

BRUNSWICK CITY PLANNING & ZONING COMMITTEE

Agenda MARCH 13, 2017 6:25 PM

1. Discussion Items
 - (a) **ORD. NO. 23-17** - An emergency ordinance amending Chapter 1234 of the City of Brunswick Codified Ordinances pursuant to the requirements of the Ohio Environmental Protection Agency - **1st Reading** (To be brought from Planning & Zoning Committee, *Administration/Matt Jones*)

ORD. NO. 24-17 - An emergency ordinance amending Chapter 1236 of the City of Brunswick Codified Ordinances - **1st Reading** (To be brought from Planning & Zoning, *Administration/Matt Jones*)
2. General Discussion
3. Adjournment

PLANNING COMMISSION

MEMORANDUM



DATE: March 3, 2017

TO: City Council
Carl DeForest, Acting City Manager

FROM: Pam Plavecski, Planning & Zoning Coordinator *pp*

SUBJECT: Chapter 1234 entitled "Erosion & Sediment Control" & Chapter 1236
entitled "Stormwater Management text amendments"

The Planning Commission, at their meeting on March 3, 2017, voted to **recommend approval** to City Council of the proposed text amendments to Section 1234 entitled "Erosion & Sediment Control, and Chapter 1236 entitled "Stormwater Management (copies attached), of the Codified Ordinances of the City of Brunswick.

Enc.

c: Grant Aungst, Community & Economic Dev. Director
Ken Fisher, Law Director
Santo Incorvaia, Assistant Law Director
Cliff Calaway, Chief Building Official
Matt Jones, Consulting City Engineer

CHAPTER 1234
EROSION AND SEDIMENT CONTROL

1234.01 PURPOSE AND SCOPE

- (a) The purpose of this regulation is to establish technically feasible and economically reasonable standards to achieve a level of erosion and sediment control that will minimize damage to property and degradation of water resources, and will promote and maintain the health and safety of the citizens of City of Brunswick:
- (b) This regulation will:
 - (1) Allow development while minimizing increases in erosion and sedimentation.
 - (2) Reduce water quality impacts to receiving water resources that may be caused by new development or redevelopment activities.
- (c) This regulation applies to all parcels used or being developed, either wholly or partially, for new or relocated projects involving highways, underground cables, or pipelines; subdivisions or larger common plans of development; industrial, commercial, institutional, or residential projects; building activities on farms; redevelopment activities; general clearing; and all other uses that are not specifically exempted in Section 1234.01(d).
- (d) This regulation does not apply to activities regulated by, and in compliance with, the Ohio Agricultural Sediment Pollution Abatement Rules.

1234.02 DEFINITIONS

For purpose of this regulation, the following terms shall have the meaning herein indicated:

- (a) **ABBREVIATED STORMWATER POLLUTION PREVENTION PLAN (ABBREVIATED SWP3):** The written document that sets forth the plans and practices to be used to meet the requirements of this regulation.
- (b) **ACRE:** A measurement of area equaling 43,560 square feet.
- (c) **ADMINISTRATOR:** The person or entity having the responsibility and duty of administering and ensuring compliance with this regulation.
- (d) **COMMENCEMENT OF CONSTRUCTION:** The initial disturbance of soils associated with clearing, grubbing, grading, placement of fill, or excavating activities or other construction activities.
- (e) **COMMUNITY:** Throughout this regulation, this shall refer to City of Brunswick, its designated representatives, boards, or commissions.
- (f) **CONCENTRATED STORMWATER RUNOFF:** Any stormwater runoff that flows through a drainage pipe, ditch, diversion, or other discrete conveyance channel.
- (g) **CONSTRUCTION ENTRANCE:** The permitted points of ingress and egress to development areas regulated under this regulation.

- (h) DEVELOPMENT AREA: A parcel or contiguous parcels owned by one person or persons, or operated as one development unit, and used or being developed for commercial, industrial, residential, institutional, or other construction or alteration that changes runoff characteristics.
- (i) DEWATERING VOLUME: See current *Ohio Rainwater and Land Development Manual*.
- (j) DISCHARGE: The addition of any pollutant to surface waters of the state from a point source.
- (k) DISTURBANCE: Any clearing, grading, excavating, filling, or other alteration of land surface where natural or man-made cover is destroyed in a manner that exposes the underlying soils.
- (l) DISTURBED AREA: An area of land subject to erosion due to the removal of vegetative cover and/or soil disturbing activities such as grading, excavating, or filling.
- (m) DRAINAGE: (1) The area of land contributing surface water to a specific point. (2) The removal of excess surface water or groundwater from land by surface or subsurface drains.
- (n) DRAINAGE WATERSHED: For the purpose of this regulation the total contributing drainage area to a SCM, i.e., the “watershed” directed to the practice. This includes offsite contributing drainage.
- (o) DRAINAGE WAY: A natural or manmade channel, ditch, or waterway that conveys surface water in a concentrated manner by gravity.
- (p) EROSION: The process by which the land surface is worn away by the action of wind, water, ice, gravity, or any combination of those forces.
- (q) EROSION AND SEDIMENT CONTROL: The control of soil, both mineral and organic, to minimize the removal of soil from the land surface and to prevent its transport from a disturbed area by means of wind, water, ice, gravity, or any combination of those forces.
- (r) FINAL STABILIZATION: All soil disturbing activities at the site have been completed and a uniform perennial vegetative cover with a density of at least 80% coverage for the area has been established or equivalent stabilization measures, such as the use of mulches or geotextiles, have been employed. In addition, all temporary erosion and sediment control practices are removed and disposed of and all trapped sediment is permanently stabilized to prevent further erosion. Final stabilization also requires the installation of permanent (post-construction) stormwater control measures (SCMs).
- (s) GRADING: The excavating, filling, or stockpiling of earth material, or any combination thereof, including the land in its excavated or filled condition.
- (t) GRUBBING: Removing or grinding of roots, stumps and other unwanted material below existing grade.
- (u) IMPERVIOUS: That which does not allow infiltration.

- (v) **LANDSCAPE ARCHITECT:** A Registered Professional Landscape Architect whom is registered in the State of Ohio.
- (w) **LARGER COMMON PLAN OF DEVELOPMENT OR SALE:** A contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan.
- (x) **MAXIMUM EXTENT PRACTICABLE (MEP):** The technology-based discharge standard for Municipal Separate Storm Sewer Systems to reduce pollutants in stormwater discharges that was established by the Clean Water Act §402(p). A discussion of MEP as it applies to small MS4s is found in 40 CFR 122.34.
- (y) **MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4):** A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that are:
 - a. Owned or operated by the federal government, state, municipality, township, county, district, or other public body (created by or pursuant to state or federal law) including a special district under state law such as a sewer district, flood control district or drainage districts, or similar entity, or a designated and approved management agency under Section 208 of the Federal Water Pollution Control Act that discharges into surface waters of the state; and
 - b. Designed or used for collecting or conveying solely stormwater,
 - c. Which is not a combined sewer, and
 - d. Which is not a part of a publicly owned treatment works
- (z) **NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES):** The national program for issuing, modifying, revoking and reissuing, termination, monitoring and enforcing permits and enforcing pretreatment requirements, under sections 307, 402, 318, 405 under the Clean Water Act.
- (aa) **OPERATOR:** Any party associated with a construction project that meets either of the following two criteria:
 - a. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
 - b. The party has day-to-day operational control of those activities at a project which are necessary to ensure compliance with A Stormwater Pollution Prevention Plan (SWP3) for the site or other permit conditions (e.g. they are authorized to direct workers at a site to carry out activities required by the SWP3 or comply with other permit conditions
- (bb) **OWNER OR OPERATOR:** The owner or operator of any “facility or activity” subject to regulation under the NPDES program.
 - i. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
 - ii. The party has day-to-day operational control of those activities at a project which are necessary to ensure compliance with A Stormwater Pollution Prevention Plan (SWP3) for the site or other permit conditions (e.g. they are authorized to direct workers at a site to carry out activities required by the SWP3 or comply with other permit conditions.)
- (cc) **PARCEL:** Means a tract of land occupied or intended to be occupied by a use, building or group of buildings and their accessory uses and buildings as a unit, together with such

open spaces and driveways as are provided and required. A parcel may contain more than one contiguous lot individually identified by a 'Permanent Parcel Number' assigned by the Medina County Auditor's Office.

- (dd) PERCENT IMPERVIOUSNESS: The impervious area created divided by the total area of the project site.
- (ee) PERMANENT STABILIZATION: Establishment of permanent vegetation, decorative landscape mulching, matting, sod, rip rap, and landscaping techniques to provide permanent erosion control on areas where construction operations are complete or where no further disturbance is expected for at least one year.
- (ff) PERSON: Any individual, corporation, firm, trust, commission, board, public or private partnership, joint venture, agency, unincorporated association, municipal corporation, county or state agency, the federal government, other legal entity, or an agent thereof.
- (gg) PHASING: Clearing a parcel of land in distinct sections, with the stabilization of each section before the clearing of the next.
- (hh) POINT SOURCE: Any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or the floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.
- (ii) PROFESSIONAL ENGINEER: A Registered Professional Engineer registered in the State of Ohio.
- (jj) PROFESSIONAL WETLAND CONSULTANT: Individuals competent in botany, hydric soils and wetland hydrology that provide professional services or advice, and meet the education and professional experience requirements as required by the Society of Professional Wetland Scientists.
- (kk) QUALIFIED INSPECTION PERSONNEL: A person knowledgeable in the principles and practice of erosion and sediment controls, who possess the skills to assess all conditions at the construction site that could impact stormwater quality and to assess the effectiveness of any sediment and erosion control measure selected to control the quality of stormwater discharges from the construction activity.
- (ll) *RAINWATER AND LAND DEVELOPMENT*: Ohio's standards for stormwater management, land development, and urban stream protection. The most current edition of these standards shall be used with this regulation.
- (mm) RIPARIAN AREA: The transition area between flowing water and terrestrial (land) ecosystems composed of trees, shrubs and surrounding vegetation which serve to stabilize erodible soil, improve both surface and ground water quality, increase stream shading and enhance wildlife habitat.
- (nn) RUNOFF: The portion of rainfall, melted snow, or irrigation water that flows across the ground surface and is eventually conveyed to water resources or wetlands.

- (oo) RUNOFF COEFFICIENT: The fraction of rainfall that will appear at the conveyance as runoff.
- (pp) SEDIMENT: The soils or other surface materials that are transported or deposited by the action of wind, water, ice, gravity, or any combination of those forces, as a product of erosion.
- (qq) SEDIMENTATION: The deposition or settling of sediment.
- (rr) SEDIMENT SETTLING POND: A sediment trap, sediment basin or permanent basin that has been temporarily modified for sediment control, as described in the latest edition of *Ohio Rainwater and Land Development*.
- (ss) SEDIMENT STORAGE VOLUME: See current edition of *Ohio Rainwater and Land Development*.
- (tt) SETBACK: A designated transition area around water resources that is left in a natural, usually vegetated, state so as to protect the water resources from runoff pollution. Soil disturbing activities in this area are restricted by this regulation.
- (uu) SOIL DISTURBING ACTIVITY: Clearing, grading, excavating, filling, grubbing or stump removal that occurs during clearing or timber activities, or other alteration of the earth's surface where natural or human made ground cover is destroyed and that may result in, or contribute to, erosion and sediment pollution.
- (vv) SOIL & WATER CONSERVATION DISTRICT: An entity organized under Chapter 1515 of the Ohio Revised Code referring to either the Soil and Water Conservation District Board or its designated employee(s). Hereafter referred to as Medina SWCD.
- (ww) STABILIZATION: The use of SCMs, such as seeding and mulching, that reduce or prevent soil erosion by water, wind, ice, gravity, or a combination of those forces.
- (xx) STEEP SLOPES: Slopes that are 15 percent or greater in grade. NOTE: If otherwise defined in City zoning, use City definition.
- (yy) STORMWATER: Stormwater runoff, snow melt and surface runoff and drainage.
- (zz) STORMWATER CONTROL MEASURE (SCM): Schedule of activities, prohibitions of practices, maintenance procedures, and other management practices (both structural and non-structural) to prevent or reduce the pollution of water resources. SCMs also include treatment requirements, operating procedures, and practices to control facility and/or construction site runoff, spillage, or leaks; sludge or waste disposal; or drainage from raw material storage.
- (aaa) STORMWATER POLLUTION PREVENTION PLAN (SWP3): The written document that sets forth the plans and practices to be used to meet the requirements of this regulation.
- (bbb) SUBDIVISIONS, MAJOR AND MINOR: See Ohio Administrative Code 711.001 for definition.

- (ccc) SURFACE OUTLET: A dewatering device that only draws water from the surface of the water.
- (ddd) SURFACE WATER OF THE STATE: Also Water Resource or Water Body. Any stream, lake, reservoir, pond, marsh, wetland, or other waterway situated wholly or partly within the boundaries of the state, except those private waters which do not combine or affect a junction with surface water. Waters defined as sewerage systems, treatment works or disposal systems in Section 6111.01 of the Ohio Revised Code are not included.
- (eee) TEMPORARY STABILIZATION: The establishment of temporary vegetation, mulching, geotextiles, sod, preservation of existing vegetation, and other techniques capable of quickly establishing cover over disturbed areas to provide erosion control between construction operations.
- (fff) TOPSOIL: The upper layer of the soil that is usually darker in color and richer in organic matter and nutrients than subsoil.
- (ggg) TOTAL MAXIMUM DAILY LOAD (TMDL): The sum of the existing and/or projected point source, nonpoint source, and background loads for a pollutant to a specified watershed, water resource or wetland, or water resource or wetland segment. A TMDL sets and allocates the maximum amount of a pollutant that may be introduced into the water and still ensure attainment and maintenance of water quality standard.
- (hhh) UNSTABLE SOILS: A portion of land that is identified by the City of Brunswick Engineer as prone to slipping, sloughing, or landslides, or is identified by the U.S. Department of Agriculture Natural Resource Conservation Service methodology as having a low soil strength.
- (iii) WATER QUALITY VOLUME (WQv): The volume of stormwater runoff which must be captured and treated prior to discharge from the developed site after construction is complete. WQv is based on the expected runoff generated by the mean storm precipitation volume from post-construction site conditions at which rapidly diminishing returns in the number of runoff events captured begins to occur.
- (jjj) WATER RESOURCE Also SURFACE WATER OF THE STATE: Any stream, lake, reservoir, pond, marsh, wetland, or waterway situated wholly or partly within the boundaries of the state, except those private waters which do not combine or affect a junction with surface water. Waters defined as sewerage systems, treatment works or disposal systems in Section 6111.01 of the Ohio Revised Code are not included.
- (kkk) WATERSHED: The total drainage area contributing runoff to a single point.
- (lll) WETLAND: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs, and similar areas (40 CFR 232, as amended).

1234.03 DISCLAIMER OF LIABILITY

- a) Compliance with the provisions of this regulation shall not relieve any person from responsibility for damage to any person otherwise imposed by law. The provisions of this regulation are

promulgated to promote the health, safety, and welfare of the public and are not designed for the benefit of any individual or for the benefit of any particular parcel of property.

- b) By approving an SWP3 under this regulation, the City does not accept responsibility for the design, installation, and operation and maintenance of stormwater management practices.
- c) Performance Liability. No provision of this Chapter shall limit, increase or otherwise affect the liabilities of the owner nor impose any liability upon the City not otherwise imposed by law.
- d) No release from Other Requirements. No condition of this permit shall release the owner from any responsibility or requirements under other Federal, State, or local environmental Chapters. If requirements vary, the most restrictive requirements shall prevail.
- e) Proceeding with Activity. Soil-disturbing activities regulated under this Chapter shall not begin until all necessary City, State and Federal permits and appropriate approvals of the SWP3 have been granted to the site owner.
- f) Performance Responsibility. The owner is responsible for carrying out all provisions of the approved SWP3 and for meeting all the standards and requirements of this Chapter.

1234.04 CONFLICTS, SEVERABILITY, NUISANCES AND RESPONSIBILITY

- (a) Where this regulation is in conflict with other provisions of law or ordinance, the most restrictive provisions shall prevail.
- (b) If any clause, section, or provision of this regulation is declared invalid or unconstitutional by a court of competent jurisdiction, the validity of the remainder shall not be affected thereby.
- (c) This regulation shall not be construed as authorizing any person to maintain a private or public nuisance on their property, and compliance with the provisions of this regulation shall not be a defense in any action to abate such a nuisance.
- (d) Failure of City of Brunswick to observe or recognize hazardous or unsightly conditions or to recommend corrective measures shall not relieve the site owner from the responsibility for the condition or damage resulting therefrom, and shall not result in City of Brunswick, its officers, employees, or agents being responsible for any condition or damage resulting therefrom.

1234.05 DEVELOPMENT OF STORMWATER POLLUTION PREVENTION PLANS

- (a) This regulation requires that a Stormwater Pollution Prevention Plan (SWP3) be developed and implemented for all development projects disturbing one (1) acre or more and on which any regulated activity of Section 1234.01(c) is proposed. The City Engineer has the discretion to require a SWP3 for projects on sites of any size.
- (b) The following activities shall submit an Abbreviated SWP3:
 - (1) New single-family residential construction regardless of parcel size. If such activities disturb one (1) acre or more, or are part of a larger common plan of development or sale disturbing one (1) acre or more, a full SWP3 and compliance with the Ohio EPA Construction General Permit may be required.

- (2) Additions, accessory buildings, for single-family residential construction. If such activities disturb one (1) acre or more, or are part of a larger common plan of development or sale disturbing one (1) acre or more, a full SWP3 and compliance with the Ohio EPA Construction Site General Permit are required.
- (3) General land clearing activities not related to construction. If such activities disturb one (1) acre or more, or are part of a larger common plan of development or sale disturbing one (1) acre or more, compliance with the Ohio EPA Construction Site General Permit and a full SWP3 are required.
- (c) Activities disturbing 1/10th (one tenth) or less of an acre are not required to submit a SWP3 or an Abbreviated SWP3, unless required by the City of Brunswick Engineer. These activities must comply with all other provisions of this regulation.

1234.06 APPLICATION PROCEDURES

- (a) **SOIL DISTURBING ACTIVITIES SUBMITTING A STORMWATER POLLUTION PREVENTION PLAN:** The owner shall submit two (2) sets of the SWP3 and the applicable fees to the City of Brunswick and as follows:
 - (1) For subdivisions: After the approval of the preliminary plans and with submittal of the improvement plans.
 - (2) For other construction projects: SWP3 plans and fees must be submitted in conjunction with the submission of site development plans. The SWP3 must be reviewed and approved by the City Engineer prior to the Chief Building Official for the City of Brunswick issuing a building permit.
 - (3) For general clearing projects: SWP3 plans and fees must be submitted prior to the commencement of clearing/demolition activities begin. The SWP3 must be reviewed and approved by the City Engineer prior to the Chief Building Official for the City of Brunswick issuing a pertinent permit or clearing/demolition activities begin.
- (b) **SOIL DISTURBING ACTIVITIES SUBMITTING AN ABBREVIATED STORMWATER POLLUTION PREVENTION PLAN:** The owner shall submit two (2) sets of the Abbreviated SWP3 and the applicable fees to the City of Brunswick as follows:
 - (1) For single-family home construction: With submission of a residential site plan for the proposed structure. The SWP3 must be reviewed and approved by the City Engineer prior to the Chief Building Official for the City of Brunswick issuing a building permit.
 - (2) For general clearing projects: SWP3 plans and fees must be submitted prior to the commencement of clearing/demolition activities begin. The SWP3 must be reviewed and approved by the City Engineer before the Chief Building Official for the City of Brunswick issuing a pertinent permit or clearing/demolition activities begin.
- (c) Soil disturbing activities shall not begin and building permits shall not be issued without an approved SWP3 or Abbreviated SWP3 and installation of perimeter sediment controls.

- (d) SWP3 for individual sublots in a subdivision will not be approved unless the larger common plan of development or sale containing the subplot is in compliance with this regulation.
- (e) Approvals issued in accordance with this regulation shall remain valid for one (1) year from the date of approval.

1234.07 COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

Approvals issued in accordance with this regulation do not relieve the owner of responsibility for obtaining all other necessary permits and/or approvals from the Ohio EPA, the US Army Corps of Engineers, and other federal, state, and/or county agencies. If requirements vary, the most restrictive requirement shall prevail. These permits may include, but are not limited to, those listed below. All submittals required to show proof of compliance with these state and federal regulations shall be submitted with SWP3s or Abbreviated SWP3s.

- (a) Ohio EPA NPDES Permits authorizing stormwater discharges associated with construction activity or the most current version thereof: Proof of compliance with these requirements shall be a copy of the Ohio EPA Director's Authorization Letter for the NPDES Permit, or a letter from the site owner certifying and explaining why the NPDES Permit is not applicable.
- (b) Section 401 of the Clean Water Act: Proof of compliance shall be a copy of the Ohio EPA Water Quality Certification application, public notice, or project approval, or a letter from the site owner certifying that a qualified Professional Wetland Consultant has surveyed the site and found no waters of the United States. Wetlands, and other waters of the United States, shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time of application of this regulation.
- (c) Ohio EPA Isolated Wetland Permit: Proof of compliance shall be a copy of Ohio EPA's Isolated Wetland Permit application, public notice, or project approval, or a letter from the site owner certifying that a qualified Professional Wetland Consultant has surveyed the site and found no waters of the State. Isolated wetlands shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time of application of this regulation.
- (d) Section 404 of the Clean Water Act: Proof of compliance shall be a copy of the U.S. Army Corps of Engineers Individual Permit application, if an Individual Permit is required for the development project, public notice, or project approval. If an Individual Permit is not required, the site owner shall submit proof of compliance with the U.S. Army Corps of Engineer's Nationwide Permit Program. Wetlands, and other waters of the United States, shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time of application of this regulation. Proof of compliance shall include one of the following:
 - (1) A letter from a qualified professional who has evaluated the site and determined that Section 404 of the Clean Water Act is not applicable.
 - (2) A site plan showing that any proposed fill of waters of the United States conforms to the general and specific conditions specified in the applicable Nationwide Permit.

- (e) Ohio Dam Safety Law: Proof of compliance shall be a copy of the ODNR Division of Water permit application, a copy of the project approval letter from the ODNR Division of Water, or a letter from the site owner certifying and explaining why the Ohio Dam Safety Law is not applicable.

1234.08 STORMWATER POLLUTION PREVENTION PLAN

- (a) In order to control sediment pollution of water resources the owner shall submit a SWP3 in accordance with the requirements of this regulation.
- (b) The SWP3 shall include Stormwater Control Measures (SCMs) adequate to prevent pollution of public waters by soil sediment from accelerated stormwater runoff from development areas.
- (c) The SWP3 shall be certified by a Registered Professional Engineer, a Registered Professional Surveyor, certified Professional Erosion and Sediment Control Specialist, or a Registered Landscape Architect.
- (d) The SWP3 shall be amended if requested by the City of Brunswick Engineer, whenever there is a change in design, construction, operation or maintenance, which has a significant effect on the potential for the discharge of pollutants to surface waters of the state or if the SWP3 proves to be ineffective in achieving the general objectives of controlling pollutants in stormwater discharges associated with construction activity.
- (e) The SWP3 shall incorporate measures as recommended by the most current online edition of *Ohio Rainwater and Land Development* as published by the Ohio Environmental Protection Agency and shall include the following information:
 - (1) A cover page or title identifying the name and location of the site, the name and contact information of all construction site operators, the name and contact information for the person responsible for authorizing and amending the SWP3, preparation date, and the estimated start and completion dates for construction.
 - (2) A copy of the permit requirements (attaching a copy of the current Ohio EPA NPDES Construction General Permit is acceptable).
 - (3) Site description: The SWP3 shall provide:
 - A. A description of the nature and type of the construction activity (e.g. residential, etc.).
 - B. Total area of the site and the area of the site that is expected to be disturbed (i.e., grubbing, clearing, excavation, filling or grading, including off-site borrow areas).
 - C. An estimate of the impervious area and percent of imperviousness created by the land disturbance.
 - D. Existing data describing the soil and, if available, the quality of any known pollutant discharge from the site such as that which may result from previous contamination caused by prior land uses.

- E. A description of prior land uses at the site.
- F. An implementation schedule which describes the sequence of major soil-disturbing operations (i.e., grubbing, excavating, grading, utilities and infrastructure installation) and the implementation of erosion and sediment controls to be employed during each operation of the sequence.
- G. The location and name of the immediate receiving stream or surface water(s) and the first subsequent receiving water(s). and the aerial extent and description of wetlands or other special aquatic sites at or near the site which will be disturbed or which will receive discharges from undisturbed areas of the project. For discharges to a municipal separate storm sewer system (MS4), the point of discharge to the MS4 and the location where the MS4 ultimately discharges to a water resource shall be indicated.
- H. List TMDLs applicable for the site and demonstrate that appropriate stormwater control measures (SCMs) have been selected to address these TMDLs. The TMDL information for all watersheds in the State of Ohio can be found on the Ohio EPA Nonpoint Source Pollution Control Program Website.
- I. A log documenting grading and stabilization activities as well as amendments to the SWP3, which occur after construction activities commence.
- J. Each temporary and permanent stormwater practice shall be designated with an individual identification number.
- K. Site map showing:
 - i. Limits of soil-disturbing activity of the site, including off site spoil and borrow areas.
 - ii. Soils types should be depicted for all areas of the site, including locations of unstable or highly erodible soils.
 - iii. Existing and proposed one-foot (1') contours. This must include a delineation of drainage watersheds expected during and after major grading activities as well as the size of each drainage watershed in acres. Contour intervals of more than one-foot (1') may be accepted at the discretion of the City Engineer for drainage watersheds outside of the project boundary.
 - iv. Surface water locations including springs, wetlands, streams, lakes, water wells, etc., on or within 200 feet of the site, including the boundaries of wetlands or stream channels and first subsequent named receiving water(s) the owner intends to fill or relocate for which the owner is seeking approval from the Army Corps of Engineers and/or Ohio EPA.
 - v. Existing and planned locations of buildings, roads, parking

facilities, and utilities.

- vi. The location of all erosion and sediment control practices, including the location of areas likely to require temporary stabilization during the course of site development.
- vii. Sediment and stormwater management basins including their sediment settling volume and the maximum expected disturbed area that will be directed to the sediment pond during construction. The plan should include a summary of the following:
 - i. The required sediment storage and dewatering volumes
 - ii. The provided sediment storage and dewatering volumes
 - iii. The weir length or skimmer size, as applicable
 - iv. The weir length or skimmer size provided
- viii. Data sheets for all sediment traps, sediment basins, and SCMs that identify contributing drainage area, disturbed area, water quality volume, sedimentation volume, dewatering volume, practice surface area, facility discharge and dewatering time, outlet type and dimensions, and any other relevant parameters for each practice.
- ix. A separate plan and profile view of each individual sediment settling pond and its outlet structure. Detail drawings of the outlet structure shall indicate the following elevations:
 - a) Pond bottom
 - b) Elevation required to store the required sediment storage volume
 - c) For sediment basins, the elevation at which the skimmer is attached
 - d) For sediment traps, the top and bottom of the stone outlet section
 - e) Elevation required to store the dewatering volume, exclusive of the sediment storage volume
 - f) Elevation of the top of embankment
 - g) Crest of the emergency spillway
- x. Where used as a sediment-settling pond during construction, the plan shall include a detail drawing of the temporary outlet configuration of the permanent stormwater basin with the following information specified:
 - a) Storage volume provided below the elevation at which the skimmer or other surface dewatering device is attached
 - b) Elevation at which the skimmer or other surface dewatering device is attached
 - c) Elevation at which the full dewatering zone is stored above the skimmer invert

- d) Any temporary modification to permanent outlet orifices or weirs required to ensure no discharge below the skimmer invert and only the skimmer controls the discharge up to the top of the dewatering volume.
 - e) Calculations of the sediment storage volume, dewatering volume and skimmer drawdown time shall also be provided
 - xi. The location of permanent SCMs to be used to control pollutants in stormwater after construction operations have been completed.
 - xii. Areas designated for the storage or disposal of solid, sanitary and toxic wastes, including dumpster areas, areas designated for cement truck washout, and vehicle fueling.
 - xiii. Measures to prevent and respond to chemical spills and leaks. Owners may also reference the existence of other plans (i.e., Spill Prevention Control and Countermeasure (SPCC) plans, spill control programs, Safety Response Plans, etc.) provided that such plan addresses this requirement and a copy of such plan is maintained on site.
 - xiv. Methods to minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. No detergents may be used to wash vehicles. Wash waters shall be treated in a sediment basin or alternative control that provides equivalent treatment prior to discharge.
 - xv. The location of designated stoned construction entrances where the vehicles will ingress and egress the construction site.
 - xvi. The location of any in-stream activities including stream crossings.
- (2) A soils engineering report. The City of Brunswick Engineer may require the SWP3 to include a Soils Engineering Report based upon his/her determination that the conditions of the soils are unknown or unclear to the extent that additional information is required to protect against erosion or other hazards. This report shall be based on adequate and necessary test borings and/or site investigation, and shall contain all the information listed below. Recommendations included in the report and approved by the City of Brunswick Engineer shall be incorporated in the grading plans and/or other specifications for site development.
- A. Data regarding the nature, distribution, strength, and erodibility of existing soils.
 - B. If applicable, data regarding the nature, distribution, strength, and erodibility of the soil to be placed on the site.
 - C. Conclusions and recommendations for grading procedures.

- D. Conclusions and recommended designs for interim soil stabilization devices and measures, and for permanent soil stabilization after construction is completed.
- E. Design criteria for corrective measures when necessary.
- F. Opinions and recommendations covering the stability of the site.

1234.09 PERFORMANCE STANDARDS

The SWP3 must contain a description of the controls appropriate for each construction operation and the owner must implement such controls. The SWP3 must clearly describe for each major construction activity the appropriate control measures; the general sequence during the construction process under which the measures will be implemented; and the contractor responsible for implementation (e.g., contractor A will clear land and install perimeter controls and contractor B will maintain perimeter controls until final stabilization).

The approved SWP3, and the sediment and erosion controls, and non-sediment pollution controls contained therein, shall be implemented upon the commencement of construction. The approved plan must be implemented until the site reaches final stabilization. All properties adjacent to the site of soil-disturbing activity shall be protected from soil erosion and sediment run-off and damage, including, but not limited to, private properties, natural and artificial waterways, wetlands, storm sewers and public lands.

It is the owner's responsibility to maintain current records of contractor(s) responsible for implementation the SWP3 and providing that information to the City Engineer. The SWP3 shall identify all subcontractors engaged in activities that could impact stormwater runoff. The SWP3 shall contain signatures from all of the identified subcontractors indicating that they have been informed and understand their roles and responsibilities in complying with the SWP3.

Erosion and sediment controls shall be designed, installed and maintained effectively to minimize the discharge of pollutants during the course of earth disturbing activities. The controls shall include the following minimum components:

- (a) **NON-STRUCTURAL PRESERVATION MEASURES:** The SWP3 must make use of practices that preserve the existing natural condition to the maximum extent practicable. Such practices may include preserving riparian areas, preserving existing vegetation and vegetative buffer strips, phasing of construction operations in order to minimize the amount of disturbed land at any one time, minimizing disturbance of steep slopes, designation of tree preservation areas or other protective clearing or grubbing practices. Soil compaction shall be minimized and, unless infeasible, topsoil shall be preserved. Provide and maintain a 50-foot buffer of undisturbed natural vegetation around surface waters of the state, or riparian setbacks, if applicable, whichever is greater, unless maintaining this buffer is infeasible, e.g. stream crossings for roads or utilities, or for channel and floodplain rehabilitation and restoration. Direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration.
- (b) **EROSION CONTROL PRACTICES:** The SWP3 must make use of erosion controls that are capable of providing cover over disturbed soils. The amount of soil exposed during construction activity shall be minimized. A description of control practices designed to restabilize disturbed areas after grading or construction shall be included in the SWP3. The SWP3 must provide specifications for stabilization of all disturbed areas of the site

and provide guidance as to which method of stabilization will be employed for any time of the year. Such practices may include: temporary seeding, permanent seeding, mulching, matting, sod stabilization, vegetative buffer strips, phasing of construction operations, the use of construction entrances, and the use of alternative ground cover.

Erosion control practices must meet the following requirements:

- (1) Stabilization. Disturbed areas must be stabilized as specified in Tables 1 and 2 below.

Table 1: Permanent Stabilization

Area requiring permanent stabilization	Time frame to apply erosion controls
Any area that will lie dormant for one year or more.	Within 7 days of the most recent disturbance.
Any area within 50 feet of a surface water of the state and at final grade.	Within 2 days of reaching final grade.
Any other areas at final grade.	Within 7 days of reaching final grade within that area.

Table 2: Temporary Stabilization

Area requiring temporary stabilization	Time frame to apply erosion controls
Any disturbed area within 50 feet of a surface water of the state and not at final grade.	Within 2 days of the most recent disturbance if that area will remain idle for more than 14 days.
For all construction activities, any disturbed area, including soil stockpiles that will be dormant for more than 14 days but less than one year, and not within 50 feet of a surface water of the state.	Within 7 days of the most recent disturbance within the area. For residential subdivisions, disturbed areas must be stabilized at least 7 days prior to transfer of ownership or operational responsibility.
Disturbed areas that will be idle over winter.	Prior to November 1 or the onset of winter weather, whichever occurs first.
Note: Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed.	

- (2) Permanent stabilization of conveyance channels. Owners shall undertake special measures to stabilize channels and outfalls and prevent erosive flows. Measures may include seeding, dormant seeding, mulching, erosion control matting, sodding, riprap, natural channel design with bioengineering techniques, or rock check dams, all as defined in the most recent edition of *Ohio Rainwater and Land Development* or the Field Office Technical Guide available at www.nrcs.usda.gov/technical/efotg/.
- (c) **RUNOFF CONTROL PRACTICES**. The SWP3 shall incorporate measures that control the volume and velocity of stormwater runoff within the site to prevent erosion. Peak flow rates and total stormwater volume shall be controlled to minimize erosion and outlets, downstream channel and streambank erosion. Such practices may include rock check dams, pipe slope drains, diversions to direct flow away from exposed soils and protective grading practices. These practices shall divert runoff away from disturbed areas and steep slopes where practicable. Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected.

- (d) **SEDIMENT CONTROL PRACTICES.** The SWP3 shall include a description of, and detailed drawings for, all structural practices that shall store runoff, allowing sediments to settle and/or divert flows away from exposed soils or otherwise limit runoff from exposed areas to minimize sediment discharges from the site. Structural practices shall be used to control erosion and trap sediment from a site remaining disturbed for more than 14 days. Such practices may include, among others: sediment settling ponds, silt fences, storm drain inlet protection, and earth diversion dikes or channels which direct runoff to a sediment settling pond. The design, installation and maintenance of erosion and sediment controls shall address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site.
- (e) All sediment control practices must be capable of ponding runoff in order to be considered functional. Earth diversion dikes or channels alone are not considered a sediment control practice unless used in conjunction with a sediment settling pond. Sediment control practices must meet the following requirements:
- (1) Timing. Sediment control structures shall be functional throughout the course of earth disturbing activity. Sediment basins and perimeter sediment barriers shall be implemented prior to grading and within seven (7) days from the start of grubbing. They shall continue to function until the up slope development area is restabilized. As construction progresses and the topography is altered, appropriate controls must be constructed or existing controls altered to address the changing drainage patterns.
- (2) Sediment settling ponds.
- A. A sediment settling pond, or equivalent best management practice upon approval from the City of Brunswick Engineer, is required for any one of the following conditions:
1. Concentrated stormwater runoff.
 2. Runoff from drainage areas that exceeds the design capacity of silt fence (see Table 3) inlet protection, or other sediment barriers.
 3. Runoff from common drainage locations with 10 or more acres of disturbed land.
 4. Sediment settling ponds shall be provided in the form of a sediment trap or sediment basin as defined in the latest edition of *R Ohio Rainwater and Land Development Manual*. The maximum allowable contributing drainage area to a sediment trap shall be limited to less than 5 acres. Contributing-drainage areas of 5 acres or more shall be treated with a sediment basin. An equivalent best management practice may be utilized upon approval from the City.
- B. The sediment-settling pond shall provide both a sediment storage zone and a dewatering zone. The volume of the dewatering zone shall be at least 1,800 cubic feet of storage per acre of total contributing drainage area. The dewatering structure of sediment basins shall be designed to have a minimum 48-hour drain time, and, unless infeasible, be designed

to always withdraw runoff from the surface of the pond throughout the storm cycle. As such, a skimmer discharge device consistent with *Ohio Rainwater and Land Development Manual* shall be provided to dewater sediment basins. Sediment traps shall also provide both a sediment storage zone and dewatering zone, but the outlet structure shall be constructed consistent with the specifications contained in the latest edition of *Ohio Rainwater and Land Development Manual*.

When post-construction detention/water quality ponds are to be used as temporary sediment trapping SCMs, a skimmer discharge device consistent with *Ohio Rainwater and Land Development Manual* shall be utilized during construction phase and until the site is deemed permanently stabilized by the City.

The skimmer shall be designed per the equivalent requirements of sediment basins and the operator must ensure that the outlet structure of the pond provides an equivalent or better sediment storage zone and dewatering zone. As such, temporarily while the site is under construction, there shall be no discharge of runoff below the elevation required for the sediment storage zone and the discharge of stormwater within the dewatering zone shall only occur through the skimmer.

- C. The volume of the sediment storage zone shall be calculated by one of the following methods:

Method 1: The volume of the sediment storage zone shall be 1,000 ft³ per disturbed acre within the watershed of the basin.

Method 2: The volume of the sediment storage zone shall be the volume necessary to store the sediment as calculated with Revised Universal Soil Loss Equation (RUSLE) or other generally accepted erosion prediction model.

- D. When determining the total contributing drainage area, off-site areas and areas which remain undisturbed by construction activity must be included unless runoff from these areas is diverted away from the sediment settling pond and is not comingled with sediment-laden runoff. The depth of the dewatering zone must be less than or equal to five (5) feet. The configuration between the inlets and the outlet of the sediment-settling pond must provide at least two units of length for each one unit of width $\geq 2:1$ length-to-width ratio; however, a length to width ratio of $\geq 4:1$ is recommended. Sediment must be removed from the sediment-settling pond when the design capacity of the sediment storage zone has been completely filled by sediment accumulations. This limit is typically reached when sediment occupies one-half of the basin depth. When designing sediment settling ponds, the owner must consider public safety, especially as it relates to children, as a design factor for the sediment basin and alternative sediment controls must be used where site limitations would preclude a safe design. The use of a combination of sediment and erosion control measures in order to achieve maximum pollutant removal is encouraged.

- (3) Silt fence and diversions. Sheet flow runoff from denuded areas shall be intercepted by silt fence or diversions to protect adjacent properties, water resources from sediment transported via sheet flow. Where intended to provide sediment control, silt fence shall be placed on a level contour and shall be capable of temporarily ponding runoff. The relationship between the maximum drainage area to silt fence for a particular slope range is shown in Table 3 below. Placing silt fence in a parallel series does not extend the size of the permissible drainage area.

Table 3: Maximum Drainage Area to Silt Fence Based on Slope

Maximum Drainage Area (acres) to 100 linear feet of silt fence	Range of Slope for a drainage area (%)
0.5	<2%
0.25	$\geq 2\%$ but < 20%
0.125	$\geq 20\%$ but < 50%

- (4) Alternative perimeter controls for sheet flow discharges may be considered by the City, but their use shall not exceed the limitations indicated in Table 3 above. Detail drawings and plan notes shall specify the diameter of filter socks, compost berms and other such alternative perimeter controls if used instead of silt fence.
- (5) Stormwater diversion practices shall be used to keep runoff away from disturbed areas and steep slopes. Such devices, which include swales, dikes or berms, may receive stormwater runoff from areas up to 10 acres.
- (6) Inlet protection. Erosion and sediment control practices, such as boxed inlet protection, shall be installed to minimize sediment-laden water entering active storm drain systems. All inlets receiving runoff from drainage areas of one or more acres will require a sediment settling pond. Straw or hay bales and filter socks around catch basins are not acceptable forms of inlet protection.
- (7) Off-site tracking of sediment and dust control. Stormwater control measures must be implemented to ensure sediment is not tracked off-site and that dust is controlled. These stormwater control measures must include, but are not limited to, the following:
- A. Construction entrances shall be built and shall serve as the only permitted points of ingress and egress to the development area. These entrances shall be built of a stabilized pad of aggregate stone or recycled concrete or cement sized greater than 2" in diameter, placed over a geotextile fabric, and constructed in conformance with specifications in the most recent edition of the *Ohio Rainwater and Land Development*.
 - B. Streets and catch basins adjacent to construction entrances shall be kept free of sediment tracked off site. Streets directly adjacent to construction entrances and receiving traffic from the development area, shall be cleaned daily to remove sediment tracked off-site. If applicable, the catch basins on these streets nearest to the construction entrances shall

also be cleaned weekly and protected from sediment-laden runoff, if feasible without posing a public safety hazard.

Based on site conditions, City of Brunswick Engineer may require additional stormwater control measures to control off site tracking and dust. These additional SCMs may include:

- C. Fencing shall be installed around the perimeter of the development area to ensure that all vehicle traffic adheres to designated construction entrances.
- D. Designated vehicle and wheel-washing areas. Wash water from these areas must be directed to a designated sediment trap, a sediment-settling pond, or to a sump pump for dewatering in conformance with Section 1234.09(G) of this regulation. No surfactants or detergents may be used to wash vehicles.
- E. Owners shall take all necessary measures to comply with applicable regulations regarding fugitive dust emissions, including obtaining necessary permits for such emissions. The City of Brunswick Engineer may require dust controls including the use of water trucks to wet disturbed areas, tarping stockpiles, temporary stabilization of disturbed areas, and regulation of the speed of vehicles on the site.

(8) Surface Waters of the State protection. Construction vehicles shall avoid water resources. A 50 foot undisturbed natural buffer shall be provided around surface waters of the state unless infeasible. If it is infeasible to provide and maintain an undisturbed 50-foot natural buffer, the SWP3 shall comply with the stabilization requirements in 1234.09.b.1 for areas within 50 feet of a surface water or riparian setbacks if applicable, whichever is greater; and minimize soil compaction and, unless infeasible, preserve topsoil. If the owner is permitted to disturb areas within 50 feet of a water resource, the following conditions shall be addressed in the SWP3:

- A. All SCMs and stream crossings shall be designed as specified in the most recent edition of *Ohio Rainwater and Land Development Manual*.
- B. Structural SCMs shall be designated and implemented on site to protect water resources from the impacts of sediment runoff.
- C. No structural sediment controls (e.g., the installation of silt fence or a sediment settling pond in-stream) shall be used in water resources or wetlands.
- D. Where stream crossings for roads or utilities are necessary and permitted, the project shall be designed such that the number of stream crossings and the width of the disturbance are minimized.
- E. Temporary stream crossings shall be constructed if water resources or wetlands will be crossed by construction vehicles during construction.
- F. Construction of bridges, culverts, or sediment control structures shall not

place soil, debris, or other particulate material into or close to the water resources or wetlands in such a manner that it may slough, slip, or erode.

- G. Concentrated stormwater runoff from SCMs to natural wetlands shall be converted to diffuse flow through the use of level spreaders or other such appropriate measure before the runoff enters the wetlands. The flow should be released such that no erosion occurs downslope. Level spreaders may need to be placed in series to ensure non-erosive velocities.
 - H. Protected areas or critical areas, including wetlands and riparian areas shall be physically marked in the field prior to earth disturbing activities.
- (9) Modifying controls. If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the owner shall replace or modify the control for site conditions.
- (f) **NON-SEDIMENT POLLUTANT CONTROLS:** No solid or liquid waste, including building materials, shall be discharged in stormwater runoff. The owner must implement site stormwater control measures to prevent toxic materials, hazardous materials, or other debris from entering water resources, wetlands or the MS4. These practices shall include but are not limited to the following:
- A. Waste Materials: A covered dumpster shall be made available for the proper disposal of garbage, plaster, drywall, grout, gypsum, and other waste materials.
 - B. Wastewater: Contaminated washout from stucco, paint, form release oils, curing compounds, and other construction materials shall not be discharged directly into a water resource or storm sewer.
 - C. Vehicle fluids: No pollutants from vehicle fuel, oils, or other vehicle fluids can be discharged to surface waters of the State.
 - D. Concrete Truck Wash Out: The washing of concrete material into a street, catch basin, other public facility, natural resource or water of the state is prohibited. A designated area for concrete washout shall be made available.
 - E. Disposal of Other Wastewaters: The discharge of washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials to a street, catch basin, other public facility, natural resource or waters of the state is prohibited. The discharge of soaps or solvents used in vehicle and equipment washing is also prohibited. If generated, these wastewaters must be collected and disposed of properly.
 - F. Fuel/Liquid Tank Storage: All fuel/liquid tanks and drums shall be stored in a marked storage area. A dike shall be constructed around this storage area with a minimum capacity equal to 110% of the volume of the largest containers in the storage area and/or a spill kit shall be provided to clean up spills. The SWP3 Plan shall contain spill prevention and response procedures.
 - G. Toxic or Hazardous Waste Disposal: Any toxic or hazardous waste shall be disposed of properly. The discharge of fuels, oils, and other pollutants used in

vehicle and equipment operation and maintenance is prohibited.

- H. Contaminated Soils Disposal and Runoff: Discovery of previously unknown contaminated soils onsite shall be self-reported to Ohio EPA and local authorities. Contaminated soils from redevelopment sites shall be disposed of properly. Runoff from contaminated soils shall not be discharged from the site. Proper permits shall be obtained for development projects on solid waste landfill sites or redevelopment sites. Where construction activities are to occur on sites with contamination from previous activities, operators shall be aware that concentrations of materials that meet other criteria (i.e. not considered a Hazardous Waste, meeting Voluntary Action Program (VAP standards)) may still result in stormwater discharges in excess of Ohio Water Quality Standards. Such discharges are not authorized by this code. Control measures which may be utilized to meet this requirement include, but are not limited to:
- i. Use berms, trenches, pits or tanks to collect contaminated runoff and prevent discharge.
 - ii. Pump runoff from contaminated soils to the sanitary sewer with the prior approval of the sanitary sewer system operator, or pump into a container for transport to an appropriate treatment or disposal facility; and
 - iii. Cover areas of contamination with tarps, daily cover or other such methods to prevent stormwater from coming into contact with contaminated materials.

The SWP3 must include methods to minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, and sanitary waste to precipitation, stormwater runoff, and snow melt. The SWP3 shall include measures to prevent and respond to chemical spills and leaks. Owners may also reference the existence of other plans (i.e., Spill Prevention Control and Countermeasure (SPCC) plans, spill control programs, Safety Response Plans, etc.) provided that such plan addresses this requirement and a copy of such plan is maintained on site.

- (g) **COMPLIANCE WITH OTHER REQUIREMENTS.** The SWP3 shall be consistent with applicable State and/or local waste disposal, sanitary sewer, or septic system regulations, including provisions prohibiting waste disposal by open burning.
- (h) **TRENCH AND GROUND WATER CONTROL.** There shall be no sediment-laden or turbid discharges to water resources or wetlands resulting from dewatering activities. If trench or ground water contains sediment, it must pass through a sediment-settling pond or other equally effective sediment control device, prior to being discharged from the construction site. Alternatively, sediment may be removed by settling in place or by dewatering into a sump pit, filter bag or comparable practice. Ground water dewatering which does not contain sediment or other pollutants is not required to be treated prior to discharge. However, care must be taken when discharging ground water to ensure that it does not become pollutant-laden by traversing over disturbed soils or other pollutant sources.
- (i) **INTERNAL INSPECTIONS.** All controls on the site shall be inspected at least once every seven (7) calendar days and within 24 hours after any storm event greater than one-half inch of rain per 24 hour period.

The owner shall assign qualified inspection personnel to conduct these inspections to ensure that the control practices are functional and to evaluate whether the SWP3 is adequate, or whether additional control measures are required. Qualified inspection personnel are individuals with knowledge and experience in the installation and maintenance of sediment and erosion controls. Certified inspection reports for full SWP3 shall be submitted to the City Engineer within seven (7) working days from the inspection and retained at the development site.

These inspections shall meet the following requirements:

- (1) Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of or the potential for, pollutants entering the drainage system.
- (2) Erosion and sediment control measures identified in the SWP3 shall be observed to ensure that they are operating correctly. The owner shall utilize an inspection form provided by the City of Brunswick or an alternate form acceptable to the City of Brunswick Engineer. The inspection form shall include:
 - A. The inspection date.
 - B. Names, titles and qualifications of personnel making the inspection.
 - C. Weather information for the period since the last inspection, including a best estimate of the beginning of each storm event, duration of each storm event and approximate amount of rainfall for each storm event in inches, and whether any discharges occurred.
 - D. Weather information and a description of any discharges occurring at the time of inspection.
 - E. Locations of:
 - i. Discharges of sediment or other pollutants from site.
 - ii. SCMs that need to be maintained.
 - iii. SCMs that failed to operate as designed or proved inadequate for a particular location.
 - iv. Where additional SCMs are needed that did not exist at the time of inspection.
 - F. Corrective action required including any necessary changes to the SWP3 and implementation dates.
 - G. For sites that will not be completed by October 1, a Pre-Winter Stabilization Meeting shall be held by the landowner and the developer, engineer and contractor of the project and the City prior to October 1, in order to plan and approve winter erosion and sediment controls as defined in the most current online edition of *Rainwater and Land Development*.

- (3) Discharge locations shall be inspected to determine whether erosion and sediment control measures are effective in preventing significant impacts to the receiving water resource or wetlands.
- (4) Locations where vehicles enter or exit the site shall be inspected for evidence of off-site vehicle tracking.
- (i) **MAINTENANCE.** The SWP3 shall be designed to minimize maintenance requirements. All SCMs shall be maintained and repaired as needed to ensure continued performance of their intended function until final stabilization. All sediment SCMs must be maintained in a functional condition until all up slope areas they control reach final stabilization. The owner shall provide a description of maintenance procedures needed to ensure the continued performance of SCMs and shall ensure a responsible party and adequate funding to conduct this maintenance, all as determined by the City of Brunswick Engineer.

When inspections reveal the need for repair, replacement, or installation of erosion and sediment control SCMs, the following procedures shall be followed:

- (1) When SCMs require repair or maintenance. If an internal inspection reveals that a SCM is in need of repair or maintenance, with the exception of a sediment-settling pond, it must be repaired or maintained within three (3) days of the inspection. Sediment settling ponds must be repaired or maintained within ten (10) days of the inspection.
 - (2) When SCMs fail to provide their intended function. If an internal inspection reveals that a SCM fails to perform its intended function as detailed in the SWP3 and that another, more appropriate control practice is required, the SWP3 must be amended and the new control practice must be installed within three (3) to ten (10) days of the inspection as determined by the City engineer or his/her designated site inspector.
 - (3) When SCMs depicted on the SWP3 are not installed. If an internal inspection reveals that a SCM has not been implemented in accordance with the schedule, the control practice must be implemented within ten (10) days from the date of the inspection. If the internal inspection reveals that the planned control practice is not needed, the record must contain a statement of explanation as to why the control practice is not needed.
- (j) **FINAL STABILIZATION.** Final stabilization shall be determined by the City of Brunswick Engineer. Once a definable area has achieved final stabilization, the owner may note this on the SWP3 and no further inspection requirement applies to that portion of the site. Final stabilization also requires the installation of permanent (post-construction) stormwater control measures (SCMs). Obligations under this ordinance shall not be completed until installation of post-construction SCMs is verified.
 - (k) **DISPOSITION OF TEMPORARY PRACTICES.** All temporary and permanent erosion and sediment control practices shall be disposed of within thirty days after final site stabilization is achieved or after the temporary practices are no longer needed, unless otherwise authorized by the City Engineering Department. Trapped sediment shall be permanently stabilized or removed to prevent further erosion.

1234.10 ABBREVIATED STORMWATER POLLUTION PREVENTION PLAN.

- (a) In order to control sediment pollution of water resources, the owner shall submit an Abbreviated SWP3 in accordance with the requirements of this regulation.
- (b) The Abbreviated SWP3 shall be certified by a Registered Professional Engineer, a Registered Professional Surveyor, certified Professional Erosion and Sediment Control Specialist, or a Registered Landscape Architect.
- (c) The Abbreviated SWP3 shall include a minimum of the following SCMs. City of Brunswick may require other SCMs as site conditions warrant.
 - (1) Construction Entrances: Construction entrances shall be built and shall serve as the only permitted points of ingress and egress to the development area. These entrances shall be built of a stabilized pad of aggregate stone or recycled concrete or cement sized greater than 2" in diameter, placed over a geotextile fabric, and constructed in conformance with specifications in the most recent edition of *Rainwater and Land Development*.
 - (2) Concrete Truck Wash Out: The washing of concrete material into a street, catch basin, or other public facility or natural resource is prohibited. A designated area for concrete washout shall be indicated on the plan. Use for other waste and wastewater is prohibited.
 - (3) Street Sweeping: Streets directly adjacent to construction entrances and receiving traffic from the development area, shall be cleaned daily as needed or when directed by the City Engineer or Service Director to remove sediment tracked off-site. If applicable, the catch basins on these streets nearest to the construction entrances shall be cleaned weekly.
 - (4) Stabilization. The development area shall be stabilized as detailed in Table 4.

Table 4: Permanent Stabilization

Area requiring stabilization	Time frame to apply erosion controls
Any disturbed area within 50 feet of a surface water of the state and not at final grade.	Within 2 days of the most recent disturbance if that area will remain idle for more than 14 days
For all construction activities, any disturbed area, including soil stockpiles, that will be dormant for more than 14 days but less than one year, and not within 50 feet of a stream.	Within 7 days of the most recent disturbance within the area.
Disturbed areas that will be idle over winter	Prior to November 1.
Note: Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed. These techniques may include mulching or erosion matting.	

- (5) Inlet Protection. Erosion and sediment control practices, such as boxed inlet protection, shall be installed to minimize sediment-laden water entering active storm drain systems, including rear yard inlets. Straw, hay bales, and filter socks are not acceptable forms of inlet protection.
- (6) Silt Fence and Other Perimeter Controls. Silt fence and other perimeter controls approved by the City shall be used to protect adjacent properties and water resources from sediment discharged via sheet (diffused) flow. Silt fence shall be placed along level contours and the permissible drainage area is limited to those indicated in Table 3 in 1234.09 of these regulations
- (7) Internal Inspection and Maintenance. All controls on the development area shall be inspected at least once every seven calendar days and within 24 hours after any storm event greater than one-half inch of rain per 24 hour period. Maintenance shall occur as detailed below:
 - A. When SCMs require repair or maintenance. If the internal inspection reveals that a SCM is in need of repair or maintenance, with the exception of a sediment-settling pond, it must be repaired or maintained within three (3) days of the inspection. Sediment settling ponds must be repaired or maintained within ten (10) days of the inspection.
 - B. When SCMs fail to provide their intended function. If the internal inspection reveals that a SCM fails to perform its intended function and that another, more appropriate SCM is required, the Abbreviated SWP3 must be amended and the new SCM must be installed within ten (10) days of the inspection.
 - C. When SCMs depicted on the Abbreviated SWP3 are not installed. If the internal inspection reveals that a SCM has not been implemented in accordance with the schedule, the SCM must be implemented within ten (10) days from the date of the inspection. If the inspection reveals that the planned SCM is not needed, the record must contain a statement of explanation as to why the SCM is not needed.
- (8) Final Stabilization: Final stabilization shall be determined by the City of Brunswick Engineer.

1234.11 FEES

The SWP3 and Abbreviated SWP3 review, filing, and inspection fee reserve is part of a complete submittal and is required to be submitted to the City of Brunswick before the review process begins. Please consult with City of Brunswick Engineer for the current fee reserve schedule. At such time that the fee reserve balance falls below 35% of its original balance the owner may be required to deposit additional funds to cover the anticipated costs of future fees or return the reserve to the original balance as determined by the City Engineer.

1234.12 BOND

- (a) If a SWP3 or Abbreviated SWP3 is required by this regulation, soil-disturbing activities shall not be permitted until either a Cash Bond, Performance Bond or Letter of Credit in the amount of \$1,500 for a single-family residential lot, or \$1,500 per acre for

subdivisions, has been deposited with the City of Brunswick Finance Department. This bonding instrument must be in a form acceptable to the Law Director and shall be posted for the City of Brunswick to perform the obligations otherwise to be performed by the owner of the development area as stated in this regulation and to allow all work to be performed as needed in the event that the owner fails to comply with the provisions of this regulation. The bond shall be returned after all work required by this regulation has been completed and final stabilization has been reached, all as determined by the City Engineer.

- (b) No project subject to this regulation shall commence without a SWP3 or Abbreviated SWP3 approved by the City Engineer.
- (c) Upon the failure of the owner and/or developer and/or contractor(s) to complete any work ordered by the City Engineer, the City may elect to contract with others or employ its own employees to remedy all or part of the said unfinished work and the owner and/or developer and/or contractor(s) shall be liable to the City of Brunswick for the cost of such work and for the cost to the City to collect its costs if not paid upon presentment. The City shall have the right to enter upon the disturbed lands to correct such failure and to abate any nuisance found.

1234.13 ENFORCEMENT

- (a) If the City of Brunswick or its duly authorized representative determines that a violation of the rules adopted under this code exist, the City of Brunswick or representative may issue an immediate stop work order if the violator failed to obtain any federal, state, or local permit necessary for sediment and erosion control, earth movement, clearing, or cut and fill activity.
- (b) All development areas are subject to external inspections by a representative of the City Engineer to ensure compliance with the approved SWP3 or Abbreviated SWP3. All costs associated with such inspections shall be the responsibility of the owner and will be deducted from the fee reserve balance posted with the finance department.
- (c) After each external inspection, City of Brunswick shall prepare and distribute a status report to the owner.
- (d) If an external inspection determines that operations are being conducted in violation of the approved SWP3 or Abbreviated SWP3 the City of Brunswick may take action as detailed in Section 1234.14 of this regulation.

1234.14 VIOLATIONS

- (a) No person shall violate or cause or knowingly permit to be violated any of the provisions of this regulation, or fail to comply with any of such provisions or with any lawful requirements of any public authority made pursuant to this regulation, or knowingly use or cause or permit the use of any lands in violation of this regulation or in violation of any permit granted under this regulation.
- (b) Upon notice, the City Manager and/or the City Engineer may suspend any active soil disturbing activity for a period not to exceed ninety (90) days, and may require immediate erosion and sediment control measures whenever he or she determines that such activity is not meeting the intent of this regulation. Such notice shall be in writing,

shall be given to the owner, and shall state the conditions under which work may be resumed. In instances, however, where the City Manager and/or the City Engineer finds that immediate action is necessary for public safety or the public interest, he or she may require that work be stopped upon verbal order pending issuance of the written notice.

1234.15 APPEALS

Any person aggrieved by any order, requirement, determination, or any other action or inaction by the City of Brunswick in relation to this regulation may appeal to the court of common pleas. Such an appeal shall be made in conformity with O.R.C. Chapter 2506. Written notice of appeal shall be served on the City of Brunswick and a copy shall be provided to the Medina SWCD.

1234.99 PENALTY

- (a) Any person, firm, entity or corporation; including but not limited to, the owner of the property, his agents and assigns, occupant, property manager, and any contractor or subcontractor who violates or fails to comply with any provision of this regulation is guilty of a misdemeanor of the third degree and shall be fined no more than five hundred dollars (\$500.00) or imprisoned for no more than sixty (60) days, or both, for each offense. A separate offense shall be deemed committed each day during or on which a violation or noncompliance occurs or continues.
- (b) The imposition of any other penalties provided herein shall not preclude the City of Brunswick instituting an appropriate action or proceeding in a Court of proper jurisdiction to prevent an unlawful development, or to restrain, correct, or abate a violation, or to require compliance with the provisions of this regulation or other applicable laws, ordinances, rules, or regulations, or the orders of the City of Brunswick.
- (c) All expenses incurred by the City of Brunswick to initiate an enforcement action, implement a mitigating event, remediation of damages caused or resolve a violation shall be the responsibility of the owner shall be deducted from any funds or bonds on file with the Finance Department.

CHAPTER 1236
COMPREHENSIVE STORMWATER MANAGEMENT

1236.01 PURPOSE AND SCOPE

- A. The purpose of this regulation is to establish technically feasible and economically reasonable stormwater management standards to achieve a level of stormwater quality and quantity control that will minimize damage to property and degradation of water resources and will promote and maintain the health, safety, and welfare of the citizens of the City of Brunswick:
- B. This regulation requires owners who develop or re-develop their property within the City of Brunswick to:
1. Control stormwater runoff from their property and ensure that all stormwater control measures (SCMs) are properly designed, constructed, and maintained.
 2. Reduce water quality impacts to receiving water resources that may be caused by new development or redevelopment activities.
 3. Control the volume, rate, and quality of stormwater runoff originating from their property so that surface water and ground water are protected and flooding and erosion potential are not increased.
 4. Minimize the need to construct, repair, and replace subsurface storm drain systems.
 5. Preserve natural infiltration and ground water recharge, and maintain subsurface flow that replenishes water resources, except in slippage prone soils.
 6. Incorporate stormwater quality and quantity controls into site planning and design at the earliest possible stage in the development process.
 7. Reduce the expense of remedial projects needed to address problems caused by inadequate stormwater management.
 8. Maximize use of SCMs that serve multiple purposes including, but not limited to, flood control, erosion control, fire protection, water quality protection, recreation, and habitat preservation.
 9. Design sites to minimize the number of stream crossings and the width of associated disturbance in order to minimize the City of Brunswick's future expenses related to the maintenance and repair of stream crossings.
 10. Maintain, promote, and re-establish conditions necessary for naturally occurring stream processes that assimilate pollutants, attenuate flood flows, and provide a healthy water resource.
- C. This regulation shall apply to all parcels used or being developed, either wholly or partially, for new or relocated projects involving highways and roads; subdivisions or larger common plans of development; industrial, commercial, institutional, or residential projects; building activities on farms; redevelopment activities; grading; and all other uses that are not specifically exempted in

Section 1236.01.

- D. Public entities, including the State of Ohio, Medina County, and the City of Brunswick shall comply with this regulation for roadway projects initiated after March 10, 2006 and, to the maximum extent practicable, for projects initiated before that time.
- E. This regulation does not apply to activities regulated by, and in compliance with, the Ohio Agricultural Sediment Pollution Abatement Rules.
- F. This regulation does not require a Comprehensive Stormwater Management Plan for linear construction projects, such as pipeline or utility line installation, that do not result in the installation of impervious surface as determined by the City Engineer. Such projects must be designed to minimize the number of stream crossings and the width of disturbance. Linear construction projects must comply with the requirements of Chapter 1234 Erosion and Sediment Control.
- G. This regulation does not apply to construction or re-construction of stand-alone single family dwellings when the parcel is not part of an overall subdivision or is part of a subdivision that is in existence as of the adoption of this ordinance, unless otherwise required by the City Engineer.

1236.02 DEFINITIONS

For the purpose of this regulation, the following terms shall have the meaning herein indicated:

- A. ACRE: A measurement of area equaling 43,560 square feet.
- B. AS-BUILT SURVEY: A survey shown on a plan or drawing prepared by a Registered Professional Surveyor indicating the actual dimensions, elevations, and locations of any structures, underground utilities, swales, detention facilities, and sewage treatment facilities after construction has been completed.
- C. CLEAN WATER ACT: Pub. L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483, Pub. L. 97-117, and Pub. L. 100-4, 33 U.S.C. 1251 et. seq. Formally referred to as the Federal Water Pollution Control Act or the Federal Water Pollution Control Act Amendments of 1972.
- D. CITY: The City of Brunswick, its designated representatives, boards, or commissions.
- E. COMMUNITY: The City of Brunswick, its designated representatives, boards, or commissions.
- F. COMPREHENSIVE STORMWATER MANAGEMENT PLAN: The written document and plans meeting the requirements of this regulation that sets forth the plans and practices to minimize stormwater runoff from a development area, to safely convey or temporarily store and release post-development runoff at an allowable rate to minimize flooding and stream bank erosion, and to protect or improve stormwater quality and stream channels.
- G. CRITICAL STORM: A storm that is determined by calculating the percentage increase in volume of runoff by a proposed development area for the 1 year 24 hour event. The critical storm is used to calculate the maximum allowable stormwater discharge rate from a developed site.
- H. DEVELOPMENT AREA: A parcel or contiguous parcels owned by one person or persons, or

- operated as one development unit, and used or being developed for commercial, industrial, residential, institutional, or other construction or alteration that changes runoff characteristics.
- I. **DEVELOPMENT DRAINAGE AREA:** A combination of each hydraulically unique watershed with individual outlet points on the development area.
- J. **DISTURBED AREA:** An area of land subject to erosion due to the removal of vegetative cover and/or soil disturbing activities.
- K. **DRAINAGE:** The removal of excess surface water or groundwater from land by surface or subsurface drains.
- L. **EROSION:** The process by which the land surface is worn away by the action of wind, water, ice, gravity, or any combination of those forces.
- M. **EXTENDED DETENTION FACILITY:** A stormwater control measure that replaces and/or enhances traditional detention facilities by releasing the runoff collected during a 0.75 inch or less rainfall events over at least 24 to 48 hours, retarding flow and allowing pollutants to settle within the facility.
- N. **FINAL STABILIZATION:** All soil disturbing activities at the site have been completed and a uniform perennial vegetative cover with a density of at least 80% coverage for the area has been established or equivalent stabilization practices, such as the use of mulches or geotextiles, have been employed.
- O. **GRADING:** The process in which the topography of the surface of the land is altered to a new slope.
- P. **GREEN INFRASTRUCTURE:** Wet weather management approaches and technologies that utilize, enhance or mimic the natural hydrologic cycle processes of infiltration, evapotranspiration and reuse.
- Q. **HYDROLOGIC UNIT CODE (HUC):** a cataloging system developed by the United States Geological Survey and the Natural Resource Conservation Service to identify watersheds in the United States.
- R. **IMPERVIOUS COVER:** Any surface that cannot effectively absorb or infiltrate water. This may include roads, streets, parking lots, rooftops, sidewalks, and other areas not covered by vegetation.
- S. **INFILTRATION CONTROL MEASURE:** A stormwater control measure practice that does not discharge to a water resource during the stormwater quality event, requiring collected runoff to either infiltrate into the groundwater and/or be consumed by evapotranspiration, thereby retaining stormwater pollutants in the facility.
- T. **LARGER COMMON PLAN OF DEVELOPMENT:** A contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan.
- U. **LOW IMPACT DEVELOPMENT:** Low-impact development (LID) is a site design approach,

which seeks to integrate hydrologically functional design with pollution prevention measures to compensate for land development impacts on hydrology and water quality. LID's goal is to mimic natural hydrology and processes by using small-scale, decentralized practices that infiltrate, evaporate, detain, and transpire stormwater. LID stormwater control measures (SCMs) are uniformly and strategically located throughout the site.

- V. **MAXIMUM EXTENT PRACTICABLE (MEP):** The level of pollutant reduction that operators of small municipal separate storm sewer systems regulated under 40 C.F.R. Parts 9, 122, 123, and 124, referred to as NPDES Stormwater Phase II, must meet.
- W. **MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4):** A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that are:
1. Owned or operated by the federal government, state, municipality, township, county, district, or other public body (created by or pursuant to state or federal law) including a special district under state law such as a sewer district, flood control district or drainage districts, or similar entity, or a designated and approved management agency under section 208 of the Clean Water Act that discharges into water resources; and
 2. Designed or used for collecting or conveying solely stormwater,
 3. Which is not a combined sewer, and
 4. Which is not a part of a publicly owned treatment works.
- X. **NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES):** A regulatory program in the Federal Clean Water Act that prohibits the discharge of pollutants into surface waters of the United States without a permit.
- Y. **NONSTRUCTURAL STORMWATER CONTROL MEASURE (SCM):** Any technique that uses natural processes and features to prevent or reduce the discharge of pollutants to water resources and control stormwater volume and rate.
- Z. ***OHIO RAINWATER AND LAND DEVELOPMENT:*** Ohio's standards for stormwater management, land development, and urban stream protection. The most current edition of these standards shall be used with this regulation
- AA. **OWNER or OPERATOR:** Any party associated with a construction project that meets either of the following two criteria:
- i. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
 - ii. The party has day-to-day operational control of those activities at a project which are necessary to ensure compliance with A Stormwater Pollution Prevention Plan (SWP3) for the site or other permit conditions (e.g. they are authorized to direct workers at a site to carry out activities required by the SWP3 or comply with other permit conditions.)
- BB. **POST-DEVELOPMENT:** The conditions that exist following the completion of soil disturbing activity in terms of topography, vegetation, land use, and the rate, volume, quality, or direction of stormwater runoff.
- CC. **PRE-CONSTRUCTION MEETING:** Meeting prior to construction between all parties associated

- with the construction of the project including government agencies, contractors and owners to review agency requirements and plans as submitted and approved.
- DD. PRE-DEVELOPMENT: The conditions that exist prior to the initiation of soil disturbing activity in terms of topography, vegetation, land use, and the rate, volume, quality, or direction of stormwater runoff.
- EE. PROFESSIONAL ENGINEER: A Professional Engineer registered in the State of Ohio with specific education and experience in water resources engineering, acting in conformance with the Code of Ethics of the Ohio State Board of Registration for Engineers and Surveyors.
- FF. REDEVELOPMENT: Sites that have been previously developed where no post construction SCMs were installed shall either ensure a 20 percent net reduction of site impervious area, provide for treatment of at least 20 percent of the WQv, or a combination of the two. A one-for-one credit towards the 20 percent net reduction of impervious area can be obtained through the use of green roofs and/or pervious pavement. Where projects are a combination of new development and redevelopment, the total WQv that must be treated shall be calculated by a weighted average based on acreage with the new development at 100 percent WQv and redevelopment at 20 percent WQv.
- GG. RIPARIAN AREA: Naturally vegetated land adjacent to any brook, creek, river, or stream having a defined bed and bank that, if appropriately sized, helps to stabilize streambanks, limit erosion, reduce flood size flows, and/or filter and settle out runoff pollutants, or performs other functions consistent with the purposes of this regulation.
- HH. RIPARIAN AND WETLAND SETBACK: A designated transition area around water resources left in a natural, usually vegetated, state so as to protect the water resources from runoff pollution.
- II. RUNOFF: The portion of rainfall, melted snow, or irrigation water that flows across the ground surface and is eventually returned to water resources.
- JJ. SEDIMENT: The soils or other surface materials that can be transported or deposited by the action of wind, water, ice, or gravity as a product of erosion.
- KK. SEDIMENTATION: The deposition of sediment in water resources.
- LL. SITE OWNER or OPERATOR: Any individual, corporation, firm, trust, commission, board, public or private partnership, joint venture, agency, unincorporated association, municipal corporation, county or state agency, the federal government, other legal entity, or an agent thereof that is responsible for the overall construction site.
- MM. SOIL DISTURBING ACTIVITY: Clearing, grading, excavating, filling, or other alteration of the earth's surface where natural or human made ground cover is destroyed and that may result in, or contribute to, increased stormwater quantity and/or decreased stormwater quality.
- NN. STABILIZATION: The use of Stormwater Control Measures that reduce or prevent soil erosion by stormwater runoff, trench dewatering, wind, ice, gravity, or a combination thereof.
- OO. STORMWATER: Defined at 40 CFR 122.26(b)(13) and means stormwater runoff, snow melt runoff and surface runoff and drainage.

- PP. STORMWATER CONTROL MEASURE (SCM): Schedule of activities, prohibitions of practices, operation and maintenance procedures, treatment requirements, and other management practices (both structural and non-structural) to prevent or reduce the pollution of water resources and to control stormwater volume and rate. This includes practices to control runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. For guidance, please see U.S. EPA's National Menu of SCMs at <http://water.epa.gov/polwaste/npdes/swbmp/index.cfm>.
- QQ. STRUCTURAL STORMWATER CONTROL MEASURE (SCM): Any constructed facility, structure, or device that prevents or reduces the discharge of pollutants to water resources and controls stormwater volume and rate.
- RR. SURFACE WATER OF THE STATE: Also Water Resource. Any stream, lake, reservoir, pond, marsh, wetland, or other waterway situated wholly or partly within the boundaries of the state, except those private waters which do not combine or affect a junction with surface water. Waters defined as sewerage systems, treatment works or disposal systems in Section 6111.01 of the Ohio Revised Code are not included.
- SS. TOTAL MAXIMUM DAILY LOAD: The sum of the existing and/or projected point source, nonpoint source, and background loads for a pollutant to a specified watershed, water body, or water body segment. A TMDL sets and allocates the maximum amount of a pollutant that may be introduced into the water and still ensures attainment and maintenance of water quality standards.
- TT. WATER QUALITY VOLUME: "Water Quality Volume (WQv)" means the volume of stormwater runoff which must be captured and treated prior to discharge from the developed site after construction is complete. WQv is based on the expected runoff generated by the mean storm precipitation volume from post-construction site conditions at which rapidly diminishing returns in the number of runoff events captured begins to occur.
- UU. WATER RESOURCE: Also SURFACE WATER OF THE STATE. Any stream, lake, reservoir, pond, marsh, wetland, or waterway situated wholly or partly within the boundaries of the state, except those private waters which do not combine or affect a junction with surface water. Waters defined as sewerage systems, treatment works or disposal systems in Section 6111.01 of the Ohio Revised Code are not included.
- VV. WATER RESOURCE CROSSING: Any bridge, box, arch, culvert, truss, or other type of structure intended to convey people, animals, vehicles, or materials from one side of a watercourse to another. This does not include private, non-commercial footbridges or pole mounted aerial electric or telecommunication lines, nor does it include below grade utility lines.
- WW. WATERSHED: The total drainage area contributing stormwater runoff to a single point.
- XX. WETLAND: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs, and similar areas (40 CFR 232, as amended).
- YY. WETLAND CONSULTANT: Individuals competent in the areas of botany, hydric soils and wetland hydrology that provide professional services or advice, and meet the education and professional experience requirements as required by the Society of Professional Wetland Scientists

1236.03 DISCLAIMER OF LIABILITY

- A. Compliance with the provisions of this regulation shall not relieve any person from responsibility for damage to any person otherwise imposed by law. The provisions of this regulation are promulgated to promote the health, safety, and welfare of the public and are not designed for the benefit of any individual or any particular parcel of property.
- B. By approving a Comprehensive Stormwater Management Plan under this regulation, the City of Brunswick does not accept responsibility for the design, installation, and operation and maintenance of SCMs.

1236.04 CONFLICTS, SEVERABILITY, NUISANCES & RESPONSIBILITY

- A. Where this regulation is in conflict with other provisions of law or ordinance, the most restrictive provisions, as determined by the City Engineer, shall prevail.
- B. If any clause, section, or provision of this regulation is declared invalid or unconstitutional by a court of competent jurisdiction, the validity of the remainder shall not be affected thereby.
- C. This regulation shall not be construed as authorizing any person to maintain a nuisance on their property, and compliance with the provisions of this regulation shall not be a defense in any action to abate such a nuisance.
- D. Failure of the City of Brunswick to observe or recognize hazardous or unsightly conditions or to recommend corrective measures shall not relieve the site owner from the responsibility for the condition or damage resulting therefrom, and shall not result in the City of Brunswick, its officers, employees, or agents being responsible for any condition or damage resulting therefrom.

1236.05 DEVELOPMENT OF COMPREHENSIVE STORMWATER MANAGEMENT PLANS

- A. This regulation requires that a Comprehensive Stormwater Management Plan be developed and implemented for all commercial and industrial site development and all soil disturbing activities disturbing one (1) or more acres of total land, or less than one (1) acre if part of a larger common plan of development or sale disturbing one (1) or more acres of total land, and on which any regulated activity of Section 1236.01 (C) is proposed. The City Engineer reserves the right to require a comprehensive stormwater management plan on sites disturbing less than 1 acre.
- B. The City of Brunswick shall administer this regulation, shall be responsible for determination of compliance with this regulation, and shall issue such notices and orders as may be necessary. The City of Brunswick may consult with the Medina County SWCD, state agencies, private engineers, stormwater districts, or other technical experts as necessary in reviewing the Comprehensive Stormwater Management Plan. Any and all fees or expenses incurred by the City of Brunswick to administer or enforce this ordinance shall be the responsibility of the owner.

1236.06 APPLICATION PROCEDURES

- A. Pre-Application Meeting: The owner is encouraged to schedule a meeting with the City Engineer or his or her designated representative to:

- a. Discuss the proposed project;
 - b. Review the requirements of this Chapter;
 - c. Identify unique aspects of the project that must be addressed during the review process;
 - d. Establish a preliminary review and approval schedule.
 - e. It is encouraged that this meeting occurs with the Planning Commission pre-application meeting.
 - f. Currently, the application for the CSWM is the current Planning Commission Application Form that can be picked up by the Planning Commission Clerk.
- B. Preliminary Comprehensive Stormwater Management Plan: The owner shall submit two (2) sets of a Preliminary Comprehensive Stormwater Management Plan (Preliminary Plan) and the applicable fees to the City Finance Department. The Preliminary Plan shall show the proposed property boundaries, setbacks, dedicated open space, public roads, water resources, stormwater control facilities, and easements in sufficient detail and engineering analysis to allow the City Engineer to determine if the site is laid out in a manner that meets the intent of this regulation and if the proposed SCMs are capable of controlling runoff from the site in compliance with this regulation. The owner shall submit two (2) sets of the Preliminary Plan and applicable fees as follows:
1. For subdivisions: In conjunction with the submission of the preliminary plat.
 2. For other construction projects: In conjunction with the application for a building permit.
 3. For general clearing projects: Prior to commencement of any clearing/demolition activities or in conjunction with the application for a permit.
- C. Final Comprehensive Stormwater Management Plan: The owner shall submit two (2) sets of a Final Comprehensive Stormwater Management Plan (Final Plan) and the applicable fees to the Finance Department conjunction with the submittal of the preliminary plat and improvement plans. The Final Plan shall meet the requirements of Section 1236.08 and shall be approved by the City Engineer prior to approval of the final plat and/or before issuance of a building permit by the Building Inspector.
- D. Review and Comment: The City Engineer shall review the Preliminary and Final Plans submitted, and shall approve or return for revisions with comments and recommendations for revisions. A Preliminary or Final Plan rejected because of deficiencies shall receive a narrative report stating specific problems and the procedures for filing a revised Preliminary or Final Plan.
- E. Approval Necessary: Land clearing and soil-disturbing activities shall not begin and building permits shall not be issued without an approved Comprehensive Stormwater Management Plan.
- F. Sublots Will Not Proceed: Comprehensive Stormwater Management Plans for individual sublots in a subdivision will not be approved and building permits will not be issued unless the larger common plan of development or sale containing the subplot is in compliance with this regulation.

- G. Valid for Two Years: Approvals issued in accordance with this regulation shall remain valid for two (2) years from the date of approval.

1236.07 COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

Approvals issued in accordance with this regulation do not relieve the owner of responsibility for obtaining all other necessary permits and/or approvals from other federal, state, and/or county agencies. If requirements vary, the most restrictive shall prevail. These permits may include, but are not limited to, those listed below. Owners are required to show proof of compliance with these regulations before the City of Brunswick will issue a building or zoning permit.

- A. Ohio Environmental Protection Agency (Ohio EPA) National Pollutant Discharge Elimination System (NPDES) Permits authorizing stormwater discharges associated with construction activity or the most current version thereof: Proof of compliance with these requirements shall be the owner's Notice of Intent (NOI) number from Ohio EPA, a copy of the Ohio EPA Director's Authorization Letter for the NPDES Permit, or a letter from the site owner certifying and explaining why the NPDES Permit is not applicable.
- B. Section 401 of the Clean Water Act: Proof of compliance shall be a copy of the Ohio EPA Water Quality Certification application tracking number, public notice, project approval, or a letter from the site owner certifying that a qualified professional has surveyed the site and determined that Section 401 of the Clean Water Act is not applicable. Wetlands, and other waters of the United States, shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time of application of this regulation.
- C. Ohio EPA Isolated Wetland Permit: Proof of compliance shall be a copy of Ohio EPA's Isolated Wetland Permit application tracking number, public notice, project approval, or a letter from the site owner certifying that a qualified professional has surveyed the site and determined that Ohio EPA's Isolated Wetlands Permit is not applicable. Isolated wetlands shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time of application of this regulation.
- D. Section 404 of the Clean Water Act: If an Individual Permit is required for the development project, proof of compliance shall be a copy of the U.S. Army Corps of Engineers Individual Permit application, public notice, or project approval. If an Individual Permit is not required, the site owner shall submit proof of compliance with the U.S. Army Corps of Engineer's Nationwide Permit Program. This shall include one of the following:
1. A letter from the site owner certifying that a qualified Professional Wetland Consultant has surveyed the site and found no waters of the United States.
 2. A site plan showing that any proposed fill of waters of the United States conforms to the general and special conditions specified in the applicable Nationwide Permit. Wetlands, and other waters of the United States, shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time of application of this regulation.
- E. Ohio Dam Safety Law: Proof of compliance shall be a copy of the ODNR Division of Soil and Water Resources permit application tracking number, a copy of the project approval letter from the ODNR Division of Soil and Water Resources, or a letter from the site owner certifying and explaining why the Ohio Dam Safety Law is not applicable.

1236.08 COMPREHENSIVE STORMWATER MANAGEMENT PLANS

- A. Comprehensive Stormwater Management Plan Required: The owner shall develop a Comprehensive Stormwater Management Plan describing how the quantity and quality of stormwater will be managed after construction is completed for every discharge from the site and/or into a water resource or small municipal separate storm sewer system (MS4). The Plan will illustrate the type, location, and dimensions of every structural and non-structural SCM incorporated into the site design, and the rationale for their selection. The rationale must address how these SCMs will address flooding within the site as well as flooding that may be caused by the development upstream and downstream of the site. The rationale will also describe how the SCMs minimize impacts to the physical, chemical, and biological characteristics of on-site and downstream water resources and, if necessary, correct current degradation of water resources that is occurring or take measures to prevent predictable degradation of water resources.
- B. Preparation by Professional Engineer: The Comprehensive Stormwater Management Plan shall be prepared by a Registered Professional Engineer registered in the state of Ohio and include supporting calculations, plan sheets, and design details. To the extent necessary, as determined by the City Engineer, a site survey shall be performed by a Registered Professional Surveyor registered in the state of Ohio to establish boundary lines, measurements, or land surfaces.
- C. Community Procedures: The City Engineer shall prepare and maintain procedures providing specific criteria and guidance to be followed when designing the stormwater management system for the site. These procedures may be updated from time to time, at the discretion of the City Engineer based on improvements in engineering, science, monitoring, and local maintenance experience. The City Engineer shall make the final determination of whether the SCMs proposed in the Comprehensive Stormwater Management Plan meet the requirements of this regulation. The City Engineer may also maintain a list of acceptable SCMs that meet the criteria of this ordinance to be used in the City of Brunswick.
- D. Contents of Comprehensive Stormwater Management Plan: The Comprehensive Stormwater Management Plan shall contain an application, narrative report, construction site plan sheets, a long-term Inspection and Maintenance Plan and Inspection and Maintenance Agreement, and a site description with the following information provided:
1. Site description:
 - a. A description of the nature and type of the construction activity (e.g. residential, shopping mall, highway, etc.).
 - b. Total area of the site and the area of the site that is expected to be disturbed (i.e. grubbing, clearing, excavation, filling or grading, including off-site borrow areas).
 - c. A description of prior land uses at the site.
 - d. An estimate of the impervious area and percent of imperviousness created by the soil-disturbing activity at the beginning and at the conclusion of the project.
 - e. Existing data describing the soils throughout the site, including soil map units, series, complexes, association, hydrologic soil group, porosity, infiltration characteristics, depth to groundwater, depth to bedrock, and any impermeable

layers.

- f. If available, the quality of any known pollutant discharge from the site such as that which may result from previous contamination caused by prior land uses.
- g. The location and name of the immediate receiving stream or surface water(s) and the first subsequent receiving water(s).
- h. If applicable, identify the point of discharge to a municipal separate storm sewer system and the location where that municipal separate storm sewer system ultimately discharges to a stream, lake, or wetland. The location and name of the immediate receiving stream or surface water(s) and the first subsequent receiving water(s) and the aerial extent and description of wetlands or other special aquatic sites at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project.
- i. The aerial (plan view) extent and description of water resources at or near the site that will be disturbed or which will receive discharges from disturbed areas of the project.
- j. TMDLs applicable for the watershed that the construction site is located in has to demonstrate that the appropriate SCMs have been selected to address the TMDLs for that watershed. The TMDL information for all watersheds in the State of Ohio can be found on the Ohio EPA Nonpoint Source Pollution Control Program Website.
- k. For each SCM, identify the drainage area, percent impervious cover within the drainage area, runoff coefficient for water quality volume, peak discharge, and the time of concentration for each subwatershed per Appendix 1 of Ohio's stormwater manual, *Ohio Rainwater and Land Development*. Pervious and impervious areas should be treated as separate subwatersheds unless allowed at the discretion of the City Engineer. Identify the SCM surface area, discharge and dewatering time, outlet type and dimensions. Each SCM shall be designated with an individual identification number.
- l. An implementation schedule which describes the sequence of major soil-disturbing operations (i.e., grubbing, excavating, grading, utilities and infrastructure installation) and the implementation of erosion and sediment controls to be employed during each operation of the sequence. The SWP3 shall clearly describe for each major construction activity (a) appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented; and (b) which contractor is responsible for implementation (e.g., contractor A will clear land and install perimeter controls and contractor B will maintain perimeter controls until final stabilization).
- m. For subdivided developments where the SWP3 does not call for a centralized sediment control capable of controlling multiple individual lots, a detail drawing of a typical individual lot showing standard individual lot erosion and sediment control practices.

- n. The location of any areas on the site located within a Special Flood Hazard Area as defined by current Flood Insurance Rate Maps published by the Federal Emergency Management Agency.
 - o. Location and description of any stormwater discharges associated with dedicated asphalt and dedicated concrete plants associated with the development area and the stormwater control measures to address pollutants in these stormwater discharges.
2. Site map showing:
- a. Limits of soil-disturbing activity on the site.
 - b. Soils map units for the entire site, including locations of unstable or highly erodible soils.
 - c. Existing and proposed one-foot (1') contours. This must include a delineation of drainage watersheds expected before, during, and after major grading activities as well as the size of each drainage watershed in acres.
 - d. Water resource locations including springs, wetlands, streams, lakes, water wells, and associated setbacks on or within 200 feet of the site, including the boundaries of wetlands or streams and first subsequent named receiving water(s) the owner intends to fill or relocate for which the owner is seeking approval from the Army Corps of Engineers and/or Ohio EPA.
 - e. Existing and planned locations of buildings, roads, parking facilities, and utilities.
 - f. The location of any in-stream activities including stream crossings.
 - g. The location of all erosion and sediment control practices, including the location of areas likely to require temporary stabilization during the course of site development.
 - h. Sediment ponds, including their sediment settling volume and contributing drainage area. When drainage areas are predicted to change throughout active construction (e.g., when temporary diversions are utilized), applicable sediment storage zone and dewatering zone volumes shall be designed for the largest anticipated drainage area, and dewatering orifices shall be designed for the smallest anticipated drainage area.
 - i. The location of designated stoned construction entrances where the vehicles will ingress and egress the construction site.
3. Contact information: Company name and contact information as well as contact name, addresses, and phone numbers for the following:
- a. The Professional Engineer who prepared the Comprehensive Stormwater Management Plan.

- b. The site owner.
- 4. Phase, if applicable, of the overall development plan.
- 5. List of subplot numbers if project is a subdivision.
- 6. Ohio EPA NPDES Permit Number and other applicable state and federal permit numbers, if available, or status of various permitting requirements if final approvals have not been received.
- 7. Location, including complete site address and subplot number if applicable.
- 8. Location of any easements or other restrictions placed on the use of the property.
- 9. A site plan sheet showing:
 - a. The location of each proposed post-construction SCMs.
 - b. The geographic coordinates (latitude and longitude) of the site AND each proposed SCM.

It is preferred that the entire site be shown on one plan sheet to allow a complete view of the site during plan review. If a smaller scale is used to accomplish this, separate sheets providing an enlarged view of areas on individual sheets should also be provided.

- 10. An Inspection and Maintenance Agreement binding on the owner and all subsequent owners of lands served by the system of SCMs designed for the site. Such Agreements between the City and the Owner shall be stand-alone documents, shall include all post-construction SCMs, shall be recorded with the deed of the property(s) within the site, and shall provide and stipulate the following:
 - a. The location of each SCM, including those SCMs permitted to be located in, or within 50 feet of, water resources and identification of the drainage area served by each SCM.
 - b. The method of funding long-term maintenance and inspections of all SCMs.
 - c. Features of the design that facilitate maintenance of the practice. Include plan for providing area for dewatering of dredged sediment, or the need to truck sediment directly from the site.
 - d. A schedule for regular maintenance for each aspect of the stormwater management system and description of routine and non-routine maintenance tasks to ensure continued performance of the system as is detailed in the approved Comprehensive Stormwater Management Plan. This schedule may include additional standards, as required by the City Engineer, to ensure continued performance of SCMs permitted to be located in, or within 50 feet of, water resources.
 - e. Additional standards, as required by the City Engineer, to ensure continual

performance of stormwater management practices permitted to be located in, or within 50 feet of, water resources.

- f. Identification of the landowner(s), organization, or entity responsible for long-term maintenance, including repairs, of the SCMs.
- g. The location and documentation of all access and maintenance easements on the property.
- h. The landowner(s), organization, or municipality shall maintain SCMs in accordance with this regulation.
- i. A prohibition on alteration of the practice without prior written approval from the City Engineer.
- j. The location and documentation of all access and maintenance easements on the property that allows the City of Brunswick access to the SCM at reasonable times for inspections to document the condition of the practice and to ensure it is functioning as originally designed and approved.
- k. Permission for City of Brunswick to enter upon the property and take whatever action is deemed necessary to maintain facilities that do not perform as specified in the Inspection and Maintenance Agreement, and to be reimbursed by the property owner(s) served by the facility for all expenses incurred within 10 days of receipt of invoice from the City of Brunswick.
- l. A release of the City of Brunswick from all damages, accidents, casualties, occurrences, or claims that might arise or be asserted against said parties from the construction, presence, existence, or maintenance of the SCMs.
- m. Alteration or termination of these stipulations is prohibited. The applicant owner must provide a draft of this Inspection and Maintenance Agreement as part of the Comprehensive Stormwater Management Plan submittal. Once a draft is approved, a recorded copy of the Agreement must be submitted to the City of Brunswick to receive final inspection approval of the site.
- n. Annual Inspection. There will be an annual inspection of all SCMs indicated in the CSWM. A SCM, in this case, shall be considered all stormwater facilities used for the purpose of water quality as decided upon by the City Engineer. Examples of SCMs requiring annual inspections are wet ponds, dry ponds, sand filters, bio-swales, and constructed wetlands. The City Engineer may require inspections to be performed more regularly if deemed necessary.
 - (1) The landowner(s) or organization shall use a stormwater certified person (e.g., P.E., CESSWI, CPESC), as approved by the City Engineer, for annual stormwater inspections.
 - (2) The Stormwater Inspector shall use the SCM checklists available from the City Engineer.

- (3) It is deemed a violation of this Section if the City does not receive the annual inspection report before August 1 of each year. In such an event, the City has the authority to enter upon the property to conduct any inspections as necessary to verify that the SCMs are being operated and maintained in accordance with this Chapter and charge the responsible party accordingly. Any accounts that are over 30 days delinquent may be certified to the County Auditor, who shall then place the same on the tax duplicate of the County, with interest as allowed by law, to be collected as taxes are collected.
- o. Annual Report. Following the annual inspection, the landowner(s) or organization shall submit an annual stormwater report to the City Engineer. This report shall contain the following:
- (1) The annual inspection form by a stormwater certified person;
 - (2) Listing of all corrective actions coming from the annual inspection listed as either high priority or normal priority;
 - (3) Records of all regular maintenance performed throughout the year;
 - (4) Records of normal priority corrective actions from the previous year;
 - (5) Contact information of party submitting report.
 - (6) The City shall maintain public records of these annual stormwater reports for a period of five years.
 - (7) The City Engineer, or his designated appointee, will inspect all SCMs every five years to ensure the integrity of the annual inspections.
- p. Corrective Actions. Corrective actions created by the annual inspection report shall be listed as either high priority or normal priority.
1. High priority items shall be corrected within three months of the date of the inspection report unless allowed further time by the City Engineer. The certified Stormwater Inspector shall submit a letter to the City Engineer when any high priority item is completed so that the City Engineer can personally inspect.
 2. Normal priority items shall be corrected before the next annual inspection and will be listed in the next annual stormwater report.
 3. The City is authorized to enter upon the property and to perform the corrective actions identified in the inspection report if the landowner(s) or organization responsible for maintenance does not make the required corrections in the specified time period. In addition to any other penalty provided for in this Chapter, the City shall be reimbursed by the landowner(s) or organization responsible for maintenance for all expenses incurred within ten days of receipt of invoice from the City.

11. Required calculations: Projected stormwater runoff flows, volumes, and timing into and through all SCMs, and the underlying assumptions and hydrologic and hydraulic methods and parameters, under pre- and post-development land use conditions, for flood control, channel protection, and water quality as required in Section 1236.09 of this regulation. Include critical storm determination and demonstrate that the runoff from offsite areas have been considered in the calculations.
12. List of all contractors and subcontractors before construction: Prior to construction or before the pre-construction meeting, provide the list of all contractors and subcontractors and their names, addresses, and phones involved with the implementation of the Comprehensive Stormwater Management Plan including a written document containing signatures of all parties as proof of acknowledgment that they have reviewed and understand the requirements and responsibilities of the Comprehensive Stormwater Management Plan.
13. Existing and proposed drainage patterns: The location and description of existing and proposed drainage patterns and SCMs, including any related SCMs beyond the development area and the larger common development area.
14. For each SCM to be employed on the development area, include the following:
 - a. Location and size, including detail drawings, maintenance requirements during and after construction, and design calculations, all where applicable.
 - b. Final site conditions including stormwater inlets and permanent nonstructural and structural SCMs. Details of SCMs shall be drawn to scale and shall show volumes and sizes of contributing drainage areas.
 - c. Any other structural and/or non-structural SCMs necessary to meet the design criteria in this regulation and any supplemental information requested by the City Engineer.
 - d. Each SCM shall be designated with an individual identification number.

1236.09 PERFORMANCE STANDARDS

- A. Stormwater Design General Information. No person shall develop any real property or connect or cause to be connected any building or other structure, either directly or indirectly, with a drain for the removal of surface, roof, ground or other water to be discharged into a ditch, swale, waterway, stream or an existing storm drainage system for such real property, without complying with the performance standards and paying the charges set forth in this chapter.
- B. General: All components of the stormwater system, including SCMs for storage, treatment and control, and conveyance facilities, shall be designed to prevent structure flooding during the 100-year, 24-hour storm event; to maintain predevelopment runoff patterns, flows, and volumes; and to meet the following criteria:
 1. Integrated practices that minimize degradation of water resources. The SCMs shall function as an integrated system that controls flooding and minimizes the degradation of the physical, biological, and chemical integrity of the water resources receiving

stormwater discharges from the site. Acceptable SCMs shall:

- a. Not disturb riparian areas, unless the disturbance is intended to support a watercourse restoration project.
- b. Maintain predevelopment hydrology and groundwater recharge on as much of the site as practicable.
- c. Only install new impervious surfaces and compact soils where necessary to support the future land use.
- d. Compensate for increased runoff volumes caused by new impervious surfaces and soil compaction by reducing stormwater peak flows to less than predevelopment levels.
- e. Be designed according to the methodology included in the most current edition of *Ohio Rainwater and Land Development* or another design manual acceptable for use by the City and Ohio EPA

SCMs that meet the criteria in this regulation, and additional criteria required by the City Engineer, shall comply with this regulation. Owners may propose alternative practices if they demonstrate to the satisfaction of the City Engineer that these practices also meet the above criteria.

2. SCMs designed for final use: SCMs shall be designed to achieve the stormwater management objectives of this regulation, to be compatible with the proposed post-construction use of the site, to protect the public health, safety, and welfare, and to function safely with routine maintenance.
3. Stormwater management for all lots: Areas developed for a subdivision, as defined in Section 1220.06 (b)(30), shall provide stormwater management and water quality controls for the development of all subdivided lots. This shall include provisions for lot grading and drainage that prevent structure flooding during the 100-year, 24-hour storm; and maintain, to the extent practicable, the pre-development runoff patterns, volumes, and peaks from each lot.
4. Stormwater facilities in water resources: SCMs shall not be constructed in water resources unless the owner obtains all appropriate permits from the Ohio EPA, the U.S. Army Corps, and other applicable federal, state, and local agencies, and the activity is in compliance with Chapter 1234 Erosion and Sediment control requirements and the City of Brunswick's future riparian setback requirements, after they have been adopted, all as determined by the City Engineer.
5. Stormwater facilities in the floodplain: Stormwater facilities constructed, manufactured or otherwise, that provide treatment of the water quality volume (see Table 4, Section 1236.09), detention, retention, and/or infiltration, and all related activities, shall not be constructed in any special flood hazard area, as defined in Chapter 1467 Flood Damage Prevention.
6. Stormwater ponds and surface conveyance channels: All stormwater pond and surface

conveyance designs must provide a minimum of one (1) foot freeboard above the projected peak stage within the facility during the 100-year, 24-hour storm. When designing stormwater ponds and conveyance channels, the owner shall consider public safety as a design factor and alternative designs must be implemented where site limitations would preclude a safe design.

7. Exemption: The site where soil-disturbing activities are conducted shall be exempt from the requirements of Section 1236.09 if it can be shown to the satisfaction of the City Engineer that the site is part of a larger common plan of development where the stormwater management requirements for the site are provided by an existing SCM, or if the stormwater management requirements for the site are provided by practices defined in a regional or local stormwater management plan approved by the City Engineer.
8. Maintenance: All SCMs shall be maintained in accordance with the Inspection and Maintenance Plan and Agreements approved by the City Engineer as detailed in Section 1236.08.
9. Agreements with Sub-dividers or Developers. A sub-divider or developer shall be required to construct an on-site SCM for the purposes of water quality and water retention approved by the City Engineer. The combination of stormwater quality and quantity requirements for two or more developments may be placed into one detention basin to be located at a strategic site given that a separate agreement with all parties is developed. The City shall enter into an agreement with the sub-divider or developer, to be approved by Council, containing the following conditions:
 - a) The sub-divider of a major subdivision shall require the formation of a homeowners' association, which shall assume responsibility for all maintenance, upkeep, repair, replacement and management of the SCM. In other developments, the sub-divider or developer shall make provisions acceptable to the City for maintenance of the SCM area as stated in Section 1236.10. Easements shall be granted to the City for access to and maintenance of the stormwater management area.
 - b) If more than one development is to use a single SCM, a separate association of all members using that SCM shall be formed. This association will be held responsible for all future maintenance and repairs of the SCM as stated in this Chapter.
 - c) The sub-divider or developer shall be exempt from the application of this Section only if authorized by the City Engineer.
 - d) Where a sub-divider or developer is exempt from the provisions of this Section, that sub-divider or developer shall comply with and pay fees in accordance with this Chapter, governing subdivisions and development prior to the effective date of this Section.
 - e) All SCMs will be placed within blocks and/or easements to allow City access (See Section 1236.11).
10. Preservation of Existing Natural Drainage. SCMs that preserve and/or improve the

existing natural drainage shall be used to the maximum extent practicable. Such SCMs may include minimizing site grading and compaction; protecting and/or restoring water resources, riparian areas, and existing vegetation and vegetative buffer strips; phasing of construction operations in order to minimize the amount of disturbed land at any one time, and designation of tree preservation areas or other protective clearing and grubbing practices; and maintaining unconcentrated stormwater runoff to and through these areas. Post-construction stormwater practices shall provide perpetual management of runoff quality and quantity so that a receiving stream's physical, chemical and biological characteristics are protected and ecological functions are maintained.

11. Preservation of Wetland Hydrology: Concentrated stormwater runoff from SCMs to wetlands shall be converted to diffuse flow before the runoff enters a wetland(s) in order to protect the natural hydrology, hydroperiod, and wetland flora. The flow shall be released such that no erosion occurs down slope. SCMs such as level spreaders, vegetative buffers, infiltration basins, conservation of forest covers, and the preservation of intermittent streams, depressions, and drainage corridors may be used to maintain the wetland hydrology.

If the owner proposes to discharge to natural wetlands, a hydrological analysis shall be performed to demonstrate that the proposed discharge matches the pre-development hydroperiods and hydrodynamics.

12. Soil Preservation and Post-Construction Soil Restoration: To the maximum extent practicable leave native soil undisturbed and protect from compaction during construction. Except for areas that will be covered by impervious surface or have been incorporated into an SCM, the soil moisture-holding capacity of areas that have been cleared and graded must be restored to that of the original, undisturbed soil to the maximum extent practicable. Areas that have been compacted or had the topsoil or duff layer removed should be amended using the following steps: 1. till subsoil to a depth of 15-18 inches, 2. incorporate compost through top 12 inches, 3. Replace with stockpiled site or imported suitable topsoil to a minimum depth of 4 inches.

- C. Stormwater Conveyance Design Criteria: All SCMs shall be designed to convey stormwater to allow for the maximum removal of pollutants and reduction in flow velocities. This shall include but not be limited to:

1. Stream/storm sewer discharge. The stormwater facility (storm sewer main or natural watercourse) that will convey the discharge from the site shall be analyzed to determine if it is capable of conveying the additional storm sewer discharge from the site of a 100-year/24-hour storm. If the designated outlet is not capable of conveying the discharge from the site during the 100-year/24-hour storm, then additional storage must be placed onsite to store the additional volume for a period of 48 hours.
2. Surface water protection: The City Engineer may allow modification to streams, rivers, lakes, wetlands or other surface waters only if the owner shows proof of compliance with all appropriate permits from the Ohio EPA, the U.S. Army Corps, and other applicable federal, state, and local agencies and the activity is in compliance with Chapter 1234 Erosion and Sediment Control and any City of Brunswick riparian setback requirements that may be in effect, all as determined by the City Engineer.

3. Off-site stormwater discharges: Off-site stormwater runoff that discharges to or across the owner's development site shall be conveyed through the stormwater conveyance system planned for the development site at its existing peak flow rates during each design storm. Off-site flows shall be diverted around stormwater quality control facilities or, if this is not possible, the stormwater quality control facility shall be sized to treat the off-site flow. Comprehensive Stormwater Management Plans will not be approved until it is demonstrated to the satisfaction of the City Engineer that off-site runoff will be adequately conveyed through the development site in a manner that does not exacerbate upstream or downstream flooding and erosion.
4. Sheet flow. The site shall be graded in a manner that maintains sheet flow over as large an area as possible. The maximum area of sheet flow shall be determined based on the slope, the uniformity of site grading, and the use of easements or other legally-binding mechanisms that prohibit re-grading and/or the placement of structures within sheet flow areas. Flow shall be directed into an open channel, storm sewer, or other SCM from areas too long and/or too large to maintain sheet flow, all as determined by the City Engineer.
5. Open channels: Unless otherwise allowed by the City Engineer, drainage tributary to SCMs shall be provided by an open channel with landscaped banks and designed to carry within these banks the 10-year, 24-hour stormwater runoff from upstream contributory areas.
6. Drainage systems: Open drainage systems shall be preferred on all new development sites to convey stormwater where feasible. Storm Sewer systems shall be allowed to augment open drainage systems, such as to limit depth of roadside or conveyance ditches. The following criteria shall be used to design storm sewer systems when necessary.
 - a. Storm sewer design flow shall be based on the Rational Method. Storm sewers shall be designed such that they do not surcharge from runoff caused by the 10 - year, 24 - hour storm, and that the hydraulic grade line of the storm sewer stays below the gutter flow line of the overlying roadway, or below the top of drainage structures outside the roadway, whichever is more restrictive during a 25 - year, 24 - hour storm. The system shall be designed to meet these requirements when conveying the flows from the contributing area within the proposed development and existing flows from offsite areas that are upstream from the development. These calculations will be reviewed and approved by the City Engineer prior to design acceptance. Rainfall data shall be obtained from the latest volume of the NOAA Rainfall ATLAS 14 or per Table 1. Runoff coefficients shall be per Table 2.

Table 1 - Rainfall per Storm Frequency	
24 Hour Storm (year)	Rainfall (in.)
2 (50% storm)	2.44
5 (20% storm)	3.06
10 (10% storm)	3.55
25 (4% storm)	4.35

50 (2% storm)	5.08
100 (1% storm)	5.92

Table 2.
Rational Method Runoff Coefficients (C) for City of Brunswick

	Runoff Coefficients for Hydrologic Soil Groups			
<u>Cover Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Cultivated agricultural land	0.17	0.3	0.43	0.50
Pasture or range land continuous grazing	0.08	0.16	0.36	0.47
Meadow protected from grazing	0.06	0.13	0.30	0.43
Woods	0.05	0.10	0.29	0.41
Woods/grass combination (orchard, tree farm, etc.)	0.07	0.14	0.33	0.45
Lawns, parks, golf courses, cemeteries, etc.	0.08	0.16	0.36	0.47
Paved streets, parking lots, roofs, driveways, etc.	0.96	0.96	0.96	0.96
Gravel areas	0.40	0.59	0.69	0.74
Residential Areas				
Average lot size & Average % Impervious Area				
1/8 acre or less 65	0.41	0.59	0.72	0.77
1/4 acre 38	0.16	0.37	0.54	0.64
1/3 acre 30	0.12	0.32	0.50	0.61

½ acre	25	0.09	0.29	0.47	0.59
1 acre	20	0.06	0.26	0.45	0.57
2 acres	12	0.05	0.23	0.41	0.50
Dirt or graded areas		0.41	0.61	0.74	0.83

- b. Rainfall intensity will be calculated using the equation $i = a/(t+b)^c$

Where:

i = Rainfall intensity (in./hour)

t = Time of concentration (minutes)

Refer to Ohio Department of Transportation's *Location & Design Manual, Volume 2* (or latest edition) *Drainage Design*, Figure 1101-2 for Rainfall Intensity Constants (a , b & c). The maximum slope allowable shall be a slope that produces no less than 2.5-fps and no more than a 10-fps velocity within the pipe barrel under design flow conditions.

- c. The minimum inside diameter of pipe to be used in public storm sewer systems is 12 inches. Smaller pipe sizes may be used in private systems, subject to the approval of the City Engineer.
- d. All stormwater conveyance systems shall be designed taking into consideration the tailwater of the receiving facility or water resource. The tailwater elevation used shall be based on the design storm frequency. The hydraulic grade line for the storm sewer system shall be computed with consideration for the energy losses associated with entrance into and exit from the system, friction through the system, and turbulence in the individual manholes, catch basins, and junctions within the system.
- i. Previous studies on file with the City.
 - ii. FEMA Flood Insurance Rate Maps.
 - iii. Calculations prepared by a Registered Professional Engineer.
- e. Catch basin design spread calculations shall be submitted to the City Engineer for review to determine catch basin spacing and sizing. At a minimum, there shall be at least one total clear lane during a 25 year, 24 hour storm.
- f. The inverts of all curb inlets, manholes, yard inlets, and other structures shall be formed and channelized to minimize the incidence of quiescent standing water where mosquitoes may breed.
- g. Headwalls shall be required at all storm sewer inlets or outlets to and from open channels or lakes.

- h. Outlets discharging into an open-water conveyance structure shall have an invert at a minimum of three inches above the average water depth during the snow-melt season.
 - i. The flood elevation for a 100 year, 24 hour storm must be a minimum of ten feet away horizontally from the perimeter of any homes within the new subdivision, nor cause any home flooding to adjacent neighboring properties, and shall be at least two feet below the finished grade elevation of any livable structure.
 - j. All storm sewer outlets from a subdivision must flow either into a public storm sewer, stream of the State, or a major ditch unless authorized by the City Engineer.
 - k. The maximum distance for sheet flow shall be 300 feet before entering a storm structure. Except, that the maximum overland drainage area tributary to the storm structure shall be no greater than 1.5 acres.
7. Water Resource Crossings. The following criteria shall be used to design structures that cross a water resource within the City of Brunswick:
- a. Water resource crossings other than bridges shall be designed to convey the stream's flow for the minimum 25-year, 24-hour storm or as indicated by the City Engineer. The maximum allowable headwater elevation for such a storm shall be 12 inches below the pavement crown elevation. Water crossings carrying receiving waters located near upstream City borders shall convey no more flow than currently designed to carry unless directed by the City Engineer.
 - b. Bridges, open bottom arch or spans are the preferred crossing technique and shall be considered in the planning phase of the development. Bridges and open spans should be considered for all State Scenic Rivers, coldwater habitat, exceptional warmwater habitat, seasonal salmonid habitat streams, and Class III headwater streams. The footers or piers for these bridges and open spans shall not be constructed below the ordinary high water mark.
 - c. If a culvert or other closed bottom crossing is used, twenty-five (25) percent of the cross-sectional area or a minimum of 1 foot of box culverts and pipe arches must be embedded below the channel bed. The conduit or conveyance must be sized to carry the 25-year storm under these conditions.
 - d. The minimum inside diameter of pipes to be used for crossings shall be 12 inches.
 - e. The maximum slope allowable shall be a slope that produces a 10-fps velocity within the culvert barrel. Erosion protection and/or energy dissipaters shall be required to properly control entrance and outlet velocities.
 - f. All culvert installations shall be designed with consideration for the tailwater of the receiving facility or water resource. The tailwater elevation used shall be based on the design storm frequency.

- g. Headwalls shall be required at all culvert inlets or outlets to and from open channels or lakes.
 - h. Streams with a drainage area of 5 square miles or larger should incorporate floodplain culverts at the bankfull elevation to restrict the rise in headwater elevation upstream of the culvert to no more than 1 foot during the 100-year, 24-hour storm.
 - i. Bridges shall be designed such that the hydraulic profile through a bridge shall be below the bottom chord of the bridge for either the 100-year, 24-hour storm, or the 100-year flood elevation as determined by FEMA, whichever is more restrictive.
 - 8. Overland flooding: Overland flood routing paths shall be used to convey stormwater runoff from the 100-year, 24-hour storm event to an adequate receiving water resource or SCM such that the runoff is contained within the drainage easement for the flood routing path and does not cause flooding of buildings or related structures. The peak 100-year water surface elevation along flood routing paths shall be at least one foot below the finished grade elevation of all structures. When designing the flood routing paths, the conveyance capacity of the site's storm sewers shall be taken into consideration.
 - 9. Compensatory flood storage mitigation: In order to preserve floodplain storage volumes and thereby avoid increases in water surface elevations, any filling within floodplains approved by the City of Brunswick must be compensated by providing an equivalent storage volume. First consideration for the location(s) of compensatory floodplain volumes should be given to areas where the stream channel will have immediate access to the new floodplain within the limits of the development site. Consideration will also be given to enlarging existing or proposed retention basins to compensate for floodplain fill if justified by a hydraulic analysis of the contributing watershed. Unless otherwise permitted by the City of Brunswick, reductions in volume due to floodplain fills must be mitigated within the legal boundaries of the development. Embankment slopes used in compensatory storage areas must reasonably conform to the natural slopes adjacent to the disturbed area. The use of vertical retaining structures is specifically prohibited.
 - 10. Velocity dissipation: Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide non-erosive flow velocity from the structure to a water resource so that the natural physical and biological characteristics and functions of the water resource are maintained and protected.
- D. Stormwater Quality Control:
- 1. Direct runoff to a SCM: The site shall be designed to direct runoff from areas disturbed during construction to one or more of the following SCMs. These SCMs are listed in Table 3 of this regulation and shall be designed to meet the following general performance standards:
 - a. Extended detention facilities that detain stormwater; settle or filter particulate pollutants; and release the controlled stormwater to a water resource.
 - b. Infiltration facilities that retain stormwater; promote settling, filtering, and

biodegradation of pollutants; and infiltrate all captured stormwater into the ground based on the findings of the soil engineering report prepared for the site.

- c. For sites disturbing less than five (5) acres, but greater than one (1) acre and not part of a common plan of development or sale, where 5 or more acres are disturbed, the City Engineer may approve other SCMs if the owner demonstrates to the City Engineer's satisfaction that these SCMs meet the objectives of this regulation.
 - d. For sites disturbing five (5) or more acres, or less than five (5) acres but part of a larger common plan of development or sale which will disturb five (5) or more acres, the City Engineer may approve other SCMs if the owner demonstrates to the City Engineer's satisfaction that these SCMs meet the objectives of this regulation as stated in Section 1236.09.C.6, and has prior written approval from the Ohio EPA.
 - e. For the construction of new roads and roadway improvement projects by public entities (i.e. the state, counties, townships, or cities), the City Engineer may approve SCMs not included in Table 2 of this regulation, but must show compliance with the current version of the Ohio Department of Transportation's "*Location and Design Manual, Volume Two Drainage Design*".
 - f. Other SCMs may be approved by the City Engineer if the owner demonstrates that they satisfactorily meet the objectives of this regulation as stated in Section 1236.09.C.6.
2. Criteria applying to all SCMs. SCMs chosen must be sized to treat the water quality volume (WQ_v) and to ensure compliance with Ohio Water Quality Standards (OAC Chapter 3745-1).
- a. The WQ_v shall be equal to the volume of runoff from a 0.75 inch rainfall event and shall be determined according to one of the following methods:

- (1) Through a site hydrologic study approved by the City Engineer that uses continuous hydrologic simulation; site-specific hydrologic parameters, including impervious area, soil infiltration characteristics, slope, and surface routing characteristics; proposed SCMs controlling the amount and/or timing of runoff from the site; and local long-term hourly records, or
- (2) Using the following equation:

$$WQ_v = C * P * A / 12$$

where terms have the following meanings:

WQ_v = water quality volume in acre-feet
 C = runoff coefficient appropriate for storms less than 1 in.
 P = 0.75 inch precipitation depth
 A = area draining into the SCM, in acres.

Runoff coefficients required by the Ohio Environmental Protection Agency (Ohio EPA) for use in determining the water quality volume are listed in Table 3 or using the following equation to calculate the runoff coefficient:

$$C = 0.858i_3 - 0.78i_2 + 0.774i_1 + 0.04, \text{ where:}$$

i = fraction of the drainage area that is impervious

Table 3: Runoff Coefficients Based on the Type of Land Use

Land Use	Runoff Coefficient
Industrial & Commercial	0.8
High Density Residential (>8 dwellings/acre)	0.5
Medium Density Residential (4 to 8 dwellings/acre)	0.4
Low Density Residential (<4 dwellings/acre)	0.3
Open Space and Recreational Areas	0.2
Where land use will be mixed, the runoff coefficient should be calculated using a weighted average. For example, if 60% of the contributing drainage area to the stormwater treatment structure is Low Density Residential, 30% is High Density Residential, and 10% is Open Space, the runoff coefficient is calculated as follows $(0.6)(0.3) + (0.3)(0.5) + (0.1)(0.2) = (0.35)$	

- b. An additional volume equal to 20% of the WQv shall be incorporated into the SCM for sediment storage. This volume shall be incorporated into the sections of SCMs where pollutants will accumulate.
- c. Each individual SCM must be sized to treat the WQv associated with its entire contributing drainage area. Exceptions to this may be granted by the City Engineer and/or the OEPA on a case-by-case basis.
- d. SCMs shall be designed such that the drain time is long enough to provide treatment and protect against downstream bank erosion, but short enough to provide storage available for successive rainfall events as defined in Table 4.
- e. Sites within watersheds of coldwater habitat streams shall include SCMs to infiltrate the water quality volume or reduce the temperature of discharged runoff. SCMs that reduce the temperature of discharged runoff include bioretention, permeable pavement, underground detention, and incorporation of shading and infiltration in parking lot design.

Table 4: Draw Down Times for Stormwater Control Measures

Stormwater Control Measure	Drain Time of WQv
Infiltration Basin or Trench ¹	48 hours
Permeable Pavement – Infiltration ¹	48 hours
Permeable Pavement – Extended Detention	24 hours
Extended Detention	
▪ Dry Extended Detention Basin ²	48 hours
▪ Wet Extended Detention Basin ³	24 hours
▪ Constructed Wetlands (above permanent pool) ⁴	24 hours

▪ Media Filtration, Bioretention Area/Cell ^{5,6}	24 hours
▪ Sand and other Media Filtration ⁵	24 hours
▪ Pocket Wetland ⁷	24 hours
¹ Practices designed to fully infiltrate the WQ _v shall empty within 48 hours to provide storage for subsequent storm events. ² The use of a forebay and micropool is required on all dry extended detention basins. Each is to be sized at a minimum 10% of the WQ _v . ³ Provide both a permanent pool and an extended detention volume above the permanent pool, each sized with at least 0.75*WQ _v . ⁴ Extended detention shall be provided for the WQ _v above the permanent water pool. ⁵ The surface ponding area shall completely empty within 24 hours so that there is no standing water. Shorter drawdown times are acceptable as long as design criteria in <i>Rainwater and Land Development</i> have been met. ⁶ This includes grassed linear bioretention, which was previously titled enhanced water quality swale. ⁷ Pocket wetlands must have a wet pool equal to the WQ _v , with 25% of the WQ _v in a pool and 75% in marshes. The ED _v above the permanent pool must be equal to the WQ _v .	

- f. Each SCM shall be designed to facilitate sediment removal, vegetation management, debris control, and other maintenance activities defined in the Inspection Plan and Maintenance Agreement for the site.
- g. The seasonal high groundwater elevation is the normal water line or normal elevation of saturation.
- h. Water quality volume (WQ_v) orifices less than 3-inches in diameter shall be designed with an anti-clogging or non-clogging design.

3. Additional criteria applying to infiltration facilities.

- a. Infiltration facilities shall only be allowed if the soils of the facility fall within hydrologic soil groups A or B, if the seasonal high water table is at least three (3) feet below the final grade elevation, and any underlying bedrock is at least six feet below the final grade elevation. Infiltration trenches should be designed to meet all criteria in *Ohio Rainwater and Land Development*.
- b. All runoff directed into an infiltration basin must first flow through a pretreatment practice such as a grass channel or filter strip to remove coarser sediments that could cause a loss of infiltration capacity.
- c. During construction, all runoff from disturbed areas of the site shall be diverted away from the proposed infiltration basin site. No construction equipment shall be allowed within the infiltration basin site to avoid soil compaction.

4. Additional Criteria for Extended Detention Facilities:

- a. The outlet shall be designed to not release more than the first half of the water quality volume in less than 1/3rd of the drain time. If elevations allow, a valve shall be provided to drain any permanent pool volume for removal of accumulated sediments. The outlet shall be designed to minimize clogging, vandalism, and maintenance.
- b. The basin design shall incorporate the following features to maximize multiple

uses, aesthetics, safety, and maintainability:

- (1) Basin side slopes above the permanent pool shall have a run to rise ratio of 3:1 or flatter.
- (2) The perimeter of all permanent pool areas deeper than 4 feet shall be surrounded by an aquatic bench that extends at least 8 feet and no more than 15 feet outward from the normal water edge. The portion of the aquatic bench closest to the shoreline shall have an average depth of 6 inches below the permanent pool to promote the growth of aquatic vegetation. The remainder of the aquatic bench shall be no more than 15 inches below the permanent pool to minimize drowning risk to individuals who accidentally or intentionally enter the basin, and to limit growth of dense vegetation in a manner that allows waves and mosquito predators to pass through the vegetation. The maximum slope of the aquatic bench shall be 10 (H) to 1 (V). The aquatic bench shall be planted with hardy native species of plant comparable to wetland vegetation that are able to withstand prolonged inundation. The use of invasive plant species is prohibited.
- (3) A forebay designed to allow larger sediment particles to settle shall be placed at basin inlets. The forebay and micropool volume shall be equal to approximately 10% of the water quality volume (WQv).
- (4) Detention basins shall be provided with an emergency drain, where practicable, so that the basin may be emptied if the primary outlet becomes clogged and/or to drain the permanent pool to facilitate maintenance. The emergency drain should be designed to drain by gravity where possible.

5. Additional criteria applying to infiltration facilities.

- A. Infiltration facilities shall only be allowed if the soils of the facility have an infiltration rate between 0.5 in./hr. and 4.0 in./hr. (or deemed acceptable by the City Engineer)), if the seasonal high water table is at least three (3) feet below the final grade elevation, and any underlying bedrock is at least six feet below the final grade elevation. Infiltration trenches should be designed to meet all criteria in the current edition of the *Ohio Rainwater and Land Development*.
- B. All runoff directed into an infiltration basin must first flow through a pretreatment practice such as a grass channel or filter strip to remove coarser sediments that could cause a loss of infiltration capacity.
- C. During construction, all runoff from disturbed areas of the site shall be diverted away from the proposed infiltration basin site. No construction equipment shall be allowed within the infiltration basin site to avoid soil compaction.

6. Criteria for the Acceptance of Alternative post-construction SCMs: The owner may request approval from the City Engineer for the use of alternative structural post-construction SCMs if the owner shows to the satisfaction of the City Engineer that these

SCMs are equivalent in pollutant removal and runoff flow/volume reduction effectiveness to those listed in Table 4. If the site is greater than five (5) acres, or less than five (5) acres but part of a larger common plan of development or sale which will disturb five (5) or more acres, prior approval from the Ohio EPA and the city as necessary. To demonstrate the equivalency, the applicant must show:

- a. The alternative SCM has a minimum total suspended solid (TSS) removal efficiency of 80 percent, using the Level II Technology Acceptance Reciprocity Partnership (TARP) testing protocol.
- b. The water quality volume discharge rate from the selected SCM is reduced to prevent stream bed erosion, unless there will be negligible hydrologic impact to the receiving surface water of the State. The discharge rate from the SCM will have negligible impacts if the owner can demonstrate one of the following conditions:
 - (1) The entire water quality volume is recharged to groundwater.
 - (2) The development will create less than one acre of impervious surface.
 - (3) The development project is a redevelopment project with an ultra-urban setting, such as a downtown area, or on a site where 100 percent of the project area is already impervious surface and the stormwater discharge is directed into an existing storm sewer system.
 - (4) The stormwater drainage system of the development discharges directly into a large river of fourth order or greater or to a lake, and where the development area is less than 5 percent of the water area upstream of the development site, unless a Total Maximum Daily Load (TMDL) has identified water quality problems in the receiving surface water of the State.

E. Stormwater Quantity Control: The Comprehensive Stormwater Management Plan shall describe how the proposed SCMs are designed to meet the following requirements for stormwater quantity control for each watershed in the development:

1. The peak discharge rate of runoff from the Critical Storm and all more frequent storms occurring under post-development conditions shall not exceed the peak discharge rate of runoff from a 1-year, 24-hour storm occurring on the same development drainage area under pre-development conditions.
2. Developers or sub-dividers shall include in their preliminary plans a local watershed study to determine the impact from the development or subdivision caused by stormwater onto the lands adjoining or downstream from the area to be developed, to assure that said lands shall not be adversely affected by the proposed development or subdivision.
3. Storms of less frequent occurrence (longer return periods) than the Critical Storm, up to the 100-year, 24-hour storm shall have peak runoff discharge rates no greater than the peak runoff rates from equivalent size storms under pre-development conditions. The 1, 2, 5, 10, 25, 50, and 100-year storms shall be considered in designing a facility to meet this requirement.

4. The Critical Storm for each specific development drainage area shall be determined as follows:
 - a. Determine, using a curve number-based hydrologic method or other hydrologic method approved by the City Engineer, the total volume (acre-feet) of runoff from a 1-year, 24-hour storm occurring on the development site area only before and after development. These calculations shall meet the following standards:
 - (1) Calculations shall include the lot coverage assumptions used for full build out as proposed.
 - (2) Calculations shall be based on the entire contributing watershed to the development area.
 - (3) Drainage area maps shall include area, curve number, time of concentrations. Time of concentration shall also show the flow path and the separation in flow type.
 - (4) Rainfall data shall be obtained from the latest volume of the NOAA Rainfall ATLAS 14 or per Table 1.
 - (5) Temporal Distribution – Use the SCS Type II rainfall distribution for all design events with a recurrence interval greater than 1 year. Include lot coverage assumptions used for full build out of the proposed condition.
 - (6) Curve numbers for the pre-development condition must reflect the average type of land use over the past 10 years and not only the current land use. Curve Numbers shall conform to the National Engineering Handbook Table 9-1.
 - i. Post-development Curve Numbers - All areas that are altered by construction practices shall use post-construction Hydraulic Soil Groups from *Ohio Rainwater and Land Development*.
 - (7) Time of Concentration - Use velocity based methods from (TR-55 NRCS USDA Urban Hydrology in Small Watersheds, 1986) to estimate travel time (Tt) for overland (sheet) flow, shallow concentrated flow and channel flow.
 - i. Maximum sheet flow length is 100 ft.
 - ii. Use the appropriate “unpaved” velocity equation for shallow concentrated flow from NEH-4 (Spell this out).
 - (8) The volume reduction provided by permeable pavement, bioretention, or other LID SCMs may be subtracted from the post development stormwater volume. Volume reductions for these practices may be demonstrated using methods outlined in *Ohio Rainwater and Land Development* or a hydrologic model acceptable to the City Engineer.

- (9) To account for future post-construction improvements to the site, calculations shall assume an impervious surface such as asphalt or concrete for all parking areas and driveways, regardless of the surface proposed in the site description except in instances of engineered permeable pavement systems.
- b. From the volume determined in Section 1236.09, determine the percent increase in volume of runoff due to development. Using the percentage, select the 24-hour Critical Storm from Table 5:

Table 5: 24-Hour Critical Storm

If the Percentage of Increase in Volume of Runoff is:		The Critical Storm will be:
Equal to or Greater Than:	and Less Than:	
----	10	1 year
10	20	2 year
20	50	5 year
50	100	10 year
100	250	25 year
250	500	50 year
500	---	100 year
For example, if the percent increase between the pre- and post-development runoff volume for a 1-year storm is 35%, the Critical Storm is a 5-year storm. The peak discharge rate of runoff for all storms up to this frequency shall be controlled so as not to exceed the peak discharge rate from the 1-year frequency storm under pre-development conditions in the development drainage area. The post-development runoff from all less frequent storms need only be controlled to meet pre-development peak discharge rates for each of those same storms.		

F. Stormwater Management on Redevelopment Projects:

1. Comprehensive Stormwater Management Plans for redevelopment projects shall reduce existing site impervious areas by at least 20 percent. A one-for-one credit towards the 20 percent net reduction of impervious area can be obtained through the use of pervious pavement and/or green roofs.
2. Where site conditions prevent the reduction of impervious area, SCMs shall be implemented to treat at least 20 percent of the WQv.
3. When a combination of impervious area reduction and stormwater quality control facilities are used, ensure a 20 percent net reduction of the site impervious area, provide for treatment of at least 20 percent of the WQv, or a combination of the two.
4. Where projects are a combination of new development and redevelopment, the total water quality

volume required to be treated shall be calculated by a weighted average based on acreage, with the new development at 100 percent water quality volume and redevelopment at 20 percent.

5. Where conditions prevent impervious area reduction or on-site stormwater management for redevelopment projects, the City Engineer may approve practical alternatives as detailed in Section 1236.10.

1236.10 ALTERNATIVE ACTIONS

- A. When the City of Brunswick determines that site constraints compromise the intent of this regulation, off-site alternatives may be used that result in an improvement of water quality and a reduction of stormwater quantity. Such alternatives shall meet the following standards:
 1. Shall achieve the same level of stormwater quantity and quality control that would be achieved by the on-site controls required under this regulation.
 2. Implemented in the same Hydrologic Unit Code (HUC) 12 watershed unit as the proposed development project.
 3. The mitigation ratio of the water quality volume is 1.5 to 1 or the water quality volume at the point of retrofit, whichever is greater.
 4. An inspection and maintenance agreement as described in Chapter 1236.08.D.10 is established to ensure operations and treatment in perpetuity.
 5. Obtain prior written approval from Ohio EPA.
- B. Alternative actions may include, but are not limited to the following. All alternative actions shall be approved by the City Engineer:
 1. Fees, in an amount specified by the City of Brunswick to be applied to community-wide SCMs.
 2. Implementation of off-site SCMs and/or the retrofit of an existing SCM to increase quality and quantity control.
 3. Stream, floodplain, or wetland restoration.
 4. Acquisition or conservation easements on protected open space significantly contributing to stormwater control such as wetland complexes.

1236.11 EASEMENTS

Access to SCMs as required by the City Engineer for inspections shall be secured by easements. The following conditions shall apply to all easements:

- A. Easements shall be included in the Inspection and Maintenance Agreement submitted with the Comprehensive Stormwater Management Plan.
- B. Easements shall be approved by the City of Brunswick prior to approval of a final plat and shall be recorded with the Medina County Auditor and on all property deeds.

- C. Unless otherwise required by the City Engineer, access easements between a public right-of-way and all SCMs shall be no less than 25-feet wide. The easement shall also incorporate the entire SCM plus an additional 25-foot wide band around the perimeter of the SCMs.
- D. The easement shall be graded and/or stabilized as necessary to allow maintenance equipment to access and manipulate around and within each facility, as defined in the Inspection and Maintenance Agreement for the site.
- E. Easements to structural SCMs shall be restricted against the planting in said easement of trees, shrubbery, or other woody growth; against the construction therein of buildings, fences, walls, and other structures that may obstruct the free flow of stormwater and the passage of inspectors and maintenance equipment; and against the changing of final grade from that described by the final grading plan approved by the City of Brunswick. Any re-grading and/or obstruction placed within a maintenance easement may be removed by the City of Brunswick at the property owners' expense. Grading and/or obstructions that is/are revised or removed may not be returned to original condition or configurations if determined by the City of Brunswick to be an obstruction to the operation and maintenance of the stormwater facility.

1236.12 MAINTENANCE AND FINAL INSPECTION APPROVAL

To receive final inspection and acceptance of any project, the following must be completed by the owner and provided to the City Engineer:

- A. Final stabilization and all permanent SCMs must be installed and made functional, as determined by the City Engineer and per the approved Comprehensive Stormwater Management Plan.
- B. An As-Built Survey must be certified (sealed, signed and dated) by a Professional Engineer with a statement certifying that the stormwater control measures as designed and installed, meet the requirements of the Comprehensive Stormwater Management Plan approved by the City Engineer. In evaluating this certification, the City Engineer may require the submission of a new set of stormwater practice calculations if he/she determines that the design was altered significantly from the approved Comprehensive Stormwater Management Plan. The As-Built Survey must provide the location, dimensions, and bearing of such SCMs and include the entity responsible for long-term maintenance as detailed in the Inspection and Maintenance Agreement.
- C. A copy of the complete and recorded Inspection and Maintenance Plan and Inspection and Maintenance Agreement as specified in Section 1236.08 must be provided to the City Engineer.

1236.13 ON-GOING INSPECTIONS

The owner shall inspect SCMs regularly as described in the Inspection and Maintenance Plan and Inspection and Maintenance Agreement. The City has the authority to enter upon the property to conduct inspections as necessary, with prior notification of the property owner, to verify that the SCMs are being maintained and operated in accordance with this regulation. Upon finding a malfunction or other need for maintenance, the City of Brunswick shall provide written notification to the responsible party, as detailed in the Inspection and Maintenance Agreement, of the need for maintenance. Upon notification, the responsible party shall have ten (10) working days, or other mutually agreed upon time, to make repairs

or submit a plan with detailed action items and established timelines. Should repairs not be made within this time, or a plan approved by the City Engineer for these repairs not be in place, the City of Brunswick may undertake the necessary repairs and assess the responsible party.

1236.14 FEES

The Comprehensive Stormwater Management Plan review, filing, and inspection fee is part of a complete submittal and is required to be submitted to the City of Brunswick before the review process begins. The City Engineer shall establish a fee schedule based upon the actual estimated cost for providing these services. At such time that the fee reserve balance falls below 35% of its original balance the owner may be required to deposit additional funds to cover the anticipated costs of future fees or return the reserve to the original balance as determined by the City Engineer.

1236.15 BOND

- A. If a Stormwater Management Plan is required by this regulation, soil-disturbing activities shall not be permitted until a performance guarantee (cash, bond or letter of credit) of \$1,500/acre disturbed, has been deposited with the City of Brunswick. This Bond shall only be required if the proposed work is not covered by other engineering Bonds securing the same improvements, in an amount equal to or greater than the bonding rate presented above, have been deposited with the City of Brunswick. This bonding instrument must be in a form acceptable to the Law Director and shall be posted for the benefit of the City of Brunswick to perform the obligations otherwise to be performed by the owner as stated in this regulation and to allow all work to be performed as needed in the event that the owner fails to comply with the provisions of this regulation. No project subject to this regulation shall commence without a Stormwater Management Plan approved by the City Engineer. The stormwater bond will be returned when the following three criteria are met:
1. After 80% of the lots of the project have been complete or 80% of the total project has been permanently stabilized from the time of permanent stabilization have passed.
 2. The City Engineer conducts an as-built inspection of all water quality practices and issues final acceptance that the water quality practices have been constructed per the approved Plan.
 3. An Inspection and Maintenance Plan has been approved by the City and An Inspection and Maintenance Agreement signed by the developer, the contractor, the City of Brunswick, and the private owner or homeowners association who will take long-term responsibility for these SCMs, is accepted by the City Engineer.
- B. Once these criteria are met, the owner shall be reimbursed all bond monies that were not used for any part of the project. If all of these criteria are not met after three years of permanent stabilization of the site, the City of Brunswick may use the bond monies to fix any outstanding issues with all water quality structures on the site and the remainder of the bond shall be given to the private lot owner/ homeowners association for the purpose of long term maintenance of the project.

1236.16 INSTALLATION OF WATER QUALITY SCMs

The owner may not direct runoff through any water quality structures until the site has reached final

stabilization as determined by the City Engineer. This is required to prevent the clogging of any of the constructed facilities with sediment due to erosion from un-stabilized areas. This occurs after the completion of the final grade at the site, after all of the utilities are installed, and the site is subsequently stabilized with vegetation or other appropriate methods. The developer must provide documentation acceptable to the City Engineer to demonstrate that the site is completely stabilized. Upon this proof of compliance, the water quality structure(s) may be completed and placed into service. Upon completion of installation of these SCMs, all disturbed areas and/or exposed soils caused by the installation of these SCMs must be stabilized within 2 days.

1236.17 VIOLATIONS

No person shall violate or cause or knowingly permit to be violated any of the provisions of this regulation, or fail to comply with any of such provisions or with any lawful requirements of any public authority made pursuant to this regulation, or knowingly use or cause or permit the use of any lands in violation of this regulation or in violation of any permit granted under this regulation.

1236.18 APPEALS

Any person aggrieved by any order, requirement, determination, or any other action or inaction by the City of Brunswick in relation to this regulation may appeal to the court of common pleas. Such an appeal shall be made in conformity with O.R.C. 2506. Written notice of appeal shall be served on the City of Brunswick.

1236.99 PENALTY

- A. Any person, firm, entity or corporation; including but not limited to, the owner of the property, his agents and assigns, occupant, property manager, and any contractor or subcontractor who violates or fails to comply with any provision of this regulation is guilty of a misdemeanor of the third degree and shall be fined no more than five hundred dollars (\$500.00) or imprisoned for no more than sixty (60) days, or both, for each offense. A separate offense shall be deemed committed each day during or on which a violation or noncompliance occurs or continues.
- B. The imposition of any other penalties provided herein shall not preclude the City of Brunswick instituting an appropriate action or proceeding in a Court of proper jurisdiction to prevent an unlawful development, or to restrain, correct, or abate a violation, or to require compliance with the provisions of this regulation or other applicable laws, ordinances, rules, or regulations, or the orders of the City of Brunswick.

CITY OF BRUNSWICK, OHIO
ORDINANCE NO. _____

BY:

**AN EMERGENCY ORDINANCE AMENDING CHAPTER 1234 OF THE CITY
OF BRUNSWICK CODIFIED ORDINANCES PURSUANT TO THE
REQUIREMENTS OF THE OHIO ENVIRONMENTAL PROTECTION
AGENCY.**

WHEREAS, soil is most vulnerable to erosion by wind and water during soil disturbing activities and this eroded soil necessitates repair of sewers and ditches and dredging of rivers, harbors, and lakes; accelerates downstream bank erosion and damage to public and private property; damages water resources and wetlands by reducing water quality; and causes the siltation of aquatic habitat;

WHEREAS, communities throughout the watershed(s) in which the City of Brunswick is located have experienced and continue to experience costs associated with inadequate erosion and sediment control and increased State and Federal regulation;

WHEREAS, there are watershed-wide efforts to reduce sedimentation in the rivers to which City of Brunswick drains and to protect and enhance the unique water resources and wetlands of the Rocky River Watershed;

WHEREAS, 40 C.F.R. Parts 9, 122, 123 and 124, referred to as NPDES Storm Water Phase II, require designated communities, including the City of Brunswick, to develop and implement a Stormwater Management Program to address, among other components, erosion and sediment control during soil disturbing activities;

WHEREAS, Article XVIII, Section 3 of the Ohio Constitution grants municipalities the legal authority to adopt rules to abate soil erosion and water pollution by soil sediments; and

WHEREAS, Best Management Practices (BMP) will from now on be referred to as Stormwater Control Measures (SCM).

**WHEREAS, THE COUNCIL OF THE CITY OF BRUNSWICK HEREBY
ORDAINS:**

SECTION 1: That City of Brunswick Codified Ordinance Chapter 1234 is hereby amended and replaced with the new text of Chapter 1234 as attached hereto as Exhibit "A".

SECTION 2: That it is found and determined that all formal actions of this Council concerning and relating to the passage of this Ordinance were adopted in an open meeting of this Council, and that all deliberations of this Council and of any of its committees that resulted in such formal actions were in meetings open to the

public, in compliance with all legal requirements, including Section 121.22 of the Ohio Revised Code.

SECTION 3: That this Ordinance is hereby declared to be an emergency measure necessary for the immediate preservation of the public health, welfare, and safety and for the additional reason to ensure passage as soon as practical for substantial compliance with the deadline imposed by the Ohio Environmental Protection Agency. Therefore, the same shall be in full force and effect from and after its passage by the required number of votes or from the earliest time allowed by law.

PASSED: 1st Reading _____

RULES SUSPENDED: AYES _____ NAYS _____

ADOPTED: _____ AYES _____ NAYS _____

ATTEST: _____
Clerk of Council
Barbara J. Ortiz, CMC

CITY OF BRUNSWICK, OHIO
ORDINANCE NO. _____

BY:

**AN EMERGENCY ORDINANCE AMENDING CHAPTER 1236 OF THE CITY
OF BRUNSWICK CODIFIED ORDINANCES.**

WHEREAS, flooding is a significant threat to property and public health and safety and stormwater management lessens flood damage by reducing and holding runoff and releasing it slowly;

WHEREAS, streambank erosion is a significant threat to property and public health and safety and stormwater management slows runoff and reduces its erosive force;

WHEREAS, insufficient control of stormwater can result in significant damage to receiving water resources, impairing the capacity of these areas to sustain aquatic systems and their associated aquatic life use designations;

WHEREAS, land development projects and associated increases in impervious cover alter the hydrologic response of local watersheds and increase stormwater runoff rates and volumes, flooding, stream channel erosion, and sediment transport and deposition;

WHEREAS, stormwater runoff contributes to increased quantities of pollutants to water resources;

WHEREAS, stormwater runoff, stream channel erosion, and nonpoint source pollution can be controlled and minimized through the regulation of runoff from land development projects;

WHEREAS, the City of Brunswick finds that the lands and waters within its borders are finite natural resources and that their quality is of primary importance in promoting and maintaining public health and safety within its borders;

WHEREAS, the City of Brunswick desires to establish standards, principles, and procedures for the regulation of soil disturbing activities that may increase flooding and erosion and may cause adverse impacts to water resources, resulting from stormwater runoff;

WHEREAS, the use of green infrastructure and runoff reduction practices improves water quality in our streams and Lake Erie and reduces the magnitude and frequency of flooding and combined sewer overflow events through the infiltration, evapotranspiration, treatment and reuse of stormwater runoff;

WHEREAS, the use of green infrastructure produces community benefits including reduced crime, increased property values, increased retail sales and lower infrastructure costs;

WHEREAS, 40 C.F.R. Parts 9, 122, 123, and 124, and Ohio Administrative Code 3745-39 require designated communities, including the City of Brunswick to develop a Stormwater Management Program that, among other components, requires the City of Brunswick to implement standards, principles, and procedures to regulate the quality of stormwater runoff during and after soil disturbing activities; and

WHEREAS, Article XVIII, Section 3 of the Ohio Constitution grants municipalities the legal authority to exercise all powers of local self-government and to adopt and enforce within their limits such local police, sanitary, and other similar regulations, as are not in conflict with general laws.

WHEREAS, THE COUNCIL OF THE CITY OF BRUNSWICK HEREBY ORDAINS:

SECTION 1: That City of Brunswick Codified Ordinance Chapter 1236 is hereby amended and replaced with the new text of Chapter 1236 as attached hereto as Exhibit “A”.

SECTION 2: That it is found and determined that all formal actions of this Council concerning and relating to the passage of this Ordinance were adopted in an open meeting of this Council, and that all deliberations of this Council and of any of its committees that resulted in such formal actions were in meetings open to the public, in compliance with all legal requirements, including Section 121.22 of the Ohio Revised Code.

SECTION 3: That this Ordinance is hereby declared to be an emergency measure necessary for the immediate preservation of the public health, welfare, and safety and for the additional reason to ensure passage as soon as practical to ensure compliance with applicable law. Therefore, the same shall be in full force and effect from and after its passage by the required number of votes or from the earliest time allowed by law.

PASSED: 1st Reading _____

RULES SUSPENDED: AYES _____ NAYS _____

ADOPTED: _____ AYES _____ NAYS _____

ATTEST: _____

Clerk of Council
Barbara J. Ortiz, CMC

CITY OF BRUNSWICK, OHIO
ORDINANCE NO. 23-17

BY: Mr. Ousley, Mr. Hanek and Mrs. Hanek

**AN EMERGENCY ORDINANCE AMENDING CHAPTER 1234 OF THE CITY
OF BRUNSWICK CODIFIED ORDINANCES PURSUANT TO THE
REQUIREMENTS OF THE OHIO ENVIRONMENTAL PROTECTION
AGENCY.**

WHEREAS, soil is most vulnerable to erosion by wind and water during soil disturbing activities and this eroded soil necessitates repair of sewers and ditches and dredging of rivers, harbors, and lakes; accelerates downstream bank erosion and damage to public and private property; damages water resources and wetlands by reducing water quality; and causes the siltation of aquatic habitat;

WHEREAS, communities throughout the watershed(s) in which the City of Brunswick is located have experienced and continue to experience costs associated with inadequate erosion and sediment control and increased State and Federal regulation;

WHEREAS, there are watershed-wide efforts to reduce sedimentation in the rivers to which City of Brunswick drains and to protect and enhance the unique water resources and wetlands of the Rocky River Watershed;

WHEREAS, 40 C.F.R. Parts 9, 122, 123 and 124, referred to as NPDES Storm Water Phase II, require designated communities, including the City of Brunswick, to develop and implement a Stormwater Management Program to address, among other components, erosion and sediment control during soil disturbing activities;

WHEREAS, Article XVIII, Section 3 of the Ohio Constitution grants municipalities the legal authority to adopt rules to abate soil erosion and water pollution by soil sediments; and

WHEREAS, Best Management Practices (BMP) will from now on be referred to as Stormwater Control Measures (SCM).

WHEREAS, THE COUNCIL OF THE CITY OF BRUNSWICK HEREBY ORDAINS:

SECTION 1: That City of Brunswick Codified Ordinance Chapter 1234 is hereby amended and replaced with the new text of Chapter 1234 as attached hereto as Exhibit "A".

SECTION 2: That it is found and determined that all formal actions of this Council concerning and relating to the passage of this Ordinance were adopted in an open meeting of this Council, and that all deliberations of this Council and of any of its committees that resulted in such formal actions were in meetings open to the

public, in compliance with all legal requirements, including Section 121.22 of the Ohio Revised Code.

SECTION 3: That this Ordinance is hereby declared to be an emergency measure necessary for the immediate preservation of the public health, welfare, and safety and for the additional reason to ensure passage as soon as practical for substantial compliance with the deadline imposed by the Ohio Environmental Protection Agency. Therefore, the same shall be in full force and effect from and after its passage by the required number of votes or from the earliest time allowed by law.

PASSED: 1st Reading _____

RULES SUSPENDED: AYES _____ NAYS _____

ADOPTED: _____ AYES _____ NAYS _____

ATTEST: _____
Clerk of Council
Barbara J. Ortiz, CMC

CITY OF BRUNSWICK, OHIO
ORDINANCE NO. 24-17

BY: Mr. Ousley, Mr. Hanek and Mrs. Hanek

**AN EMERGENCY ORDINANCE AMENDING CHAPTER 1236 OF THE CITY
OF BRUNSWICK CODIFIED ORDINANCES.**

WHEREAS, flooding is a significant threat to property and public health and safety and stormwater management lessens flood damage by reducing and holding runoff and releasing it slowly;

WHEREAS, streambank erosion is a significant threat to property and public health and safety and stormwater management slows runoff and reduces its erosive force;

WHEREAS, insufficient control of stormwater can result in significant damage to receiving water resources, impairing the capacity of these areas to sustain aquatic systems and their associated aquatic life use designations;

WHEREAS, land development projects and associated increases in impervious cover alter the hydrologic response of local watersheds and increase stormwater runoff rates and volumes, flooding, stream channel erosion, and sediment transport and deposition;

WHEREAS, stormwater runoff contributes to increased quantities of pollutants to water resources;

WHEREAS, stormwater runoff, stream channel erosion, and nonpoint source pollution can be controlled and minimized through the regulation of runoff from land development projects;

WHEREAS, the City of Brunswick finds that the lands and waters within its borders are finite natural resources and that their quality is of primary importance in promoting and maintaining public health and safety within its borders;

WHEREAS, the City of Brunswick desires to establish standards, principles, and procedures for the regulation of soil disturbing activities that may increase flooding and erosion and may cause adverse impacts to water resources, resulting from stormwater runoff;

WHEREAS, the use of green infrastructure and runoff reduction practices improves water quality in our streams and Lake Erie and reduces the magnitude and frequency of flooding and combined sewer overflow events through the infiltration, evapotranspiration, treatment and reuse of stormwater runoff;

WHEREAS, the use of green infrastructure produces community benefits including reduced crime, increased property values, increased retail sales and lower infrastructure costs;

WHEREAS, 40 C.F.R. Parts 9, 122, 123, and 124, and Ohio Administrative Code 3745-39 require designated communities, including the City of Brunswick to develop a Stormwater Management Program that, among other components, requires the City of Brunswick to implement standards, principles, and procedures to regulate the quality of stormwater runoff during and after soil disturbing activities; and

WHEREAS, Article XVIII, Section 3 of the Ohio Constitution grants municipalities the legal authority to exercise all powers of local self-government and to adopt and enforce within their limits such local police, sanitary, and other similar regulations, as are not in conflict with general laws.

WHEREAS, THE COUNCIL OF THE CITY OF BRUNSWICK HEREBY ORDAINS:

SECTION 1: That City of Brunswick Codified Ordinance Chapter 1236 is hereby amended and replaced with the new text of Chapter 1236 as attached hereto as Exhibit "A".

SECTION 2: That it is found and determined that all formal actions of this Council concerning and relating to the passage of this Ordinance were adopted in an open meeting of this Council, and that all deliberations of this Council and of any of its committees that resulted in such formal actions were in meetings open to the public, in compliance with all legal requirements, including Section 121.22 of the Ohio Revised Code.

SECTION 3: That this Ordinance is hereby declared to be an emergency measure necessary for the immediate preservation of the public health, welfare, and safety and for the additional reason to ensure passage as soon as practical to ensure compliance with applicable law. Therefore, the same shall be in full force and effect from and after its passage by the required number of votes or from the earliest time allowed by law.

PASSED: 1st Reading _____

RULES SUSPENDED: AYES _____ NAYS _____

ADOPTED: _____ AYES _____ NAYS _____

ATTEST: _____

Clerk of Council
Barbara J. Ortiz, CMC

