

ALLENDALE CHARTER TOWNSHIP
STORM WATER ORDINANCE

Ordinance 2004-8

AN ORDINANCE to provide for the regulation and control of storm water runoff; to provide for storm water permits and the procedures and standards for the issuance thereof; to provide for payment or reimbursement of costs and expenses incurred by the Charter Township of Allendale associated with storm water permits and the consideration thereof; to establish standards and requirements for the protection of floodways and for the control of soil erosion and sedimentation; to adopt other provisions for establishing, maintaining and protecting drains and drainageways; to provide regulations for inspecting, sampling and monitoring storm water and other discharges; to establish performance and design standards for storm water management in specified zones of the Charter Township of Allendale; to regulate non-storm water discharges to the storm drainage system to the maximum extent practicable as required by federal and state law; to establish methods for controlling the introduction of pollutants into the Municipal Separate Storm Sewer System (MS4) in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) Phase II permit process; and to provide penalties for violations of the ordinance.

THE CHARTER TOWNSHIP OF ALLENDALE ORDAINS:

Article I - General

Sec. 1.01 Statutory Authority and Title

This ordinance is adopted in accordance with the Charter Township Act, as amended, being MCL 42.1, et seq.; the Township and Village Public Improvement Act, as amended, being MCL 41.721, et seq.; the Drain Code of 1956, as amended, being MCL 280.1, et seq.; the Land Division Act, as amended, being MCL 560.1, et seq.; the Revenue Bond Act, as amended, being MCL 141.101, et seq.; and the Natural Resources and Environmental Protection Act, as amended, being MCL 324.101, et seq.; Section 401(p) of the Federal Water Pollution Control Act (also known as the Clean Water Act), as amended, being 33 USC 1342(p) and 40 CFR Parts 9, 122, 123 and 124; and other applicable state and federal laws.

This ordinance shall be known and may be cited as the
Charter Township of Allendale Storm Water Ordinance.

Sec. 1.02 Findings

The Charter Township of Allendale finds that:

- (1) Water bodies, roadways, structures, and other property within, and downstream of the Township are at times subjected to flooding;
- (2) Flooding is a danger to the lives and property of the public and is also a danger to the natural resources of the Township and the region;
- (3) Land development alters the hydrologic response of watersheds, which may result in increased storm water runoff rates and volumes, increased flooding, increased stream channel erosion, and increased sediment transport and deposition;
- (4) Storm water runoff produced by land development may contribute to increased quantities of waterborne pollutants;
- (5) Increases of storm water runoff, soil erosion, and non-point source pollution may have occurred as a result of land development, and may cause deterioration of the water resources of the Township and downstream municipalities;
- (6) Storm water runoff, soil erosion, and non-point source pollution, may have resulted in a deterioration of the water resources of the Township and downstream municipalities;
- (7) Increased storm water runoff rates and volumes, and the sediments and pollutants associated with storm water runoff, absent reasonable regulation and control, could adversely affect the Township's water bodies and water resources, and those of downstream municipalities;
- (8) Storm water runoff, soil erosion, and non-point source pollution could be controlled and minimized by the regulation of storm water runoff;
- (9) Adopting the standards, criteria and procedures contained in this ordinance and implementing the same can address many of the deleterious effects of storm water runoff;
- (10) Adopting these standards is necessary for the preservation of the public health, safety and welfare;
- (11) Illicit discharges may contain pollutants that could significantly degrade the Township's water bodies and water resources;
- (12) Illicit discharges enter the municipal separate storm sewer system (MS4) through either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or indirect connections (e.g., infiltration into the storm drain system or spills connected by drain inlets);
- (13) Establishing the measures for controlling illicit discharges and connections contained in this ordinance and implementing the same will address many of the deleterious effects of illicit discharges.

Sec. 1.03 Purpose

It is the purpose of this ordinance to establish minimum storm water management requirements and controls to accomplish, among others, the following objectives:

- (1) To reduce artificially induced flood damage;
- (2) To minimize increased storm water runoff rates and volumes from identified new land development;
- (3) To minimize the deterioration of existing watercourses, culverts and bridges, and other structures;
- (4) To encourage water recharge into the ground where geologically favorable conditions exist;
- (5) To prevent an increase in non-point source pollution;
- (6) To maintain the integrity of stream channels for their biological functions, as well as for drainage and other purposes;
- (7) To minimize the impact of development upon stream bank and stream bed stability;
- (8) To reduce erosion;
- (9) To preserve and protect water supply facilities and water resources by means of controlling increased flood discharges, stream erosion, and runoff pollution;
- (10) To reduce storm water runoff rates and volumes, soil erosion, and non-point source pollution, wherever practicable, from lands that were developed without storm water management controls meeting the purposes and standards of this ordinance;
- (11) To reduce the adverse impact of changing the land use along water bodies and, to that end, this ordinance establishes minimum standards to protect water bodies from degradation resulting from changing land use where there are insufficient storm water management controls;
- (12) To regulate the contribution of pollutants to the municipal separate storm sewer system (MS4) by storm water discharges by any user;
- (13) To prohibit illicit discharges and connection to the municipal separate storm sewer system;
- (14) To establish legal authority to carry out all inspection, surveillance, monitoring and enforcement procedures necessary to ensure compliance with this ordinance.

Sec. 1.04 Applicability, Exemptions and General Provisions

- (1) This ordinance shall apply to any development site which requires approval of a plat, a site development plan, building permit, or any other permit for work which will alter storm water drainage characteristics of the development site, provided, however, that this ordinance shall not apply to the following:
 - (a) The installation or removal of individual mobile homes within a mobile home park (this exemption shall not be construed to apply to the construction, expansion, or modification of a mobile home park);
 - (b) Farm operations and buildings, except dwellings, directly related to farm operations (this exemption shall not apply to livestock production facilities as defined in this ordinance, greenhouses and other similar structures);
 - (c) Plats with preliminary plat approval and other developments with final land use approval prior to the effective date of this ordinance, where such approvals remain in effect.
- (2) This ordinance shall apply to all discharges entering the storm drain system generated on any developed and undeveloped lands unless explicitly exempted.

Sec. 1.05 Definitions

For the purpose of this ordinance, the following words and phrases shall have the meanings respectively ascribed to them by this Section unless the context in which they are used specifically indicates otherwise.

- (1) Authorized Enforcement Agency: Employees of the Township designated to enforce this ordinance by the supervisor, or in his or her absence, the director of public works.
- (2) Base Flood: A flood having a one (1) percent chance of being equaled or exceeded in any given year (using Bulletin 71).
- (3) Base Flood Elevation: The high water elevation of the Base Flood, commonly referred to as the "100-year flood elevation."
- (4) Base Flood Plain: The area inundated by the Base Flood.
- (5) Best Management Practices (BMPs): A practice, or combination of practices and design criteria, that comply with the Michigan Department of Environmental Quality's Guidebook of BMPs for Michigan Watersheds, or equivalent practices and design criteria that accomplish the purposes of this ordinance (including, but not limited to, minimizing storm water runoff and preventing the discharge of pollutants into storm water) as determined by the Township Engineer, and, where appropriate, the standards of the Ottawa County Drain Commissioner.

- (6) Building Opening: Any opening of a solid wall such as a window or door, through which floodwaters could penetrate.
- (7) Clean Water Act: The Federal Water Pollution Control Act, 33 USC Sec 1251 et seq., as amended, and the applicable regulations promulgated thereunder.
- (8) Construction Site Storm Water Runoff: Storm water runoff from a development site following an earth change.
- (9) Design Engineer: Registered and licensed professional engineer in the State of Michigan responsible for the design of a drainage plan.
- (10) Detention: A system that is designed to capture storm water and release it over a given period of time through an outlet structure at a controlled rate.
- (11) Developed or Development: The installation or construction of impervious surfaces on a development site that require, pursuant to state law or local ordinance, the Township's approval of a site plan, plat, site condominium, special land use, planned unit development, rezoning of land, land division approval, private road approval or other approvals required for the development of land or the erection of buildings or structures; provided, however, that for purposes of Article II only, developed or development shall not include the actual construction of, or an addition, extension or modification to, an individual single-family or a two-family detached dwelling.
- (12) Developer: Any person proposing or implementing the development of land.
- (13) Development Site: Any land that is being or has been developed, or that a developer proposes for development.
- (14) Discharger: Any person or entity who directly or indirectly discharges storm water from any property. Discharger also means any employee, officer, director, partner, contractor, or other person who participates in, or is legally or factually responsible for, any act or omission which is or results in a violation of this ordinance.
- (15) Drain: Any drain as defined in the Drain Code of 1956, as amended, being MCL 280.1, et. seq., other than an established county or intercounty drain.
- (16) Drainage: The collection, conveyance, or discharge of ground water and/or surface water.
- (17) Drainageway: The area within which surface water or ground water is carried from one part of a lot or parcel to another part of the lot or parcel or to adjacent land.
- (18) Earth Change: A human made change in the natural cover or topography of land, including cut and fill activities. Earth change includes, but is not limited to, any

excavating, surface grading, filling, landscaping, or removal of vegetative roots. Earth change does not include the practice of plowing and tilling soil for the purpose of crop production.

- (19) EPA: The United States Environmental Protection Agency.
- (20) Erosion: The process by which the ground surface is worn away by action of wind, water, gravity or a combination thereof.
- (21) Exempted Discharges: Discharges other than storm water as specified in Section 4.02 of this ordinance.
- (22) Federal Emergency Management Agency (FEMA): The agency of the federal government charged with emergency management.
- (23) Flood or Flooding: A general and temporary condition of partial or complete inundation of normally dry land areas resulting from the overflow of water bodies or the unusual and rapid accumulation of surface water runoff from any source.
- (24) Floodplain: Any land area subject to periodic flooding.
- (25) Flood-Proofing: Any structural and/or nonstructural additions, changes, or adjustments to structures or property that reduce or eliminate flood damage to land or improvements, including utilities and other structures.
- (26) Flood Protection Elevation (FPE): The Base Flood Elevation plus one (1) foot at any given location.
- (27) Floodway: The channel of any watercourse and the adjacent land areas that must be reserved to carry and discharge a base flood without cumulatively increasing the water surface elevation more than one-tenth (1/10) of a foot due to the loss of flood conveyance or storage.
- (28) Grading: Any stripping, clearing, stumping, excavating, filling, leveling or stockpiling of soil or any combination thereof and the land in its excavated or filled condition.
- (29) Hazardous Materials: Any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.
- (30) Illicit Connection: Any method or means for conveying an illicit discharge into water bodies or the Township's storm water system.

- (31) Illicit Discharge: Any discharge to water bodies that does not consist entirely of storm water, discharges pursuant to the terms of an NPDES permit, or exempted discharges as defined in this ordinance.
- (32) Impervious Surface: A surface, such as a paved or gravel driveway, roof, parking area or road, that prevents the infiltration of water into the soil.
- (33) Livestock Production Facility: An agricultural activity, in which 100 or more livestock are fed, bred and/or raised within a confined area, other than an open pasture either inside or outside an enclosed building.
- (34) Lowest Floor: The lowest floor or the lowest enclosed area (including a basement), but not including an unfinished or flood-resistant enclosure which is usable solely for parking of vehicles or building access.
- (35) MDEQ: Michigan Department of Environmental Quality.
- (36) Municipal Separate Storm Sewer System (MS4): A publicly owned conveyance system designed or used for collecting or conveying storm water.
- (37) NPDES: National Pollution Discharge Elimination System.
- (38) National Pollutant Discharge Elimination System (NPDES) Storm Water Discharge Permit: A permit issued by EPA (or by a state under authority delegated pursuant to 33 USC § 1342 (b)) that authorizes the discharge of pollutants to waters of the United States. The permit may be applicable on an individual, group, or general area-wide basis.
- (39) Non-Storm Water Discharge: Any discharge to the storm drain system that is not composed entirely of storm water.
- (40) OCDC: Ottawa County Drain Commissioner.
- (41) Overland Flow-Way: Surface area that conveys a concentrated flow of storm water runoff.
- (42) Person: An individual, firm, partnership, association, public or private corporation, public agency, instrumentality, or any other legal entity.
- (43) Plan: Written narratives, specifications, drawings, sketches, written standards, operating procedures, or any combination of these, which contain information pursuant to this ordinance.
- (44) Pollutant: A substance discharged which includes but is not limited to the following: any dredged spoil, solid waste, vehicle fluids, yard wastes, animal wastes, agricultural waste products, sediment, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological wastes, radioactive materials, heat, wrecked or discharged equipment, rock, sand, cellar

dirt, and industrial, municipal, commercial and agricultural waste, or any other contaminant or other substance defined as a pollutant under the Clean Water Act.

- (45) Premises: Any building, lot, parcel of land, or portion of land, whether improved or unimproved, including adjacent sidewalks and parking strips.
- (46) Property Owner: Any person having legal or equitable title to property or any person having or exercising care, custody, or control over any property.
- (47) Retention: A system which is designed to capture storm water and contain it until it infiltrates the soil or evaporates.
- (48) Soil Erosion: The stripping of soil and weathered rock from land creating sediment for transportation by water, wind or ice, and enabling formation of new sedimentary deposits.
- (49) State of Michigan Water Quality Standards: All applicable State rules, regulations, and laws pertaining to water quality, including the provisions of Section 3106 of Part 31 of 1994 PA 451, as amended.
- (50) Storm Drain: A system of open or enclosed conduits and appurtenant structures intended to convey or manage storm water runoff, ground water and drainage.
- (51) Storm Water Permit: A permit issued by either the Ottawa County Drain Commissioner pursuant to state law or the Township pursuant to this ordinance.
- (52) Storm Water Pollution Prevention Plan: A document which describes the Best Management Practices and activities to be implemented by a person to identify sources of pollution or contamination at a site and the actions to eliminate or reduce pollutant discharges to storm water, storm water conveyance systems, and/or receiving waters to the maximum extent practicable.
- (53) Storm Water Runoff: The runoff and drainage of precipitation resulting from rainfall or snowmelt or other natural event or process.
- (54) Storm Water Management Facility: The method, structure, area, system, or other equipment or measures which are designed to receive, control, store, or convey storm water.
- (55) Stream: A river, stream or creek which may or may not be serving as a drain, or any other water body that has definite banks, a bed, and visible evidence of a continued flow or continued occurrence of water.
- (56) Township: The Charter Township of Allendale.
- (57) Wastewater: Any water or other liquid, other than uncontaminated storm water, discharged from a facility.

- (58) Water Body: A river, lake, stream, creek or other watercourse or wetlands.
- (59) Watershed: A region draining into a water body.
- (60) Wetlands: Land characterized by the presence of hydric soils and water at a frequency and duration sufficient to support wetland vegetation or aquatic life.

Article II – Storm Water Permits

Sec. 2.01 Permit Required

- (1) A developer shall not engage in any development without first receiving a storm water permit from the Township pursuant to Section 2.02 via the Township's site plan approval process contained in the Township Zoning Ordinance.
- (2) The granting of a storm water permit shall authorize only such development for which the permit is issued, subject to the terms of the permit, and it shall not be deemed to approve other development or other land use activities.

Sec. 2.02 Storm Water Permit Review Procedures

The Township shall grant a storm water permit as part of the site plan approval process (See Article 24 of the Township Zoning Ordinance), which may impose terms and conditions in accordance with Section 2.09, and which shall be granted only upon compliance with each of the following requirements.

- (1) The developer has submitted a drainage plan complying with Section 2.03.
- (2) The drainage plan contains a description of an adequate, temporary storm water retention system to prevent construction site storm water runoff, satisfying the requirements of Section 2.05, and the developer has obtained a soil erosion permit from the OCDC, if necessary.
- (3) The developer provides:
 - (a) A permanent on-site storm water management system complying with the OCDC Standards & Specifications, and
 - (b) Written construction plan approval from the OCDC.
- (4) The developer has paid or deposited the storm water permit review fee pursuant to Section 2.04.
- (5) The developer has paid or posted the applicable financial guarantee pursuant to Section 2.06.

- (6) The developer provides all easements necessary to implement the approved drainage plan and to otherwise comply with this ordinance including, but not limited to, Section 7.02. All easements shall be acceptable to the Township in form and substance and shall be recorded with the Ottawa County Register of Deeds.
- (7) The drainage plan is designed in conformity with Township or OCDC design and performance standards for drains and storm water management systems, as set forth in Article VIII.
- (8) All storm water runoff facilities shall be designed in accordance with the then-current BMPs.
- (9) The developer provides the required maintenance agreement for routine, emergency, and long-term maintenance of all storm water management facilities. This agreement shall be in compliance with the approved drainage plan and this ordinance including, but not limited to, Section 7.03. The maintenance agreement shall be acceptable to the Township in form and substance and shall be recorded with the Ottawa County Register of Deeds.

Sec. 2.03 Drainage Plan

During the site plan approval process, the developer shall provide a drainage plan to the Township for review and approval by the Township and OCDC. The drainage plan shall identify and contain all of the following:

- (1) The location of the development site and water bodies that will receive storm water runoff.
- (2) The existing and proposed topography of the development site, including the alignment and boundary of the natural drainage courses, with contours having a maximum interval of one foot (using USGS datum). The information shall be superimposed on the pertinent Ottawa County soil map.
- (3) The development tributary area to each point of discharge from the development.
- (4) Calculations for the final peak discharge rates.
- (5) Calculations for any facility or structure size and configuration.
- (6) A drawing showing all proposed storm water runoff facilities with existing and final grades.
- (7) The sizes and locations of upstream and downstream culverts serving the major drainage routes flowing into and out of the development site. Any significant off-site and on-site drainage outlet restrictions other than culverts should be noted on the drainage map.

- (8) An implementation plan for construction and inspection of all storm water management facilities necessary to the overall drainage plan, including a schedule of the estimated dates of completing construction of the storm water runoff facilities shown on the plan and an identification of the proposed inspection procedures to ensure that the storm water management facilities are constructed in accordance with the approved drainage plan.
- (9) A plan to ensure the effective control of construction site storm water runoff and sediment tracking onto roadways.
- (10) Drawings, profiles, and specifications for the construction of the storm water runoff facilities reasonably necessary to ensure that storm water runoff will be drained, stored, or otherwise controlled in accordance with this ordinance.
- (11) A maintenance agreement, in form and substance acceptable to the Township, for ensuring maintenance of any privately-owned storm water management facilities. The maintenance agreement shall include the developer's written commitment to provide routine, emergency, and long-term maintenance of the facilities in perpetuity and, in the event that the facilities are not maintained in accordance with the approved drainage plan, the agreement shall authorize the Township to maintain any on-site storm water management facility as reasonably necessary, at the developer's expense.
- (12) The name of the engineering firm and the registered professional engineer that designed the drainage plan and that will inspect final construction of the storm water runoff facilities.
- (13) All design information must be compatible for conversion to the Ottawa County Geographic Information System.
- (14) Any other information necessary for the Township and/or OCDC to verify that the drainage plan complies with the Township's and OCDC's design and performance standards for drains and storm water management systems.

Sec. 2.04 Storm Water Permit Review Fees

- (1) All expenses and costs incurred by the Township and/or the OCDC directly associated with processing, reviewing and approving or denying a storm water permit application shall be paid (or reimbursed) to the Township or the OCDC from the funds paid directly to the OCDC or from a separate escrow account established by the developer, as provided in subsection (2). The Township may draw funds from a developer's escrow account to reimburse the Township and/or the OCDC for out-of-pocket expenses incurred by the Township and/or the OCDC relating to the application. Such reimbursable expenses include, but are not limited to, expenses related to the following:
 - (a) Services of the Township Attorney directly related to the application.

- (b) Services of the Township Engineer directly related to the application.
 - (c) Services of other independent contractors working for the Township, which are directly related to the application.
 - (d) Any additional public hearings, required mailings and legal notice requirements necessitated by the application.
- (2) At the time a developer applies for a storm water permit through the site plan approval process, the developer shall either deposit with the Township, as an escrow deposit, an initial amount as determined by resolution of the Township Board for such matters and shall provide additional amounts as requested by the Township in such increments as are specified in said resolution or shall pay the required fees established by the OCDC for a storm water review. Any excess funds remaining in the escrow account after the application has been fully processed, reviewed, and the final Township approval and acceptance of the development has occurred will be refunded to the developer with no interest to be paid on those funds. At no time prior to the Township's final decision on an application shall the balance in the escrow account fall below the required initial amount. If the funds in the account are reduced to less than the required initial amount, the developer shall deposit into the account an additional amount as determined by Township Board resolution, before the application review process will be continued. Additional amounts may be required to be placed in the escrow account by the developer, at the discretion of the Township.

Sec. 2.05 Construction Site Runoff Controls

Prior to making any earth change on a development site regulated by this ordinance, the developer shall first obtain a soil erosion permit from the OCDC issued in accordance with Part 91 of Act No. 451 of the Public Acts of 1994, as amended, if one is required. The developer shall install storm water management facilities and shall phase the development activities so as to prevent construction site storm water runoff and off-site sedimentation. During all construction activities on the development site, the Township Engineer may inspect the development site to ensure compliance with the approved construction site runoff controls.

Sec. 2.06 Financial Guarantee

- (1) The Township Engineer shall not approve a storm water permit until the developer submits to the Township, in a form and amount satisfactory to the Township, a letter of credit or other financial guarantee for the timely and satisfactory construction of all storm water runoff facilities and site grading in accordance with the approved drainage plan. Upon certification by a registered professional engineer that the storm water management facilities have been completed in accordance with the approved drainage plan including, but not limited to, the provisions contained in Section 2.03(8), the Township may release

the letter of credit or other financial guarantee subject to final Township acceptance and approval.

- (2) Except as provided in subsection (3), the amount of the financial guarantee shall be equal to the construction cost estimate provided by the developer of all storm water runoff facilities and site grading, unless the Township determines that a greater amount is appropriate, in which case the basis for such determination shall be provided to the developer in writing. In determining whether an amount greater is appropriate, the Township shall consider the size and type of the development, the size and type of the on-site storm water system, and the nature of the off-site storm water management facilities the development will utilize.
- (3) The Township supervisor may waive the financial guarantee for a development if the OCDC or the Ottawa County Road Commission, as part of their review process, requires a letter of credit or other financial guarantee for the satisfactory construction of all storm water management facilities.
- (4) The Township supervisor may reduce or waive the amount of the financial guarantee for a development that will not increase the percentage of impervious surface of the development site by more than ten percent (10%).
- (5) This ordinance shall not be construed or interpreted as relieving a developer of its obligation to pay all costs associated with on-site private storm water runoff facilities as well as those costs arising from the need to make other drainage improvements in order to reduce a development's impact on a drain consistent with adopted design standards.

Sec. 2.07 Certificate of Occupancy

No certificate of occupancy shall be issued until storm water management facilities have been completed in accordance with the approved drainage plan; provided, however, the Township may issue a temporary certificate of occupancy if an acceptable letter of credit or other financial guarantee has been submitted to the Township, OCDC, or the Ottawa County Road Commission for the timely and satisfactory construction of all storm water management facilities and site grading in accordance with the approved drainage plan.

Sec. 2.08 No Change in Approved Facilities

Storm water management facilities, after construction and approval, shall be maintained in good condition, in accordance with the approved drainage plan, and shall not be subsequently altered, revised or replaced except in accordance with the approved drainage plan, or in accordance with approved amendments or revisions in the plan.

Sec. 2.09 Terms and Conditions of Permits

In granting a storm water permit, the Township and/or the OCDC may impose such terms and conditions as are reasonably necessary to effectuate the purposes of this ordinance. A developer shall comply with such terms and conditions.

A permit is considered to be granted by the Township when site plan approval is granted to a development, unless authorization is required to be granted by the OCDC under state law and this approval has not been offered.

Article III – Storm Water System, Floodplain and Other Standards, Soil Erosion Control

Sec. 3.01 Management of and Responsibility for Storm Water System

The Township is not responsible for providing drainage facilities on private property for the management of storm water on said property. It shall be the responsibility of the property owner to provide for, and maintain, private storm water runoff facilities serving the property and to prevent or correct the accumulation of debris that interferes with the drainage function of a water body.

Sec. 3.02 Storm Water System

All storm water management facilities shall be constructed and maintained in accordance with all applicable federal, state and local ordinances, and rules and regulations.

Sec. 3.03 Storm Water Discharge Rates and Volumes

The Township shall utilize the OCDC minimum design standards for storm water discharge release rates. However, if the Township Board makes a specific finding that the OCDC standards are insufficient, the Township is authorized to establish minimum design standards for storm water discharge release rates and to require dischargers to implement on-site retention, detention or other methods necessary to control the rate and volume of surface water runoff discharged into the storm water drainage system, in the following circumstances:

- (1) A parcel of land is being developed in a manner that increases the impervious surface area of the parcel; or
- (2) The discharge exceeds the Township approved pre-development discharge characteristics for the subject property, and the Township determines that the discharge is a violation of the drainage, flooding or soil erosion regulations of this ordinance.

Sec. 3.04 Floodplain Standards

- (1) All new buildings and substantial improvements to existing buildings shall be protected from flood damage up to the Flood Protection Elevation (FPE) and shall be in accordance with all applicable federal, state and local ordinances, and rules and regulations. Floodplain/floodway alteration shall be permitted only upon review and approval by the Township and OCDC, in accordance with an approved drainage plan. If authorized under state law, MDEQ review and approval is also required.

- (2) A drainage plan providing for the filling or alteration of a floodplain/floodway shall include provisions to minimize erosion, stabilize the stream bank and to protect water quality. A natural vegetation strip shall be maintained on each parcel or lot between the top of the stream bank and a line, each point of which is twenty-five (25) feet horizontal from the top of the stream bank toward the stream.
- (3) Within any required buffer zone, no earth change shall take place except in accordance with the approved drainage plan and Soil Erosion & Sedimentation Control Permit. Such a plan may also include provisions for the acceptable replacement of flood plain storage volume, where such storage volume is lost or diminished as a result of approved development.

Sec. 3.05 Soil Erosion and Sedimentation Control

- (1) All persons who cause, in whole or in part, any earth change to occur shall provide soil erosion and sedimentation control so as to adequately prevent soils from being eroded and discharged or deposited onto adjacent properties or into a storm water drainage system, a public street or right of way, wetland, creek, stream, water body, or floodplain. All development shall be in accordance with Part 91 of Act No. 451 of the Public Acts of 1994, as amended, and all applicable federal, state and local ordinances, rules and regulations.
- (2) A Soil Erosion and Sedimentation Control (SESC) Permit is required for any earth change that is greater than one acre or less than 500 feet from any lake or stream. Permits are obtained from the SESC Agent in the OCDC office.
- (3) During any earth change which exposes soil to an increased risk of erosion or sediment tracking, the property owner and other persons causing or participating in the earth change shall do the following:
 - (a) Comply with the storm water management standards of this ordinance.
 - (b) Obtain and comply with the terms of a soil erosion and sedimentation control permit from the OCDC office.
 - (c) Prevent damage to any public utilities or services within the limits of grading and within any routes of travel or areas of work of construction equipment.
 - (d) Prevent damage to or impairment of any water body on or near the location of the earth change or affected thereby.
 - (e) Prevent damage to adjacent or nearby land.
 - (f) Apply for all required approvals or permits prior to the commencement of work.