

STATE OF MICHIGAN
COUNTY OF WASHTENAW
TOWNSHIP OF SALEM
ORDINANCE NO. 1999-11-30-01

STORM WATER MANAGEMENT ORDINANCE

An ordinance to prevent water quality degradation, flooding, and drainage problems resulting from storm water runoff; reduce soil erosion during and after site development; identify requirements for storm water management; provide for long-term maintenance of storm water systems; identify requirements and prohibitions relative to discharge to and use of storm water systems; and to protect the health, safety and general welfare of Salem Township residents.

THE TOWNSHIP BOARD OF SALEM TOWNSHIP, COUNTY OF WASHTENAW, STATE OF MICHIGAN ORDAINS:

Section 1 of Ordinance

A new ordinance of the Township of Salem shall be established, reading as follows:

ARTICLE I. PURPOSES AND INTERPRETATION

Section 1.01 Purposes

The purposes of this Ordinance shall be:

- A. To protect public health, safety and welfare by requiring storm water management whenever new, expanded or modified developments are proposed.
- B. To assure that storm water runoff from development is controlled so that the water quality in watercourses, ground water recharged by storm water and habitat situated in areas impacted by storm water are protected, and that siltation and pollution are minimized.
- C. To provide for cost-effective and functionally-effective storm water management, and to reduce the need for future remedial projects.
- D. To prevent soil erosion and sedimentation.

- E. To ensure that, if wetlands are to be used for storm water detention, the natural functions and quality of wetlands throughout the Township are protected to the maximum extent feasible.
- F. To recognize private responsibility to incorporate storm water management systems into the early stages of site planning and design.
- G. To ensure that all storm water conveyance and detention facilities will be properly maintained.
- H. To promote the avoidance of degradation of water resources by reducing and/or avoiding impacts on the hydrology of storm water runoff.
- I. To establish regulations to prevent harmful effects of changes in the quantity and quality of surface water discharge into water bodies that are in Salem Township, in whole or part.
- J. Recognizing that significant adverse surface and/or ground water impacts may result from development, it is the intent of this Ordinance to require development design and control mechanisms to ensure that storm water runoff does not result in a short-term and/or long-term threat to the public health, safety and welfare in Salem Township, and in downstream areas. In this regard, it is the intent of the Township to require “special best management practice” applicable to development of environmentally sensitive areas that require greater protection in terms of impacts upon surface and ground water from storm water runoff and storage.
- K. To achieve compliance with state and federal law and regulations relating to water quality.

Section 1.02 Construction of Language

The following rules of construction apply to the text of this Ordinance:

- A. Particulars provided by way of illustration or enumeration shall not control general language.
- B. Ambiguities, if any, shall be construed liberally in favor of protecting natural land and water resources.
- C. Words used in the present tense shall include the future, and words used in the singular number shall include the plural, and the plural the singular, unless the context clearly indicates the contrary.
- D. Terms not specifically defined in this Ordinance shall have the meaning customarily assigned to them.

- E. Considering that storm water management in many cases requires sophisticated engineering design and improvements, some of the terms of this Ordinance are complex in nature. Effort has been made to simplify terms to the extent the subject matter permits. In addition, assistance and examples will be provided by or on behalf of the Township as needed for the interpretation and understanding of this Ordinance.

Section 1.03 Abrogation and Conflict of Authority

Nothing in this Ordinance shall be interpreted to conflict with present or future state statutes in the same subject matter. Conflicting provisions of this Ordinance shall be abrogated to the extent of the conflict. The provisions of this Ordinance shall be construed, if possible, to be consistent with and in addition to relevant state regulations and statutes.

In their interpretation and application, the provisions of this Ordinance shall be held to be minimum requirements and shall be liberally construed in favor of achieving the objectives of this Ordinance, and shall not be deemed a limitation or repeal of any other powers granted by state statutes.

This Ordinance is not intended to repeal, abrogate or impair any existing easements, covenants, or deed restrictions. However, where this Ordinance imposes greater restrictions, the provisions of this Ordinance shall prevail. If there is another ordinance that is inconsistent, the terms of the Ordinance that promotes the objectives of this Ordinance to the greatest extent shall apply.

ARTICLE II. DEFINITIONS

Section 2.01 Definition of Terms

The following terms, phrases, words and derivatives shall have the meaning defined below:

Accelerated soil erosion. The increased movement of soils that occurs as a result of the impact of development upon the flow of storm water.

Conveyance facility. A storm drain, as defined in this Ordinance.

Detention basin. A structure or facility, natural or artificial, which stores storm water on a temporary basis and releases it at a controlled rate. A detention basin may drain completely after a storm event, or it may be a pond with a fixed minimum water elevation between runoff events.

Development. Any change in land and/or vegetative cover that tends to alter storm water impact. This term shall not include customary lawn maintenance or gardening.

Discharge. Any addition or introduction of any pollutant, storm water, or any other substance into the storm water system or into ground water.

Disturbed area. An area of land subjected to development.

Drainage system. All facilities, measures, areas, and structures which serve to convey, catch, hold, filter, store, and/or receive storm water, either on a temporary or permanent basis.

Earth change. A human-made change in the natural cover or topography of land, including but not limited to cut and fill activities, which may result in or contribute to soil erosion or sedimentation of watercourses or wetlands.

Engineered site grading. A sealed drawing or plan and accompanying text prepared by a registered engineer or landscape architect which shows alterations of topography, alterations of watercourses, flow directions of storm water runoff, and proposed storm water management and measures, having as its purpose to ensure that the objectives of this Ordinance are met.

Environmentally-sensitive areas. See Article VIII.

Flood. A temporary rise in the level of any waterbody, watercourse or wetland which inundates areas not ordinarily covered by water.

Floodplain. For a given flood event, that area of land adjoining a continuous watercourse that has been covered temporarily by water.

French Drain. A below-ground drain consisting of a trench filled with gravel to permit movement of water through the gravel and into the ground. Perforated pipe may be used to enhance the efficiency of the system.

Infiltration. The percolation of water into the ground, expressed in inches per hour.

Infiltration facility. A structure or designated area which allows runoff to seep gradually into the ground, e.g., French drains, seepage pits, infiltration trenches, dry well, or perforated pipe.

Maintenance agreement. A binding agreement that sets forth the terms, measures and conditions for the maintenance of storm water systems and facilities.

Non-erosive velocity. Storm water flow that does not cause accelerated soil erosion.

Offsite facility. All or part of a drainage system that is located partially or completely off of the development site which it serves.

Peak rate of discharge. The maximum rate of storm water flow at a particular location following a storm event, as measured at a given point and time in cubic feet per second.

Person. Any individual, firm, partnership, association, corporation, company, or organization of any kind including school districts and government agencies conducting operations within the Township.

Planning Commission. Salem Township Planning Commission.

Public storm sewer. A drainage system serving a platted subdivision or other development which has been designed and constructed and accepted to be operated and maintained by the Washtenaw County Drain Commissioner or the Washtenaw County Road Commission.

Receiving body of water. Any watercourse or wetland into which storm waters are directed, either naturally or artificially.

Retention basin. A holding area for storm water, either natural or man made, which does not have an outlet to adjoining watercourses or wetlands. Water is removed from retention basins through infiltration and/or evaporation processes, and retention basins may or may not have a permanent pool of water.

Runoff. That part of precipitation which flows over the land.

Sediment. Mineral or organic particulate matter that has been removed from its site of origin by the processes of soil erosion, is in suspension in water, or is being transported.

Soil erosion. The wearing away of land by the action of wind, water, gravity or a combination thereof.

Soil erosion control measures. A structure, facility, barrier, berm, process, vegetative cover, basin, and/or other installations designed to control accelerated soil erosion. Temporary measures are installed to control soil erosion during construction or until soils in the contributing drainage area are stabilized. Permanent measures remain after the project is completed.

Storage facility. A basin, structure, or area, either natural or human made, which is capable of holding storm water for the purpose of controlling or eliminating discharge from the site.

Storm water discharge. The volume of water passing a given point at a given time expressed in cubic feet per second. Also referred to as rate of flow.

Storm drain. A conduit, pipe, swale, natural channel or manmade structure which serves to transport storm water runoff. Storm drains may be either enclosed or open.

Storm water management measure and facility. Any facility, structure, channel, area, process or measure which serves to control storm water runoff in accordance with the purposes and standards of this Ordinance.

Storm water management. Drawings and written information prepared by a registered engineer, registered landscape architect or registered surveyor which describe the way in which accelerated soil erosion and/or storm water flows are proposed to be controlled, both during and after construction, having as its purpose to ensure that the objectives of this Ordinance are met.

Storm water management system. Entire storm water conveyance and storage facilities and all appurtenances thereto.

Swale. Defined contour of land with gradual slopes that transports and directs the flow of storm water.

Township. Salem Township.

Township Board. Salem Township Board.

Watercourse. Any natural or manmade waterway or other body of water having reasonably well defined banks. Rivers, streams, creeks and brooks and channels, whether continually or intermittently flowing, as well as lakes and ponds are watercourses for purposes of storm water management.

Watershed. An area in which there is a common receiving body of water into which storm water ultimately flows, otherwise known as a drainage area.

Wetlands. Land characterized by the presence of water at a frequency and duration sufficient to support, and that under normal circumstances does support, wetland vegetation or aquatic life and is commonly referred to as a bog, swamp or marsh, as defined by state law.

ARTICLE III. GENERAL PROVISIONS

Section 3.01 Applicability

Except for those activities expressly exempted by Section 3.02, every new development (as defined in this Ordinance), or redevelopment in Salem Township shall have either a storm water management plan or an engineered site grading plan, depending on the type of activity, as listed below. No development or preparation for development on a site shall occur unless and until an application has been submitted and approved for a storm water management plan or engineering site grading plan.

A. Requirement for a Storm Water Management Plan

A storm water management plan shall be submitted and reviewed in accordance with requirements of Article IV. Approval of final development plans, site plans, and final preliminary subdivision and condominium plans shall not be granted prior to approval of the storm water management plan. The following types of developments and earth changes require a storm water management plan:

1. Land development proposals subject to site plan review requirements in the Salem Township Zoning Ordinance.
2. Subdivision plat proposals.
3. Site condominium developments pursuant to the Condominium Act, P.A. 59 of 1978 as amended; MCLA 559. 101 et. seq.

4. Any development on property divided by land division in connection with which one or more public or private roads are created or extended, and/or in connection with which more than three parcels of less than one acre are created.
5. Any proposal to mine, excavate, or clear and grade or other-wise develop one acre or more of land for purposes other than routine single family residential landscaping and gardening, or any proposal within 500 feet of the top of the bank of an inland lake or stream.
6. Development projects of federal, state and local agencies and school districts.

B. Requirement for an Engineered Site Grading Plan

An engineered site grading plan shall be submitted and reviewed in accordance with requirements of Article VI. The engineered site grading plan shall be approved by the Township Engineer and the designated Township building official prior to the issuance of any building permit. The following types of new construction of single-family housing units require an engineered grading plan:

1. Development on acreage parcels (lot splits) for which a storm water management plan is not required.
2. Development on platted subdivision lots.
3. Development on site condominium units.

Section 3.02 Exempt Activities

- A. Notwithstanding the requirements of Section 3.01, neither a storm water management plan nor an engineered site grading plan shall be required for activities commonly associated with farming, horticulture and silviculture including plowing, irrigation, irrigation ditching, seeding, cultivating, minor drainage, harvesting for the production of food, fiber, and forest products.
- B. Routine single family residential landscaping and/or gardening that does not alter the management plan or site grading plan as determined by the Township.
- C. Development on one single family lot, parcel or condominium unit where the building official determines that, due to the size of the site, or due to other circumstances, the quantity, quality and/or rate of storm water leaving the site will not be meaningfully altered.

ARTICLE IV. STORM WATER MANAGEMENT PLAN REOUIREMENTS

Section 4.01 Pre-application Conference

If required by the Township, a pre-application conference shall be held with the Township Supervisor and/or his/her designee prior to the submittal of a storm water management plan. The purpose of the pre-application conference is to provide information about plan submittal requirements, and Township and county regulations.

Section 4.02 Contents of Storm Water Management Plan

A. Plan Presentation

1. Through plans, illustrations, reports, and calculations, the storm water management plan shall display the required information specified in Part I of Appendix.
2. The storm water management plan must be sufficiently detailed to specify the type, location, and size of storm water management facilities, using preliminary calculations. Detailed construction drawings are not required at the storm water management plan review stage.
3. If it is proposed to develop a parcel in two or more phases, the storm water management plan shall be prepared and submitted for the total project unless a variance has been approved by the Salem Township Board of Trustees. Moreover, it shall be demonstrated that a sufficient plan shall exist upon the completion of each phase, i.e., if it is assumed that future phases shall never be developed.

B. Plan Preparation

The storm water management plan shall be prepared by a registered civil engineer or registered landscape architect, and shall meet the requirements specified in Part I of Appendix. Other persons and professionals may assist in the preparation of the plan.

C. Scale for Mapping

The storm water management plan shall be drawn to a scale as specified in Part I of Appendix.

D. Required Information

1. Identification and Description

The following information is required for all storm water management plans:

- a. Information specified in Part I of Appendix.
 - b. Zoning classification of petitioner's parcel and all abutting parcels.
2. Existing Conditions
- The information describing existing site conditions for all storm water management plans as specified in Part I of Appendix.
3. Proposed Conditions
- A description of the site after the proposed development as specified in Part I of Appendix.

Section 4.03 Plan Submission

- A. Four copies of the storm water management plan required under Section 3.01 A shall be submitted to the Township Clerk.
- B. For developments subject to site plan review, the proprietor shall submit a storm water management plan to the Township Clerk at the time that the preliminary site plan is submitted.
- C. For developments subject to subdivision plat review, the proprietor shall submit a storm water management plan to the Township Clerk at the time that the tentative preliminary plan is submitted.
- D. For other earth changes or activities subject to storm water management plan requirements, the plan shall be submitted to the Township Clerk before construction drawings are submitted.
- E. Compliance with the requirements of this Ordinance does not eliminate the need for the proprietor to obtain required permits and approvals from county and state agencies. Such permits and approvals include, but are not limited to, soil erosion permits from the Washtenaw County Soil Erosion Control Officer, drainage approvals from the Washtenaw County Drain Commissioner, road drainage approvals from the Washtenaw County Road Commission, wetlands permits from the Township and Michigan Department of Environmental Quality, and dam construction permits from the Michigan Department of Natural Resources.
- F. Compliance with the requirements of this Ordinance does not eliminate the need for the proprietor to comply with other applicable Township ordinances and regulations.

Section 4.04 Revision of Plan

If it becomes necessary to alter a development or earth change proposal after the storm water management plan has been approved, a revised storm water management plan must be submitted. All requirements and standards for storm water management plans (Article V) shall apply.

Section 4.05 Review Procedures

A. Planning Commission Review

1. The Planning Commission shall, following recommendation by the Township Engineer, review appropriate storm water management plans to assure compliance with the approval standards listed in Section 4.07 of this Ordinance.
2. Engineered site grading plans do not require Planning Commission review.
3. When the storm water management plan appears on the Planning Commission's agenda for the first time, it will be distributed to Township consultants and staff.
4. If the Planning Commission determines that the required information has not all been received, the proprietor may request that the matter be tabled to allow for the submittal of the required information.
5. A recommendation to the Township Board to approve, approve with conditions, or deny approval shall be made by the Planning Commission.

B. Township Board Review

1. The storm water management plan approval request shall be placed on the Township Board agenda after recommendation by the Planning Commission.
2. Following completion of its review of the storm water management plan, the Township Board shall approve or deny the proposed storm water management plan, with or without modifications and/or conditions.

Section 4.06 Review Fees

The Township Board shall establish application fees and escrow requirements by resolution. Fees and escrow account payments shall be sufficient to cover administrative and technical review costs anticipated to be incurred by the Township including the costs of on-site inspections.

Section 4.07 Standards for Storm Water Management Plan Approval

All developments requiring a storm water management plan shall be designed, constructed, and maintained to prevent flooding and protect water quality. The particular facilities and measures required on-site shall take into consideration the natural features, wetlands, and watercourses on the site; the potential for on-site and off-site adverse storm water impacts, water pollution, and erosion; and the size of the site.

A. General Standards for On-Site and Off-site Storm water Management

1. Storm water management conveyance, storage and infiltration measures and facilities shall be designed to prevent flood hazards and water pollution related to storm water runoff, to prevent accelerated soil erosion from the proposed development, and shall conform with the requirements as specified in Part II of Appendix.
2. Natural topography and site drainage shall be preserved and site grading shall be minimized to the maximum extent reasonably achievable considering the nature of the development.
3. Unless otherwise approved, storm water runoff shall be conveyed through swales and vegetated buffer strips so as to decrease runoff velocity, allow for natural infiltration, allow suspended sediment particles to settle, and to remove pollutants.
4. Runoff rates from detention basins shall conform with the requirements specified in Part II of Appendix for the first flush, bankful, and 100-year storm unless more restrictive rates have been established in this Ordinance for particular areas of the Township, or in the Township's Master Storm water Plan.
5. Watercourses shall not be deepened, widened, dredged, cleared of vegetation, straightened, stabilized or otherwise altered without applicable permits or approvals from the Township Board, relevant county agencies and the Michigan Department of Environmental Quality.
6. Drainage systems shall be designed to protect public health and safety and to facilitate efficient and effective maintenance.

B. Soil Erosion Control

1. Cutting, filling and grading shall conform with the requirements specified in Part II of Appendix.
2. All development and other earth changes shall be designed, constructed and completed in such a manner that the exposed area of any disturbed land is limited to the shortest practical period of time. Proposed erosion control measures shall be submitted to the Washtenaw County Soil Erosion Control Authority for

determination that such measures comply with the Washtenaw County Soil Erosion Control Ordinance.

3. Approved soil erosion control measures shall be installed between the disturbed area and any downgradient watercourses (including rivers, streams, creeks, lakes, ponds and other watercourses), wetlands, roadways and property lines.
4. Sediment resulting from accelerated soil erosion shall be removed from runoff water before it leaves the site of the development.
5. Temporary and permanent soil measures designed and constructed for the conveyance of water around, through or away from the development or earth change area shall be designed to limit the water flow to a non-erosive velocity.
6. Temporary soil measures shall be removed after permanent soil measures have been implemented and stabilized. All developments and earth change areas shall be stabilized with permanent soil measures.
7. If inland lakes, ponds, rivers, creeks, streams or other watercourses and wetlands are located on or near the site, measures which trap sediment shall be provided. Straw bale berms may be used as temporary storm water diversion structures but will not be considered sufficient by themselves for trapping sediment on-site. The use of temporary sediment basins, sediment traps, filter fabric, and rock filters in lieu of straw bale berms shall be employed as required as part of a permit. Other measures may be required if reasonably determined to be necessary to protect a watercourse or wetland.
8. When it is not possible to permanently stabilize a disturbed area after an earth change has been completed or where significant earth change activity ceases, temporary soil erosion control measures shall be implemented within two calendar days.
9. Permanent soil measures for all slopes, channels, ditches, or any disturbed land area shall be completed within 15-calendar days after final grading or the final earth change has been completed. All temporary soil measures shall be maintained until permanent soil measures are implemented and stabilized.
10. Vegetated filter strips, 25 feet in width, shall be created or retained along the edges of all lakes, creeks, streams, and other watercourses. As part of permit approval, the width of a particular filter strip may be reduced to the extent it is demonstrated that a portion of the width will serve no useful function, e.g., to the extent the grade is such that water flow will be away from the watercourse and the filter strip does not serve to protect wildlife habitat or other useful function.
11. The Township shall have the authority to issue stop-work orders for failure to comply with the requirements of this section, provided a proprietor shall be

entitled to a hearing before the Supervisor or the Supervisor's designee within three business days to determine whether the stop-work order shall continue.

C. Storm Water Storage and Infiltration Facilities

Storm water storage and/or infiltration facilities required pursuant to this Ordinance shall comply with the requirements specified in Part II of Appendix.

D. Discharge of Storm Water Runoff to Wetlands

1. Wetlands will be protected from damaging modification and adverse changes in runoff quality and quantity associated with land developments. Before approval of a final plat or site plan, all necessary wetland permits from the Michigan Department of Environmental Quality (MDEQ) and the Township will be in place.
2. Direct discharge of untreated storm water to a natural wetland is prohibited. All runoff from the development will be pre-treated to remove sediment and other pollutants prior to discharge to a wetland. Such treatment facilities shall be constructed before property grading begins.
3. Site drainage patterns will not be altered in any way that will modify existing water levels in protected wetlands without proof that all applicable permits from the MDEQ and/or the Township have been obtained.
4. Wetland construction, reconstruction, or modification will be overseen by a qualified professional with specific wetland expertise.
5. Whenever feasible, a permanent filter strip, preferably vegetated with native plant species, will be maintained or restored around the periphery of wetlands.
6. Wetlands will be protected during development by appropriate soil erosion and sediment control measures.

Section 4.08 Off-Site Storm Water Management

A. Requirements

1. In lieu of on-site storm water detention, the use of off-site storm water conveyance, infiltration, and/or detention areas may be proposed. Off-site storm water management facilities shall be designed to comply with the requirements specified in Part II of Appendix and all other standards provided by this Ordinance that are applicable to on-site facilities.
2. Off-site storm water management areas may be shared with other landowners, provided that a county drainage district is established.

3. Adequate provision and agreements providing for maintenance and inspection of storm water management facilities shall be made by recorded instrument, including an access easement, approved by the Township.
 4. Accelerated soil erosion shall be managed off-site as well as on-site.
- B. Performance Guarantees, Inspections, Maintenance, and Enforcement

All provisions of Articles VIII, X and XI shall apply to off-site storm water conveyance and detention.

ARTICLE V. STORM WATER MANAGEMENT FACILITY

Section 5.01 Submittal, Review and Approval Procedures Requirements

- A. Four copies of construction drawings and engineering specifications shall be submitted to the Washtenaw County Drain Commissioner and to the Township Clerk following storm water management plan approval but prior to the issuance of any construction or building permits.
- B. Construction drawings and engineering specifications shall be reviewed by the Township's Consultant for engineering review, and a copy shall be transmitted to the Washtenaw County Drain Commissioner.
- C. A building permit, construction permit or certificate of occupancy shall not be issued unless the detailed engineering drawings and specifications meet the standards of this Ordinance, applicable engineering standards and practices, and any applicable requirements of other government agencies.

ARTICLE VI. ENGINEERED GRADING PLANS

Section 6.01 Contents of Engineered Site Grading Plans

- A. Four copies of engineered site grading plans for single-family homes and private road developments shall be submitted by the proprietor to the Township Clerk.
- B. The engineered grading plan shall include the following site information:
 1. The legal property description.
 2. Existing grades on a 50-foot grid to a minimum of 50 feet beyond the site property line and sufficient intermediate grades to determine such things as ditches, swales, adjacent pavement, buildings and other pertinent features.
 3. Location of any watercourses, wetlands, lakes and ponds on the site.

4. Existing easements.
5. Existing utilities, manholes and culverts.
6. Road rights-of-way, existing and proposed.
7. Proposed topography of the site.
8. Location and description of any existing and proposed storm water management and soil erosion control measures.
9. Flow direction(s) of storm water runoff onto and from the site before and after development, including the direction of overland flow.
10. Proposed elevations shall be underlined or boxed in to differentiate from existing elevations. It is expected that all elevations shall be in hundredths of a foot.
11. A location map.

Section 6.02 Review Procedures and Standards

- A. The Township Engineer shall review engineered site grading plans to assure compliance with the following standards:
 1. Cutting, filling and grading shall be minimized and the natural topography of the site shall be preserved to the extent feasible.
 2. Sediment caused by accelerated soil erosion shall be trapped and retained on the site through the use of effective soil and erosion control measures.
 3. Seeding, mulching, establishment of a vegetative cover, or other permanent soil erosion control measures for all disturbed land areas shall be completed within 15-calendar days after final grading or the final earth change has been completed.
 4. When it is not possible to permanently stabilize a disturbed area after an earth change has been completed or where significant earth change activity ceases, temporary soil erosion control measures shall be implemented within two-calendar days. All temporary soil measures shall be maintained until permanent soil measures are implemented.
 5. The engineered site grading plan shall promote retention and detention on site through the design of site contours, yards, paved areas, roadways, driveways, landscaping, and infiltration measures (including but not limited to native landscaping, French leaching basins, rain barrels.)

6. Alterations of storm water runoff to adjacent properties that result in off-site impacts such as flooding, accelerated soil erosion, damage to natural features including wildlife habitat or stream channels shall be prohibited.
- B. Engineered grading plans shall be reviewed and approved by the Township Engineer prior to the issuance of a building permit.

**ARTICLE VII. PERFORMANCE GUARANTEES, EASEMENTS, AND
MAINTENANCE**

Section 7.01 Applicability of Requirements

Requirements of this Article concerning performance guarantees, easements, and maintenance agreements shall apply to proprietors required to submit a storm water management plan to the Township for review and approval. These requirements do not apply to engineered grading plans.

Section 7.02 Performance Guarantees

The proprietor shall post an acceptable form of letter of credit, cash escrow, certified check, or other Township approved performance security, unless waived by the Township Board based upon good cause demonstrated by the applicant. The performance guarantee shall be an amount determined by the Township Engineer, equal to one and one-half times the amount required to complete storm water management and facilities as specified in the storm water management plan, together with reasonable administrative expenses. Required performance guarantees shall be provided to the Township after storm water management plan approval but prior to the initiation of any earth change.

After determination by the Township Engineer for site plans, or by the Washtenaw County Drain Commissioner for site condominiums and subdivisions, that all facilities are constructed in compliance with the approved plan, the letter of credit or other securities shall be released.

Section 7.03 Storm Water Management Easements

- A. Necessity of Easements

Storm water management easements shall be provided in a form required by the Township and recorded as directed by the Township to assure (1) access for inspections; (2) access to storm water management facilities for maintenance purposes; and (3) preservation of primary and secondary drainageways which are needed to serve storm water management needs of other properties.

- B. Easements for Off-site Storm water Management

The proprietor shall obtain easements assuring access to all areas used for off-site storm water management, including wetlands.

C. Recording of-Easements

Easements shall be recorded with the Washtenaw County Register of Deeds according to Washtenaw County requirements.

D. Recording Prior to Building Permit Issuance

The proprietor must provide the Township administrative official with evidence of the recording of the easement prior to final subdivision plat approval or final construction approval.

Section 7.04 Maintenance Agreement

A. Purpose of Maintenance Agreement

The purpose of the maintenance agreement is to provide the means and assurance that maintenance of storm water management and facilities shall be undertaken.

B. Maintenance Agreement Required

1. A maintenance agreement shall be submitted to the Township Clerk for all development subject to storm water management plan requirements (Article IV).
2. Maintenance agreements shall be approved by the Salem Township Board prior to final subdivision plat approval in the case of subdivisions, and prior to construction approval in other cases.

C. Maintenance Agreement Provisions

1. The maintenance agreement shall include a plan for routine, emergency and long-term maintenance of all storm water facilities with a detailed annual estimated budget for the initial three years.
2. The maintenance agreement shall be binding on all subsequent owners of land served by the storm water management and facilities, and shall be recorded in the office of the Washtenaw County Register of Deeds prior to the effectiveness of the approval of the Salem Township Board.

Section 7.05 Establishment of County Drains and Storm Water Systems for Multiple Users

Prior to final approval, all storm water management facilities for platted subdivisions, site condominiums and any other circumstance in which multiple owners will use common storm water facilities, shall be established as county drains, as authorized in Section 433, Chapter 18 of the Michigan Drain Code (P.A. 40 of 1956, as amended) for long-term maintenance.

ARTICLE VIII. SPECIAL STANDARDS APPLICABLE TO ENVIRONMENTALLY SENSITIVE AREAS

Section 8.01 Application

This Article shall be applicable to developments that meet all of the following criteria:

- A. The development shall require the submission of a Storm Water Management Plan under this Ordinance, or shall be within 75 feet of a water course identified in paragraph C. below;
- B. The development shall not be designed to retain all storm water on-site; and,
- C. Storm water from the site shall be discharged directly or indirectly into one of the following water courses:
 - 1. Fleming Creek.
 - 2. Johnson Creek
 - 3. Fellows Creek.
 - 4. WalkerDrain
 - 5. Watercourses identified by the state pursuant to Section 303(d) of the Clean Water Act, 33 U.S.C 1313.

Section 8.02 Special Standards

For all developments to which this Article is applicable, the following special standards and regulations shall apply:

- A. In connection with storm water discharge from the site, there shall be no measurable adverse change in the discharge volume and rate, sediment discharge, nitrogen and/or mass load, annual temperature regime, and/or other contaminants (such as phosphorous heavy metals or organic chemicals).
- B. In connection with storm water storage on or off-site, there shall be no measurable adverse change in ground water quality.
- C. There shall be an approved storm water management plan, making provision for the ongoing maintenance of storm water facilities and improvements, and providing for security that the plan is implemented.

Section 8.03 Special Best Management Practices

- A. The special standards specified in Section 8.02 above for environmentally-sensitive areas, shall be achieved for the development by application of Special Best Management Practices, which shall be deemed to consist of a practice, or a combination of practices, determined to be the most effective practical means of preventing or reducing the amount

of pollution generated in connection with the movement and storage of storm water. Special Best Management Practices are also described by the United States Environmental Protection Agency (*see, e.g., Guidance Specifying Management Measures for Sources of Non-Point Pollution, U.S. EPA, Jan. 1993, #840-B-92-00*) and described in Michigan Department of Environmental Quality reference material. Application of the special standards shall be demonstrated to the Township in a detailed submission, as specified below.

- B. If the proposed development is a re-development project, and Special Best Management Practices for Environmentally-Sensitive Areas are feasible and required in order to correct an existing, or anticipated future threat to surface or ground water resources, such application of Best Management Practices shall be included in the submission made to the Township.

Section 8.04 Submission

A proposal of Special Best Management Practices shall be submitted to the Township in an application containing the following:

- A. Detailed specification of the pre-project storm water discharge condition.
- B. Detailed specification of the post-project storm water discharge condition, i.e., the discharge condition assuming the completed project is in place, including any applicable controls that are proposed upon the discharge of storm water from the site.
- C. The conditions specified based upon paragraphs A. and B. above shall be stated for precipitation events of one-half inch, one inch, one and one-half inches, two inches, two and one-half inches, three inches, three and one-half inches, and four inches.
- D. The method of specifying and calculating the pre- and post-project discharge conditions shall include terms that will be sufficient and capable of being analyzed by Township Consultants for the purpose of determining whether the standards of this Article have been met. Sample calculations from other projects will be provided as guidance upon request. It is suggested that the applicant consult with Township representatives prior to submission of methodology for the purpose of confirming acceptability. The Township shall have the right to reject a calculation method if it reasonably determines that such method may not be effectively applied in the administration of this Ordinance.
- E. The plan proposed by the applicant to ensure ongoing maintenance and functioning of approved storm water facilities and improvements, and the security to be provided to ensure implementation of the plan.

ARTICLE IX VARIANCES

Section 9.01 Township-Board Authority

The Township Board shall have the authority to grant variances from the strict terms of this Ordinance in accordance with the terms specified below.

Section 9.02 Written Application Requirements

A written application shall be submitted to the Township Clerk demonstrating that:

1. Special conditions and circumstances exist which are peculiar to the land or project involved, and which are not generally applicable to other plans or projects.
2. The special conditions and circumstances do not result or have not resulted from the actions of the applicant or the applicant's predecessor.
3. The special conditions and circumstances do not result or have not resulted from the actions of the applicant or the applicant's predecessor.
4. Literal interpretation of the provisions of this Ordinance would deprive the applicant of reasonable use of the property as a whole.
5. A plan demonstrating an alternate means to achieve the objectives of this Ordinance.

Section 9.03 Hearing Required

Variances from the terms of this Ordinance shall not be granted unless and until a hearing shall be held by Township Board, and the Township Board determines that the applicant has demonstrated all of the requirements of Section 9.02.

Section 9.04 Conditions for Approval

The Township Board may prescribe appropriate conditions and safeguards consistent with the purposes and standards of this Ordinance in connection with the grant of a variance.

ARTICLE X SEVERABILITY

If any section, clause, provision or portion of this Ordinance is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of this Ordinance shall remain in force and effect.

ARTICLE XI PENALTIES AND ENFORCEMENT

Section 11.01 Penalties

- A. Any person found guilty of violating any of the provisions of this Ordinance shall be punished by a fine not to exceed Five Hundred Dollars (\$500.00) or imprisonment not to exceed ninety (90) days, or both such fine and imprisonment, at the discretion of the Court.

- B. The Township Board, in addition to other remedies, may institute any appropriate action or proceeding to prevent, abate or restrain the violation.
- C. Each day's continuance of a violation shall be deemed a separate and distinct offense. Expenses in connection with such action shall be assessed as damages against the violation.

Section 11.02 Effect of Approval on Remedies

The approval or disapproval of any storm water management plan shall not have any effect on any remedy of any person at law or in equity.

Section 2 of Ordinance

CERTIFICATION

It is hereby certified that the foregoing Resolution was adopted by the Township Board of the Township of Salem, Washtenaw County, Michigan, at a meeting of the Board duly called and held on the 30th day of November, 1999.

TOWNSHIP OF SALEM

By: _____
MARCIA VAN FOSSEN, CLERK

ADOPTED:
EFFECTIVE:
PUBLISHED: