the developer to notify the Code Enforcement Officer at least 48 hours in advance of the completion of each identified phase.
5. Any portion of the work which does not comply with the approved plan must be corrected by the developer before proceeding with any subsequent phase.

**§ 153. Suspension of Permit. [Ord. 64, 4/21/1997, § 503]**

1. Any permit issued under this Part may be suspended by the Code Enforcement Officer based upon:
  - A. The noncompliance with or failure to implement any provision of the stormwater management plan.
  - B. A violation of any provision of this Part relating to the project.

- C. The creation of any condition or the commission of any act during construction which constitutes or creates a hazard or nuisance or which endangers life or property of others.

Under the suspension of a permit, only such work as the Code Enforcement Officer so authorizes may proceed. This work shall be limited to that which is necessary to correct the violation.

- 2. A suspended permit shall be reinstated by the Code Enforcement Officer when:
  - A. The City Code Enforcement Officer has inspected and approved the corrections to the stormwater management facilities or the elimination of the hazard or nuisance.
  - B. The City Code Enforcement Officer is satisfied that the violation of this Part has been corrected.

**§ 154. Revocation of Permit. [Ord. 64, 4/21/1997, § 504]**

- 1. Based upon a report from the City Engineer that the existing condition or further construction is likely to endanger property or create hazardous conditions, the Code Enforcement Officer may:
  - A. Revoke a permit.
  - B. Require protective measures to be taken and assign a reasonable time period for the necessary action.
  - C. Authorize protective measures to be done and lien all cost of the work against the property on which work is required.
- 2. A permit which has been revoked cannot be reinstated. The applicant may apply for a new permit in accordance with the processing procedures of Part 1C.

**§ 155. Notification of Suspension or Revocation. [Ord. 64, 4/21/1997, § 505]**

In the event of a suspension or revocation of a stormwater management permit, the Code Enforcement Officer shall provide written notification, by certified mail, of the violation to the landowner at his last known address. Such notification shall:

- A. Cite the specific violation, described the requirements which have not been met, and cite the provision of the ordinance relied upon.
- B. Identify the specific protective measures to be taken.
- C. Assign a reasonable time period necessary for action or, in the case of revocation, identify any protective measures to be performed at the cost to the landowner.

- D. Identify the right of the landowner to request a hearing before the City Council if aggrieved by the suspension or revocation.

**§ 156. Penalties. [Ord. 64, 4/21/1997, § 506]**

Any person who violates any of the provisions of this Part shall, upon conviction thereof in a summary proceeding or civil enforcement proceeding, be subject to a fine or civil penalty in an amount not less than \$100 nor more than \$1,000 for each violation, together with costs of suit. In default of payment of the fine or civil penalty, such person may be imprisoned for a term not exceeding 30 days. A new and separate violation shall be deemed to be committed for each day that a violation continues to exist after receipt of notice of the violation.

**§ 157. Civil Penalties. [Ord. 64, 4/21/1997, § 507]**

In addition to the penalties provided under this Part, the City may institute an action in law or in equity to enforce this Part or to prevent or abate a violation thereof.