

ARTICLE IV. STORMWATER MANAGEMENT

Sec. 16-150. Definition of terms.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Accelerated soil erosion means the increased movement of soils that occurs as a result of the impact of development upon the flow of stormwater.

BMP or best management practice means any structural, vegetative or managerial practice used to treat, prevent or reduce water pollution. Such practices include temporary seeding on exposed soils, detention and retention basins for stormwater control, and scheduling the implementation of all BMPs to ensure their effectiveness.

Conveyance facility means a storm drain, either open channel or pipe, as defined in this article.

Detention basin means a structure or facility, natural or artificial, which stores stormwater 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 means any change in grade, impervious surface area, or land cover that tends to alter stormwater impacts on non-residential properties will be held to Oakland County Water Resources Commissioner's Office (OCWRC) standards.

Discharge means any addition or introduction of any pollutant, stormwater, or any other substance into the stormwater system or into the groundwater table.

Disturbed area means an area of land subjected to development.

Ditch means a defined depression of land that transports and directs the flow of stormwater usually along the side of a road.

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

Earth change means 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.

Floodplain means the area of land typically adjacent to a continuous watercourse that is covered temporarily by water during given flood events recorded elevation per FEMA.

French drain means 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.

Grading plan means a sealed drawing or plan and accompanying text prepared by a registered professional engineer, surveyor or landscape architect which shows alterations of topography, alterations of watercourses, flow directions of stormwater runoff, and proposed stormwater management and measures, having as its purpose to ensure that the objectives of this article and the City's grading ordinance are met.

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

Infiltration facility means 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 means a binding agreement that sets forth the terms, measures and conditions for the maintenance of stormwater management systems and facilities.

Nonerosive velocity means stormwater flow rate/speed that does not cause accelerated soil erosion.

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

Peak rate of discharge means the maximum rate of stormwater flow at a particular location following a storm event, as measured at a given point and time in cubic feet per second (cfs).

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

Planning Commission means the City Harbor Planning Commission.

Ponding means the unwanted pooling of water.

Private storm drain means 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 property owner, business or homeowner's association.

Public storm drain means 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 City.

Receiving body of water means any watercourse or wetland into which stormwaters are directed, either naturally or artificially.

Retention basin means a holding area for stormwater, either natural or manmade, 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 means that part of precipitation which flows over the land.

Sediment means 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.

Site improvement means any change in grade, impervious surface area, or land cover on the site that tends to alter stormwater impacts. The term "site improvement" does not include customary lawn maintenance or gardening.

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

Soil erosion control measures means 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 means a basin, structure, or area, either natural or human made, which is capable of holding stormwater for the purpose of controlling or eliminating discharge from the site.

Stormwater discharge means the volume of water passing a given point at a given time expressed in cubic feet per second. Also referred to as "peak rate of discharge."

Storm drain means a conduit, pipe, ditch, swale, natural channel or manmade structure which serves to transport stormwater runoff. Storm drains may be either enclosed or open.

Stormwater management measure and facility means any facility, structure, channel, area, process or measure which serves to control stormwater runoff in accordance with the purposes and standards of this article.

Stormwater management plan means drawings and/or written information prepared by a registered professional engineer or registered landscape architect which describe the way in which accelerated soil erosion and/or stormwater flows are proposed to be controlled, both during and after construction, having as its purpose to ensure that the objectives of this article are met.

Stormwater management system means the entire existing or proposed stormwater conveyance and storage facilities and all appurtenances thereto.

Swale means a defined contour of land with gradual slopes that transports and directs the flow of stormwater. Also known as a shallow ditch. Generally, a swale is located between homes or through rear yards and is not within a public easement.

Watercourse means 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 stormwater management.

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

Wetlands means 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.

(Ord. No. 19-07, § 10-83, 11-21-2019)

Sec. 16-151. Construction of language.

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

- (1) Particulars provided by way of illustration or enumeration shall not control general language.
- (2) Ambiguities, if any, shall be construed liberally in favor of protecting natural land and water resources.
- (3) 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.
- (4) Terms not specifically defined in this article shall have the meaning customarily assigned to them.
- (5) Considering that stormwater management in many cases requires sophisticated engineering design and improvements, some of the terms of this article 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 City as needed for the interpretation and understanding of this article.

(Ord. No. 19-07, § 10-81, 11-21-2019)

Sec. 16-152. Purposes.

The purpose of this Chapter is to prevent contamination of surface and ground-water by regulating and controlling the construction, operation, and use of stormwater runoff facilities and discharge to the public storm drainage system and waterways; to protect public health, safety, and general welfare; and prevent the pollution, impairment, and destruction of natural resource and the environment of the City and the State. Specifically, the purpose of this article shall be too:

-
- (1) To protect public health, safety, and welfare by requiring stormwater management i.e. quantity and quality enhancements, whenever site improvements or developments are undertaken and existing stormwater features are to be expanded, modified, or altered.
 - (2) To protect surface water and groundwater quality by minimizing pollutants, hazardous substance, sedimentation, soil erosion, flooding, and other adverse impacts associated with stormwater.
 - (3) To promote the minimization or degradation of water resources by reducing and/or avoiding impacts on the hydrology of stormwater runoff.
 - (4) To reduce the need for costly maintenance and repairs to streets, embankments, ditches, streams, lakes, wetlands and stormwater infrastructure, which are the result of inadequate soil erosion and stormwater runoff control.
 - (5) To ensure that stormwater management facilities are properly designed, constructed, maintained, and operated in a cost-effective and functionally effective manner to reduce the need for future remedial projects and infrastructure repairs.
 - (6) To regulate the quantity, rate, direction, and quality of stormwater discharge to prevent harmful effects and damage to adjacent properties, downstream areas, watercourses, lakes, wetlands, groundwater recharge areas, and public or private stormwater infrastructure and allow for off-site stormwater facilities and measures if the proposals meet the requirements of this chapter.
 - (7) To protect the public health, safety, and welfare by preserving, protecting, maintaining, and utilizing existing natural and manmade drainage systems and stormwater management facilities where feasible.
 - (8) To require the incorporation of stormwater management practices and runoff control measures into the early stages of site planning, design, construction, operation, and maintenance.
 - (9) To prevent groundwater contamination and accelerated soil erosion and to control stormwater runoff resulting from proposed earth changes both during and after construction.
 - (10) To ensure that stormwater runoff from development is controlled so that the water quality in watercourses, groundwater recharged by stormwater, and the habitat situated in areas impacted by stormwater are protected, and that siltation and pollution are minimized to the extent possible.
 - (11) To eliminate illicit stormwater connections, discharge to sanitary sewer system, and protect the integrity of the public storm drainage system.
 - (12) To ensure that property owners control the volume and rate of stormwater runoff originating from their property, so stormwater and groundwater quality is protected, soil erosion minimized, and flooding reduced.
 - (13) To encourage stormwater management systems that provide multiple benefits, including, but not limited to, flood control, water quality protection, groundwater recharge, and environmental preservation.
 - (14) To ensure compliance with all applicable local, State, and Federal stormwater, water quality, and environmental laws and regulations.
 - (15) To establish standards, administrative procedures, enforcement authority, and penalties necessary to implement and enforce the provisions of this chapter.
-
- ~~(2) To protect the public health, safety, and welfare by protecting existing manmade or natural stormwater management facilities.~~

-
- ~~(4) To establish regulations to prevent harmful effects of changes in the quantity and quality of surface water discharge into water bodies that are in the City or in downstream areas.~~
 - ~~(5) To protect homeowner/property owners from neighboring runoff.~~
 - ~~(7) To provide for cost-effective and functionally effective stormwater management, and to reduce the need for future remedial projects.~~
 - ~~(8) To minimize soil erosion and sedimentation.~~
 - ~~(9) To ensure that all stormwater management facilities will be properly maintained.~~
 - ~~(10) To eliminate stormwater connections to the separated sanitary sewer.~~
 - ~~(11) To recognize private responsibility to incorporate stormwater management systems into the early stages of site planning and design.~~
 - ~~(12) To ensure compliance with State and federal law and regulations relating to water quality.~~

(Ord. No. 19-07, § 10-80, 11-21-2019)

Sec. 16-153. Abrogation and conflict of authority.

- (a) Nothing in this article shall be interpreted to conflict with present or future State statutes in the same subject matter. Conflicting provisions of this article shall be abrogated to the extent of the conflict. The provisions of this article shall be construed, if possible, to be consistent with and in addition to relevant State regulations and statutes.
- (b) In their interpretation and application, the provisions of this article shall be held to be minimum requirements and shall be liberally construed in favor of achieving the objectives of this article, and shall not be deemed a limitation or repeal of any other powers granted by State statutes.
- (c) This article is not intended to repeal, abrogate or impair any existing easements, covenants, or deed restrictions. However, where this article imposes greater restrictions, the provisions of this article shall prevail. If there is another ordinance that is inconsistent, the terms of the ordinance that promotes the objectives of this article to the greatest extent shall apply.

(Ord. No. 19-07, § 10-82, 11-21-2019)

Sec. 16-154. Standards for stormwater management plan approval.

All developments requiring a stormwater management plan shall comply with the Oakland County Water Resources Commissioner's Office stormwater standards 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 stormwater impacts, water pollution, and erosion; and the size of the site. Developments shall be held to OCWRC Standards; site improvements will require a grading plan and must comply with the following:

- (1) *Protecting existing stormwater management systems.*
 - a. Natural drainage courses such as ditches, swales, streams, creeks, lakes, etc. shall be protected from:
 - 1. Increased discharge of pollutants or sedimentation;
 - 2. Adverse impacts from increased water quantity or velocity;

-
3. Encroachments that could be otherwise avoided;
 4. Improvements, such as enclosures, for purely aesthetic reasons.
- b. Existing stormwater management systems shall not be obstructed, blocked or their route otherwise altered without the submittal of a stormwater management plan in accordance with this article and the approval granted by the City.
 - c. Regrading, such as cutting or filling, in a wetland is prohibited unless permitted by EGLE.
 - d. Regrading, such as cutting and filling, in a floodplain may be completed as long as a 1:1 cut to fill ratio is maintained and no adverse impact to the floodplain is created. Regrading in the floodplain requires approval from the City based on engineering review and administrative consent unless otherwise indicated.
 - e. Depositing soil, leaf, lawn, plant or other yard waste materials within an existing drainage facility or body of water shall be strictly prohibited.
 - f. All stormwater management plans shall first take into account existing drainage and stormwater facilities and preserve and protect these features.
- (2) *Discharge onto neighboring property.*
- a. Site drainage or discharge originating from one (1) property (including filling low-lying areas) is prohibited to flow onto another adjacent property, unless it is through an intended stormwater conveyance path through a right-of-way (ROW), such as a ditch, or protected by an easement. Increased site drainage must either be contained on site or drained to an intended conveyance path on the originating property.
 - b. In the case of a violation, a solution shall be proposed by the discharging party within ten (10) business days to resolve the issue. The solution must be agreed upon by both parties and by the City for a resolution to occur. If an agreement is made, the discharging entity will have 30 business days to implement the solution and resolve the issue.
 - c. If any entity violates this provision or an agreement cannot be reached, the City will determine and implement a solution. A lien will be placed on the discharging party's property for the cost of the solution. The property will be subject to a fine not exceeding \$500.00.
- (3) *Improving existing stormwater management systems.*
- a. Most existing stormwater conveyance paths, such as ditches and culverts, are located within county drainage districts or the City's public road ROW. The responsibility for routine maintenance (i.e., mowing, removing obstructions and debris, improving landscaping, etc.) lies with the adjacent property owners.
 - b. Under the provisions herein, property owners adjacent to the stormwater facility may individually or in concert with other such property owners petition the City to establish a Special Assessment District (SAD) to evaluate, design, construct, administer, and finance an improvement to a stormwater management facility. The SAD will be facilitated in accordance with the provisions herein, State law, and the City Charter. The benefiting property owners will be assessed their portion of the project costs based on benefit. Typically, drainage area, percent impervious, capacity, or other means as determined by the City are used to determine benefit. The City may elect to contribute to the project costs based on a review of the petition and benefit to the City at large.
 - c. Improvements to existing stormwater management systems can also be petitioned through the Oakland County Water Resources Drain Commissioner's Office in accordance the Drain Code of 1956 (MCL 280.1 et seq.).

-
- d. Historically, drainage ditches have been filled in or regraded without approval or without an alternative drainage path constructed. The City has the right to require that drainage areas on or offsite be improved or restored as part of any site improvement or development.
 - e. Design and construction provisions for improving existing stormwater management systems shall be as indicated herein.

(4) *Ditches and driveway culverts.*

- a. It is recognized that existing roadside ditches and driveway culverts are an integral part of the City's overall stormwater management system and are important to local drainage patterns.
- b. Typically, maintenance of roadside ditches and driveway culverts are the responsibility of the adjacent property owner. As such the property owner is responsible for maintaining the drainage pattern through these facilities, removing obstructions, mowing in the case of a grassed ditch, and replacing or repairing these facilities if deteriorated or damaged.
- c. Should a property owner wish to modify or replace a driveway culvert, a plan meeting the requirements of this article shall be prepared, submitted, and include the following specific items:
 - 1. Size and material of the culvert to be replaced and any culverts within 100 feet on the same street of the culvert to be replaced.
 - 2. The existing and proposed inverts of the culvert to be replaced and any culverts within 100 feet on the same street of the culvert to be replaced and any other piping near the proposed replacement.
 - 3. Provisions for the replacement of the driveway including materials, cross sections, construction requirements, etc.
 - 4. The existing and proposed width of the driveway and culvert.
 - 5. Details of any culvert end treatments such as headwalls, end sections, bar grates, etc.
- d. Should a property owner wish to enclose an existing ditch and/or swale, a plan meeting the requirements of this article shall be prepared and submitted and include the following specific items:
 - 1. Size and material of the culvert to be installed and any culverts within 100 feet on the same street of the culvert to be replaced.
 - 2. The proposed inverts of the culvert to be installed and any culverts within 100 feet on the same street of the culvert to be replaced and any other piping near the proposed replacement.
 - 3. A cross section of the ditch enclosure showing the existing ditch bottom, pipe invert, bedding, backfill and at least six (6) inches of fall from the existing edge of the road to a swale over the top of the culvert.
 - 4. Drainage calculations showing the proposed culvert is sized adequately to convey the upstream drainage area.
 - 5. Drainage calculations showing the downstream culverts are sized adequately to convey the upstream drainage area.
 - 6. Location and details of at least two (2) inlets, catch basins or structures per property, to receive and inlet surface drainage into piping.
- e. Requests for enclosing ditches shall not be granted unless it can be demonstrated that:

-
1. The proposed enclosure is sized accordingly and can be extended for a future storm sewer;
 2. The enclosure will not affect the subsurface drainage for the adjacent roadways; and
 3. Surrounding properties will not adversely be affected.
- f. All design, construction and maintenance costs for driveway culverts and ditch enclosures will be the responsibility of the adjacent property owner. The City may request a surety bond or escrow deposit be placed with the City to guarantee the completion of the project.
- g. If a City-initiated roadway or drainage project requires the cleaning or repairing of a driveway culvert or ditch enclosure the City shall cause said cleaning, repair or enclosure to be done at the project's cost. All other cleaning or repairing to maintain flow shall be completed by the property owner or at the City's request in accordance with the provisions herein. Failure to comply with the City's request may result in the City completing the project. Costs will be assessed to the adjacent property owner and a lien placed on the property if payment is not received.

(5) *Soil erosion control.*

- a. Cutting, filling and grading shall conform with the requirements of the grading ordinance and the soil erosion control permit issued by the Oakland County Water Resources Drain Commissioner's Office.
- b. 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 City for determination that such measures comply with the City regulations in the zoning ordinance that require property owners to obtain a grading permit, if relevant.
- c. Approved soil erosion control measures shall be installed and maintained between the disturbed area and any down gradient watercourses (including rivers, streams, creeks, lakes, ponds, and other watercourses), wetlands, roadways, and property lines.
- d. Sediment resulting from accelerated soil erosion shall be removed from runoff water before it leaves the site of the development.
- e. 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 nonerosive velocity.
- f. Temporary soil erosion control measures shall be removed after permanent soil erosion control measures have been implemented and stabilized. All developments and earth change areas shall be stabilized with permanent erosion control measures.
- g. If inland lakes, ponds, rivers, creeks, wetlands, streams or other watercourses are located on or near the site, measures which trap sediment shall be provided. Straw bale berms may be used as temporary stormwater 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.
- h. 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 (2) calendar days.
- i. Permanent soil erosion control 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.

- j. 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.
- k. The City 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 chief building inspector or designee within three (3) business days to determine whether the stop-work order shall continue.

(6) Stormwater quality treatment requirements.

All new and substantially redeveloped non-single-family residential projects, regardless of size or disturbed area, shall incorporate stormwater management practices that improve stormwater runoff quality before discharge from the site. Untreated stormwater runoff to lakes, wetlands, watercourses, or municipal storm sewers shall be minimized to the maximum extent practicable through green infrastructure and other approved best management practices. Acceptable practices must follow the most current version of the Oakland County Water Resources Commissioner's Stormwater Engineering Design Standards.

The selected management practices shall be designed to remove pollutants, reduce sediment transport, promote infiltration, and protect downstream water resources. The City Engineer or designated reviewing authority may approve alternative practices that provide equivalent or greater water quality benefits based on site conditions and proposed land use.

(7) Post construction stormwater management and infiltration requirements.

- a. All development and redevelopment projects disturbing one acre or more shall comply with the post-construction stormwater management, water quality treatment, and infiltration requirements contained in the most current version of the Oakland County Water Resources Commissioner's Stormwater Engineering Design Standards.
- b. All non-single family residential development and redevelopment projects, regardless of size, shall provide stormwater quality treatment in accordance City of Keego Harbor Ordinances and/or with the most current version of Oakland County Water Resource Commissioner's Stormwater Design Standards.
- c. These requirements apply to development and redevelopment projects involving land disturbance, including but not limited to clearing, grading, excavating, construction and paving, that results in an earth change or disturbance in the existing cover or topography of land, including any external demolition, modification, or alteration of a site or the footprint of a building.
- d. Exemptions from these requirements shall be consistent with the exemptions contained in the most current version of the Oakland County Water Resources Commissioner's Stormwater Engineering Design Standards. Common exemptions to these stormwater standards include, but are not limited to, the following:
 - 1. Resurfacing of an asphalt, concrete, or similar surface (mill and fill) that does not expose the aggregate or subgrade or result in replacement of the onsite drainage system.

-
2. The practices of clearing, plowing, and tilling soil and harvesting for the purpose of crop production.
 3. The project does not meet the development or redevelopment criteria as dictated by the City of Keego Harbor.
 4. The development or redevelopment project is for one single family detached dwelling that is not part of a common plan of development.
 5. The development or redevelopment project is for emergency maintenance and work performed to protect public health and safety.
 6. Development or redevelopment projects discharging to a Road Commission of Oakland County (RCOC) stormwater system or right-of-way shall comply with all applicable City of Keego Harbor, Oakland County Water Resource Commissioner, and Road Commission for Oakland County stormwater management requirements. Where requirements differ, the most restrictive standard shall apply as determined by the City Engineer.
 7. Other exemptions may apply based on technical infeasibility but must be approved by the City Engineer or will be updated based on the most current version of the Oakland County Stormwater Design Standards.
- e. Where site conditions prevent full compliance with infiltration due to groundwater conditions, unsuitable soils, contamination concerns, or other documented constraints, the application shall demonstrate infeasibility and provide alternative stormwater management measures acceptable to the City Engineer.
 - f. Compliance with this subsection shall not relieve an applicant from obtaining any other permits or approvals required by the City, Oakland County Water Resources Commissioner, Road Commission for Oakland County, Oakland County Health Division, Michigan Department of Environment, Great Lakes, and Energy (EGLE), or other applicable agencies.

(Ord. No. 19-07, § 10-84, 11-21-2019)

Sec. 16-155. Stormwater management and soil erosion and sediment control approval.

- (1) *Regulated land uses and earth changes.* Earth changes and other activities that may affect stormwater runoff, drainage, or water quality shall comply with the requirements in this Chapter, and per the requirements of the final site plan approval in Article XVI, Administration and Enforcement. Where a final site plan is required by the City, stormwater management and soil erosion and sediment control (SESC) measures shall be reviewed as part of the final site plan review process. Unless otherwise exempt from this Chapter, the following activities shall be subject to review under the stormwater management requirements of this Chapter:
- a. Any activity requiring a grading permit, as specified in Zoning Ordinance Article XV, Section 15.26, Site Grading, including grading, excavation, filling, stockpiling, or other alterations to the land.
 - b. Any development, redevelopment, or earth change activity associated with multiple-family, commercial, industrial, institutional, recreational, public, or mixed-use development that creates, modifies, replaces, or increases surface area.

-
- c. Any earth changes activities requiring stormwater management facilities, best management practices, or other runoff control measures pursuant to this Chapter.
 - d. Any earth change activity identified by the City Engineer as having the potential to increase flooding, erosion, sedimentation, pollutant discharge, drainage impacts, or environmental degradation on-site or off-site.
 - e. Landscaping and routine grounds maintenance activities shall be exempt from permit requirements provided such activities do not alter drainage patterns, increase impervious surface area, or otherwise violate the requirements of this Chapter.
 - f. Separate permits pursuant to Part 91, Soil Erosion and Sedimentation Control, and other applicable federal, state, and local, or county regulations may be required as determined by the applicable enforcing agency.

(2) Final site plan approval.

- a. Where required by this Chapter, a stormwater management and SESC plan shall be submitted as part of the final site plan application.
- b. Final site plan approval shall not be granted until the City Engineer determines that the proposed control measures comply with the requirements in this Chapter.
- c. No development activities shall be made prior to final site plan approval. Any unauthorized work shall be considered a violation of this chapter regardless of any later actions taken toward compliance. Soil tests boring, cutting of vegetation for land surveys, percolation tests, and normal maintenance shall not be considered as a type of work under this chapter.
- d. Approval of a final site plan under this Chapter shall not relieve the applicant of the responsibility to obtain any grading permit, building permit, special land use approval, or other authorization required by the City Code or Zoning Ordinance.

(3) Modifications to an approved final site plan.

- a. Any substantial modifications to an approved final site plan that affects grading, drainage patterns, impervious surface area, stormwater management facilities, or other features affecting stormwater runoff or soil erosion and sediment controls shall be reviewed and approved by the City Engineer prior to implementation.
- b. Any approval of modifications to the final site plan for any stormwater runoff and SESC controls shall not relieve the applicant from obtaining any grading permit, special land use approval, or other authorization required by the City Code or Zoning Ordinance.

(Ord. No. X, § X, X)