

FIRST READING – April 26, 2011
SECOND READING – May 10, 2011
THIRD READING – May 24, 2011
EMERGENCY -

COUNCIL NO: 024
SPONSOR: Service Director Smith
ORDINANCE NO. 23-11

AN ORDINANCE BY THE COUNCIL OF THE CITY OF SHEFFIELD LAKE ESTABLISHING CHAPTER 944 OF THE CODIFIED ORDINANCES OF SHEFFIELD LAKE REGARDING REGULATION OF POLLUTANTS INTO THE MUNICIPAL STORM SEWER SYSTEM, AND THE DECLARING OF AN EMERGENCY.

WHEREAS, the City of Sheffield Lake 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; and,

WHEREAS, the City of Sheffield Lake 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 storm water runoff; and,

WHEREAS, 40 C.F.R. Parts 9, 122, 123, and 124, and Ohio Administrative Code 3745-39 require designated communities, including the City of Sheffield Lake to develop a Storm Water Management Program that, among other components, requires the City of Sheffield Lake to implement standards, principles, and procedures to regulate the quality of storm water 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 with their limits such local police, sanitary, and other similar regulations, as are not in conflict with general laws; and,

WHEREAS, Pursuant to Ordinance 46-09, passed August 25, 2009, Council has adopted regulations controlling construction site soil erosion, sediment, storm water runoff, storm water quality, riparian setback, and wetlands protection; and,

WHEREAS, it is in the best interest of the City of Sheffield Lake to establish Codified Ordinance 944 regarding Regulation of Pollutants into the Municipal Storm Sewer System.

NOW THEREFORE, be it ordained by the Council of the City of Sheffield Lake, County of Lorain, State of Ohio:

SECTION 1. Council of the City of Sheffield Lake hereby establishes Chapter 944 of the Codified Ordinances as follows:

CHAPTER 944
Regulation of Pollutants into the Municipal Storm Sewer System

944.01 DISCLAIMER OF LIABILITY

Neither submission of a plan under the provisions herein, nor compliance with the provisions of these regulations, shall relieve any person or entity from responsibility for damage to any person or property that is otherwise imposed by law.

944.02 CONFLICTS, SERVILITY, NUISANCES & RESPONSIBILITY

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

- A. Where this Ordinance imposes a greater restriction upon land than is imposed or required by other City provisions of law, ordinance, contract or deed, the provisions of this ordinance shall prevail.
- B. If a court of competent jurisdiction declares any clause, section, or provision of these regulations invalid or unconstitutional, the validity of the remainder shall not be affected thereby.
- C. These regulations shall not be construed as authorizing any person to maintain a private or public nuisance on their property. Compliance with the provisions of this regulation shall not be defense in any action to abate such nuisance.
- D. Failure of the City to observe or recognize hazardous or unsightly conditions or to be recommended corrective measures shall not relieve the owner from the responsibility for the condition or damage resulting there from, and shall not result in the City, its officers, employees, or agents being responsible for any condition or damage resulting therefrom.

944.03 EFFECTIVE DATE

This ordinance and its regulations shall become effective upon their passage.

944.04 SCOPE

This Ordinance applies to development areas having new or relocated projects involving highways, underground cables, pipelines, subdivisions, industrial projects, commercial projects, building activities on farms, redevelopment of urban areas and all other land uses not specifically exempted. This Ordinance does not apply to:

- A. Existing land-disturbing activities related to producing agricultural crops or Silviculture operations regulated by the Ohio Agricultural Sediment Pollution Abatement Rules (1501: 15-3-01 to 1501: 15-3-09 of the Ohio Administrative Code).
- B. Existing strip mining operations regulated by Chapter 1512 of the Ohio Revised Code.

- C. Existing surface mining operations regulated by Chapter 1514 of the Ohio Revised Code.

944.05 CONSOLATIONS

In implementing these regulations, the City SWMP Director may consult with the local county SWCD, state and federal agencies and other technical experts as necessary. Any costs associated with such consultations may be assessed to the applicant of their designated representative.

944.06 STORM WATER MANAGEMENT, STORM WATER QUALITY, SOIL EROSION & SEDIMENT CONTROL PLANS

In order to control storm water damage and sediment pollution of water resources, wetlands, riparian areas, other natural areas, and public and private lands, the owner of each development area shall be responsible for developing Storm Water Management, Storm Water Quality, and Soil Erosion and Sediment Control Plans. These plans must contain a description of controls appropriate for each construction operation covered by these regulations, and the operator must implement such controls in a timely manner. The plans and BMPs used to satisfy the conditions of these regulations should meet the standards and specifications in the current edition of the Rain Water and Land Development manual. The plans must make use of the practices, which preserve the existing natural condition to the Maximum Extent Practicable (MEP), as implemented by the SWAP director.

- A. **Small Development Sites:** Individual development sites that are smaller than one (1) acre in total size, and are part of a larger common plan of development, can submit abbreviated plans with the topography plan for the requested permit(s). The abbreviated plan must cover the following items, in addition to any other items from this Ordinance that are required by the SWAP Director with advice from law director and city engineer.
 - 1. Storm Water Issues: A statement as to how the increased storm water runoff and decreased storm water quality that will be caused by the planned development project will be handled. For example, the statement could say that the “storm water management and quality issues were addressed by the plans and specifications for the larger common plan of development.” If the larger common plan of development did not address these issues, then state what Best Management (BMP) the new construction project will include in order to address them. Owners of development sites that were created by demolishing an older existing structure can request, in writing, that the City SWMP Director, with advice from the City Engineer, exempt them from the storm water issues.
 - 2. Riparian and /or Wetland Setback: All riparian and wetland setback areas will be identified.
 - 3. Soil Erosion and Sediment Issues: A sketch of the entire property development site and the location of:

- (a) All existing and planned impervious areas, storm water inlets, drainage swales, wetlands, streams, conservation easements and other natural features to be saved and protected on the property.
- (b) All existing and planned temporary and permanent conservation practices for the site. Residential lots shall include the following: soil erosion and sediment control BMPs, which designs shall meet the standards and specifications of the Rainwater and Land Development manual as follows:
 - 1) Construction Entrance, and;
 - 2) Temporary Grass Seeding with 2 tons per acre of straw and mulch, and;
 - 3) Storm Drain Inlet Protection around every storm yard inlet on the site, and;
 - 4) Silt Fence protection for any stream located on or close to the site and lacking an adequate vegetative buffer, and;
 - 5) Construction fence to protect any conservation easements from encroachment.
- (c) On single-family residential construction and other similar types of construction, as determined by the SWMP Director, with advice from the City Engineer, the Building Department shall require two building permits.
 - 1) The first building permit shall allow the construction of the footers and basement, walls or slab. No additional construction shall be performed and no additional building materials shall be allowed on the site until the Building Department has issued the second building permit.
 - 2) The second building permit, as administered by the SWMP Director, allows delivery of the remaining building materials and the remaining construction activities, shall not be issued until the City Engineer certifies that the required BMPs and any other BMPs identified in the Soil Erosion and Sediment Control Plan submitted with the application for the first building permit have been properly installed, pursuant to the most recent edition of the Rainwater and Land Development manual, as accepted by the SWMP Director.

B. Large Development Sites: All developments that have a larger common plan of development equal to or larger than one (1) acre in size are subject to this ordinance and shall follow all of the requirements set forth in this ordinance. In order to control sediment pollution of the water resources, wetlands, riparian buffers, and public and private properties, the owner of each development project shall create a Soil Erosion and Sediment Control Plan (SE&SC Plan) and a Storm Water Management Plan (SWM Plan) and a post-construction Water Quality Plan (WQ Plan). These can be combined into one plan submittal.

1. Content of the Plans: The following information shall be included in each of the Soil Erosion and Sediment Control (SE&SC), Storm Water Management (SWM) and post-construction Water Quality (WQ) plans:
 - (a) A general project description including the nature, type and purpose of earth-disturbing activity and the larger common plan of development.
 - (b) All vicinity sketches locating the larger common plan of development, the development area, and all pertinent surrounding features, including water resources, wetlands, riparian buffers, conservation easements and other sensitive natural resources.
 - (c) A larger common plan of development and the area of the site that is expected to undergo excavations, filling and grading or clearing.
 - (d) The location of sensitive areas receiving runoff from the development.
 - (e) The name and/or location of the immediate receiving stream or surface water(s) and the first subsequent named receiving water and the major river watershed in which it is located.
 - (f) The existing and proposed topography shown in the appropriate contour intervals (generally one-foot contours are used).
 - (g) The location and description of existing and proposed drainage patterns and facilities, including any allied drainage facilities beyond the development area and the larger common plan of development.
 - (h) Drainage patterns during major phases of construction.
 - (i) Existing and proposed watershed boundary lines, direction of flow and watershed acreage.
 - (j) The limits of earth-disturbing activity.
 - (k) The types of soils within, or affected by, the development area, and the location of all highly erodible or unstable soils as determined by the most current edition of the soil survey of local county, by the NRCS-USDA.
 - (l) An onsite, detailed Soils Engineering Report if required by the City Engineer, as directed by the SWMP Director.
 - (m) The scheduling, phasing and coordination of construction operations and erosion and sediment control BMPs, including vegetative plantings and mulch.
 - (n) Surface water locations including springs, wetlands, streams, lakes, ponds, riparian areas, etc., on or within 200 feet of the site.
 - (o) Existing and planned locations of buildings and utilities that may affect soil erosion and sediment control.
 - (p) The person or entity responsible for continued maintenance of all vegetative and/or mechanical BMPs used during the

construction and post-construction phases of each development.

- (q) Long-term maintenance requirements and schedules of all BMPs used during the construction and post-construction phases of each development.
- (r) Long-term maintenance inspection schedules, including the printed name and contact point of the inspecting official.
- (s) The person or entity financially responsible for maintaining the permanent inspection and maintenance of permanent storm water conveyance and storage structures and other conservation practices.
- (t) The method of ensuring that funding will be available to conduct the long-term maintenance and inspections of all permanent storm water, soil erosion and sediment control and water quality practices.
- (u) The location of any riparian and/or wetland setback areas on the property.
- (v) The plan must clearly describe for each major construction activity that appropriate BMPs and the general timing (or sequence) during the construction process of when the measures will be implemented; and, who (which contractor) will be responsible for implementation (e.g., Contractor A will clear, grub and install perimeter contrails and Contractor B will maintain perimeter controls until final stabilization; Contractor C will conduct and document the scheduled inspections.)

2. Soil Erosion and Sediment Control Plan (SE&SC): The SE&SC Plan shall include a list of soil erosion and sediment control BMPs and the standards and specifications to be followed by the filed contractors in the installation. A map showing the location of the planned SE&SC BMPs shall be provided. The map shall show, at a minimum, the following:

- (a) The location of each BMP
- (b) The BMPs size details drawings, maintenance requirements and design calculations.
- (c) The type and amount of plant seed, live plants, fertilizer, agricultural ground limestone and mulch to be used. (Soil testing fertility and lime requirements is preferred. Only perennial grass seed will be used.)
- (d) Settling ponds drawn to scale with basic dimension and calculations for size and volume.
- (e) The SWMP Director will determine settling ponds on lakefront.
- (f) Detailed drawings of all other structural control BMPs.
- (g) Proposed utilities, which may affect soil erosion and sediment control BMPs.
- (h) Limits of clearing operations.

- (i) Limits of earth-disturbing activities.
 - (j) Any other soil erosion and sediment control related to BMPs and items that are required by the City Engineer, as directed by the SWMP Director.
- 3. Storm Water Management Plan (SWM): In addition to the list of items found in the *Content of the Plans* section of this Ordinance, the Storm Water Management Plan shall include, at a minimum, the following information:
 - (a) A general description of the SWM strategy proposed to meet this ordinance.
 - (b) The location and design calculations for all permanent storm water conveyance, detention and retention structures, and other storm water control structures.
 - (c) Any other storm water management-related items required by the City Engineer, by direction of the SWMP Director.
- 4. Water Quality Plans (WQ): The planning and implementation of post-construction water quality which shall meet, at a minimum, the requirements of this ordinance and the Ohio EPA.
 - (a) A description shall be provided of the BMPs that will be installed to control construction pollutants in storm water discharges occurring after construction operations have been completed (post construction). Such BMPs may include, among others, infiltration of runoff, flow reduction by use of open vegetated swales, diversions, permanent grass plantings, tree and shrub plantings, stream bank protection practices, grade stabilization structures, etc.
 - (b) A description of the water quality standards and projected treatments levels, if any, that will be addressed by the water quality BMPs being installed.

944.07

EASEMENTS

Future access to flood control facilities, runoff drainage ditches and channels, runoff storage facilities, storm sewers and other drainage ways and structures, as required by the City Flood Plane Manager, with advice from the City Engineer.

- A. The easement requirements shall conform to existing City Ordinances for maintenance and access.
- B. Easements for the emergency flow ways shall be a minimum of twenty-five (25) feet in width, or larger if required by the City Engineer at direction of SWMP Director.
- C. Flood control or storm drainage easements containing underground facilities shall have a minimum width of twenty-five (25) feet.

- D. Those lots crossed by an easement shall be restricted against the planting within said easement of trees, shrubbery or plantings with woody growth characteristics, and against the construction therein of the buildings, accessory buildings fences, walls or any other obstructions to the free flow of storm water and the movement of inspectors and maintenance equipment and also restricted against the changing of final grade from that described by the grading plan.

944.08 MAINTENANCE

Any portion of the permanent drainage, soil erosion, sediment control and water quality management system, including on-site and off-site storage facilities that are constructed by the owner, will continuously maintained into perpetuity.

- A. Single-Family Residential Developments: A Homeowners' Association shall be created and placed in title of the affected lands and shall be continuously responsible for post-construction maintenance and inspections into perpetuity unless the City officially accepts such maintenance and inspections.
- B. Multi-Family, Commercial and Industrial Developments: The plans will clearly state that the owner of the property shall be continuously responsible for post-construction maintenance and inspections into perpetuity unless the City officially accepts such maintenance and inspections.
- C. Maintenance Design: Low maintenance requirements are a priority in the design and construction of all facilities. Multi-use facilities incorporating assets such as aesthetics and recreation may be incorporated into the design of the drainage facilities. All permanent drainage, soil erosion, sediment control, water quality management systems and BMPs, including on-site and off-site structures and vegetation that are constructed or planted, must be inspected and maintained into perpetuity by the responsible party designated in the plans and the requirements of this Ordinance. Inspections and maintenance will be incorporated periodically throughout the year to ensure that the facilities are properly operational.

944.09 MINIMUM STANDARDS

In order to control sediment pollution of water resources, the owner or person responsible for the development area shall use conservation planning and practices to maintain the level of conservation established in the following standards:

- A. Clearing and Grubbing: Clearing and grubbing will be done in two (2) or more phases. The first phase will include those locations necessary to install the perimeter soil erosion, sediment and storm water control BMPs. After the perimeter controls are in place and function, the remaining phase(s) of clearing and grubbing may continue.

- B. Timing of Sediment Trapping Practices: Sediment control practices shall be functional throughout all phases of up slope earth disturbing activity. Settling facilities, perimeter controls and other practices intended to trap sediment shall be implemented as the first step of grading, and within seven (7) days from the start of grubbing. They shall continue to function until the up slope development area is permanently destabilized.
- C. Stabilization of Denuded Areas: Disturbed areas must be stabilized as specified in the tables below, or according to the Ohio EPA NPDES Storm Water Permit Rules, whichever is most restrictive:

Table 1: Permanent Stabilization

Area requiring permanent stabilization	Time frame
Any areas that will lie dormant for one (1) year or more	Within seven (7) days of the most recent disturbance
Any areas within fifty (50) feet of a stream and at final grade	Within two (2) days of reaching final grade
Any other areas at final grade	Within seven (7) days of reaching final grade within that area

Table 2: Temporary Stabilization

Area requiring temporary stabilization	Time Frame
Any disturbed areas within fifty (50) feet of a stream and not at final grade	Within two (2) days of the most recent disturbance if the area will remain idle for seven (7) days or more
Disturbed areas that will be dormant for more than 21 days but less than one (1) year and not within fifty (50) feet of a stream	Within seven (7) days of the most recent disturbance within the area
Residential subdivision for disturbance which has occurred on building lots	Within seven (7) days of the most recent disturbance if housing unit construction on the lot is not scheduled to begin within 21 days of the disturbance. In any case, Temporary or Permanent Stabilization will be properly installed, pursuant to the most recent edition of the Rainwater and

	Land Development manual, before the second building permit is issued.
Non-residential subdivisions and commercial developments	Within seven (7) days of the most recent disturbance if further construction activity will not occur within 21 days of the disturbance. Where vegetative stabilization techniques may cause structural instability or are otherwise prohibited, alternative stabilization techniques must be employed.
Disturbed area that will be idle over winter	Prior to the onset of winter weather.

D. Settling Ponds: Concentrated storm water runoff from denuded areas of five (5) acres or more, and all areas flowing at rates that exceed the design capacity of sediment barriers, shall pass through a sediment settling facility.

1. The facility's storage capacity shall be no less than sixty-seven (67) cubic yards per acre of total drainage area.
2. Permanent storm water management ponds that are designed to trap sediment during construction shall be designed to provide for a slow release of sediment-laden water. The ideal drawdown time is from three (3) to four (4) days (72 to 96 hours).
3. The design of Selling Ponds shall have a minimum length of flow of 2:1.

E. Sediment Barriers: Sheet and rill flow runoff from denuded areas shall be diverted to a settling pond or treated by a geotextile silt fence or other approved sediment barrier. The total runoff flow treated by a sediment barrier shall not exceed the design capacity for that sediment barrier.

F. Storm Sewer Protection:

1. All storm sewer inlets that accept water runoff from the development area shall be protected so that sediment-laden water will not enter the storm sewer, unless exempted by the SWMP Director. In areas where construction will be ongoing, such as subdivisions, the storm sewer protection shall be maintained until all up slope areas reach final stabilization, as determined by the SWMP Director.
2. The site owner shall hydraulically clean the storm sewers at the end of this period to the satisfaction of the Service Director. All sediments shall be removed from the system and shall not be flushed downstream.

- G. Storm Sewer & Other Drainage Outlets: All storm sewers, footer drains, roof gutter drains and all other drains will be outletted at the bottom of the slope. The slope below the outlet will be able to control the water being drained through the storm sewer or other drains without causing erosion of the stream or channel banks or channel bottom.
- H. Working Near, Or Crossing Streams and Wetlands: Construction vehicles shall avoid water resources, wetlands, riparian areas, and their setbacks. If construction vehicles must cross these areas repeatedly during construction, an approved temporary crossing shall be constructed. Streams, including beds and banks, shall be restabilized immediately after in-channel work is completed, interrupted, or stopped.
- I. Constructions Access Routes:
1. Measures shall be taken to prevent soil transport onto public roads, or surfaces where runoff is not checked by sediment controls. Gravel construction entrance(s) shall be implemented as required by the Service Director and the Ohio EPA.
 2. Where soil is transported onto a public road surface, the roads shall be cleaned thoroughly at the end of each day, or more frequently, in order to ensure public safety. Soil shall be removed from paved surfaces by shoveling or sweeping. Street washing shall be allowed only after shoveling or sweeping has removed most of the sediment. The Service Director will enforce this provision.
- J. Unstable Soils:
1. Unstable soils prone to slipping or land sliding shall not be graded, excavated, filled or have loads imposed upon them unless the work is performed in accordance with a qualified professional engineer's recommendations to correct, eliminate, or adequately address problems.
 2. The City Engineer may require detailed soil reports when he/she deems necessary.
- K. Cut and Fill Slopes: Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion and slippage. Consideration shall be given to the length and steepness of the slope, soil type, up-slope drainage area, and groundwater conditions and slope stabilization.
- L. Stabilization of Outfalls and Channels: Outfalls and constructed or modified channels shall be designed and constructed to withstand the expected velocity of flow from a post-development, minimum ten-year (or greater) frequency storm without eroding.
- M. Establishment of Permanent Vegetation: A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until ground cover

is achieved which, in the opinion of the City Engineer, covers 80% or more of the soil surface with a uniform density, provides adequate cover, and is mature enough to satisfactorily control soil erosion and survive adverse weather conditions.

- N. Disposition of Temporary Practices: All temporary erosion and sediment control practices shall be disposed of immediately after final site stabilization is achieved or after the temporary practices are no longer needed, unless otherwise required by the City Engineer. Trapped sediment shall be permanently stabilized to prevent further erosion.
- O. Maintenance: All temporary and permanent erosion and sediment control practices shall be designed and constructed to minimize maintenance requirements. They shall be maintained and repaired as needed to ensure continued performance of their intended function. The person or entity responsible for the continued physical and financial maintenance of permanent erosion control practices shall be identified to the satisfaction of the Service Director.
- P. Underground Utility Construction: The construction of underground utility lines, pipes, etc. shall be subject to the following criteria:
1. Trenches shall remain open for no more than five days.
 2. Trench-dewatering devices shall discharge in a manner approved by the Service Director, which will not adversely affect resource waters or off-site properties.
- Q. Inspections:
1. The owner of the development area shall have the site inspected for soil erosion, sediment control and other environmental concerns every seven (7) calendar days, and within twenty-four (24) hours of a 0.5 inch or greater rainfall event until the site is certified as being stable by the SWMP Director.
 2. The owner, or his designated representative, shall keep a written log of each inspection and any subsequent improvements to the soil erosion, sediment control or other environmental controls. The inspections shall include the date of the inspections, the name of the inspector, weather conditions, and the actions needed to correct the identified problem(s).
 3. The inspections will include the date and actions taken to correct problems noted in past inspection logs.
 4. If the construction site is subject to Ohio EPA's National Pollutant Discharge Elimination System (NPDES) permits, a copy of all the required inspection sheets will be submitted to the SWMP Director within two (2) working days of the date that the inspection was conducted.

R. Control of Materials and Debris: Site management practices shall be implemented to prevent toxic materials, hazardous materials, or other debris from entering the City and state's water resources or wetlands. These practices shall include, but are not limited to, the following:

1. A covered dumpster shall be made available for the proper disposal of construction site waste materials, garbage, plaster, drywall, grout, gypsum and etc. A second covered dumpster will be provided for the proper disposal of toxic and hazardous waste.
2. The washing of excess concrete material into a street, catch basin, or other public facility or natural resource shall not occur. A designated area for concrete washouts shall be made available and used for all concrete washouts.
3. All fuel 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 100% of the volume of the largest container in the storage area. All additional requirements of the local fire authority must be followed. If the fuel tanks have a self-contained "dike", the plug will be kept in the "dike" tank at all times.
4. Any toxic or hazardous waste and contaminated soils shall be disposed of properly.
5. Runoff from contaminated sites shall not be allowed to leave the site.
6. Proper permits shall be obtained for development of projects on solid waste landfill sites.

S. Pre-winter Stabilization: If the development area is, or is planned to remain active through the winter months, the owner of the development area shall hold a Pre-Winter Stabilization Meeting. The meeting will be held before October 1st. The owner shall invite the operator, developer, engineer, contractor, SWMP Director, and anyone else requested by the SWMP Director to the meeting.

T. Water Quality Requirements: Storm water released from any part of a development site shall meet the most restrictive of the following criteria as well as the current requirements of the Ohio EPA.

1. All construction activities must be designed and planned to not impact the chemical, biological and physical integrity of the waters of the state.
2. The WQ Plan must contain a description of the post-construction BMPs for the site and rationale for choosing them. The rationale must address the anticipated impacts on the hydrology, water quality and riparian habitat. Detailed drawings and long-term maintenance plans must be provided for all post-construction BMPs. Maintenance plans must assure that pollutants which collect within structural post-construction practices, be disposed of in accordance with local, state and federal regulations.
3. Post construction BMPs must achieve the following goals:

- (a) Water Quality Volume: For all development on previously undeveloped property, structural (designed) post-construction storm water treatment practices shall be incorporated into the permanent drainage system for the site. These practices must be sized to treat the water quality volume (WQv) and assure compliance with the criteria in Sec. 3745-1-04 of the Ohio Administrative Code: In addition, the discharge must not violate Ohio's Water Quality Standards as outlined in Ohio Administrative Code 3745-1. The WQv shall be the maximized water quality capture volume for the site, as defined in "Urban Runoff Quality Management," WEF Manual of Practice No. 23 and ASCE Manual and Report on Engineering Practice No. 87 (WEF and ASCE, 1998).
- (b) The WQv shall be determined through a site hydrologic study approved by the City Engineer that uses continuous hydraulic simulation and local long-term hourly precipitation records, or by using the following equation:

$$WQv = 8 (0.858i^3 - 0.78i^2 + 0.774I + 0.04) * PA/12$$

Where:

WQv = water quality volume in acre-feet

i = watershed impervious ration, namely, percent total imperviousness/100

P = mean storm presentation volume in inches

A = area draining into the family acres

Table 1
Regression Constant and Required Draw Down Time for Structural Post-Construction Treatment Control Practices (WEF & ASCE, 1998)

Best Management Practice	Drain Time of WQv in Hours	Regression Constant %
Infiltration, Vegetated Swale and Filter Strip	12	1.109
Extended Detention Basin (Dry Ponds)	48	1.545
Retention Ponds (Wet Ponds)		
-Solids Removal Only*	12	1.109
-Solids & Dissolved Nutrient Removal**	N/A	3.0
Constructed Wetlands (above permanent pool)	24	1.299
Media Filtration, Bioretention	40	1.500

Other Facilities (if acceptable by the City Engineer and Ohio EPA)	24	1.299
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*Provide both a permanent pool and an extended detention volume above the permanent pool, each sized at WQv

**Based on a permanent pool with wetland vegetation and a 2 to 3 week retention time

- (c) An additional volume equal to 20% of the water quality volume shall be incorporated into the facility for sediment storage and/or reduced infiltration capacity. Facilities shall be designed according to the methodology included in the WEF and ASCE manual of practice, Rainwater and Land Development manual, or in another design manual acceptable for used by the SWMP Director and Ohio EPA.
- (d) Facilities shall be cleaned and maintained such that the full water quality volume is available and that the facility functions as designed.
- (e) Exemption: Construction activities shall be exempted from this condition if it can be demonstrated that this requirement was met within another larger common plan of development or regional storm water management plan.
- (f) For all construction activities: Maintain or improve ecological function of watercourses by protecting or improving the stream and riparian form. Ecological functions include pollution assimilation, flood attenuation, maintenance of the sediment regime, base flow, moderation of temperature and habitat to the maximum extent practicable (MEP);
- (g) For all construction activities immediately adjacent to surface waters of the state, a minimum Riparian and Wetland setback identified in these regulations shall be maintained in its natural state as a permanent buffer. Where impacts within this setback area are unavoidable due to the nature of the construction activity (e.g. stream crossings for roads or utilities), the project shall be designed so that the number of stream crossings and the width of the disturbance within the setback are minimized.
- (h) For all redevelopment projects: Post-construction practices shall assure a net reduction of 20% of the impervious area of the site, or provide for treatment of 20% of the WQv.
- (i) As technology and understand of habitat and land function develop the City SWMP Director determines that additional BMPs are appropriate. These regulations do not preclude the use of innovation or experimental post-construction storm water management technologies. However, the SWMP Director may require discharges from such structure to be

monitored to assure compliance with these other Community regulations.

U. Storm Water Basins:

1. Pool Geometry: The minimum length-to-width ration for the pond is 3:1 (the length will be three (3) times the width).
2. Riser in Embankment: The riser shall be located within the embankment for purposes of maintenance access. Access to the riser will be by manholes.
3. Water Drains: Each retention and water quality basin shall have a drainpipe that can completely drain the pond. The drain shall have an elbow within the pond to prevent sediment deposition from plugging the drain.
4. Adjustable Gate Valves: Both the Storm Water Management and water quality basin drains shall have adjustable gate valves. Valves shall be located inside of the riser at a point where they will remain dry and can be operated in a safe and convenient manner. During the annual inspections the valves shall be fully opened and closed at least once, and the verifying official shall attest to this on the inspection form. To prevent vandalism, the handwheel shall be chained to a ringbolt or manhole step.
5. Principal Spillway: Each principal spillway shall be designed in accordance with the NRCS standards and specifications for the office serving Cuyahoga County, Ohio. Each principal spillway shall have the capacity to pass the 100-year design storm flows. The inlet of riser size for the pipe drops shall be designed so that the flow through the structure goes from weir flow control to pipe flow control without going into orifice control in the riser. The crest elevation of the primary spillway and a removable trash rack shall be installed at each location. Anti-seep collars shall be provided for all pipe conduits through an embankment.
6. Safety Features;
 - (a) The perimeter of all water pool areas that are deeper than three (3) feet shall be surrounded by benches that meet the following:
 - 1) A safety bench, with a maximum slope of 3%, which extends outward, on dry land, from the shoreline. This bench will be a minimum of 25 feet wide to provide for the safety of individuals and maintenance vehicles that are adjacent to the water pool. The safety bench may be landscaped to prevent access to the water pool.
 - 2) Side slopes between the safety bench and the aquatic bench shall not be steeper than 3:1 (3 feet horizontal for every foot vertical).
 - 3) An aquatic bench that extends inward from the shoreline far enough to ensure public safety and has a maximum depth of 15 inches below the normal water surface elevations. The aquatic bench may be landscaped to

prevent access to the deeper water pool. The aquatic bench may also be incorporated into the post construction Water Quality Plan.

- 4) Side slopes beyond the aquatic bench and below the permanent water level shall not be steeper than 2:1 (2 feet horizontal for every foot vertical).
- (b) The contours of the pond will be designed and managed to eliminate drop-offs and other hazards. Side slopes getting to the pond shall not exceed 3:1 and shall terminate on a safety bench.
- (c) The primary spillway opening shall not permit access to the public and other non-maintenance personnel.

These standards are general guidelines and shall not limit the right of the SWMP Director to impose at any time additional, more stringent requirements, nor shall the standards limit the right of the SWMP Director to waive, in writing, individual requirements.

Methods for controlling increases in storm water runoff peaks and volumes may include, but are not limited to:

- A. Retarding flow velocities by increasing friction; for example, grassed road ditches rather than paved street gutters where practical, discharging roof water to vegetated areas, or grass and rock-lined drainage channels.
- B. Grading and use of grade control structures to provide a level of control in flow paths and stream gradients.
- C. Induced infiltration of increased storm water runoff into soil, where practical; for example, constructing special infiltration areas where soils are suitable, retaining topsoil for all areas to be vegetated, or providing good infiltration areas with proper emergency overflow facilities.
- D. Provisions for detention and retention; for example, permanent ponds and lakes with storm water basins provided with proper drainage, multiple-use areas for storm water detention, recreation, wildlife or transportation, or subsurface storage areas.

944.10

STREAM CHANNEL AND FLOOD PLAIN EROSION

Runoff Rate: The peak runoff rate from the development area shall not be greater after development than it was before development. The applicant shall provide calculations proving no increase in the runoff rates from the one (1), two (2), five (5), ten (10), twenty-five (25), fifty (50), and one hundred (100) year storms.

Runoff Volume: Increases in the runoff volume shall be offset by further restricting runoff rates. Based on the increase in runoff volume, the applicant shall determine the critical storm for the development area. The runoff rate from the

critical storm shall be restricted to the one (1) year pre-development storm runoff rate.

The critical storm shall be calculated as follows:

- A. Determine the total volume of runoff from a one-year frequency, twenty-four hour storm, occurring on the development area before and after development.
- B. From the volumes in paragraph (1) determine the percent of increase in volume of runoff due to development according to the equation (Q after divided by the Q before) X 100 and, using this percentage, select the critical storm from this table:

The Percentage Increase In Volume of Runoff Is:		
Equal To or Greater Than	And Less Than	The 24-Hour “Critical Storm” For Discharge Will Be
0	10	1 Year
10	20	2 Years
20	50	5 Years
50	100	10 Years
100	250	25 Years
250	500	50 Years
500	-	100 Years

Detention or Retention Basin Exemption for Redevelopment & Expansion Areas:

944.11

DETENTION OR RETENTION BASIN EXEMPTION FOR REDEVELOPMENT AND EXPANSION IN AREAS:

- A. In any non-residential district, the construction of a detention or retention basin will not be required for the redevelopment of an area if the post-development peak discharge for a 100 year frequency 24 hour storm is one (1) cubic foot per second or less during the TR-55 method of calculation.
- B. Only one (1) exemption will be allowed per parcel. Any subsequent expansion must provide for detention or retention and must include the previously exempted area.

Ohio Dam Safety Laws: The provisions of the Ohio Dam Safety Laws shall be followed. Proof of compliance with the Ohio Dam Safety Law administered by the ODNR Division of Water shall be, but is not limited to, a copy of the ODNR Division of Water permit number or a copy of the project approval letter from the ODNR Division of Water or a letter from the site owner explaining why the Ohio Dam Safety Law is not applicable. The written proof will be provided to the City Engineer before a construction permit will be issued.

NPDES Permits: The provisions of the National Pollutant Discharge Elimination System (NPDES) Permits, by the Ohio EPA, shall be followed. Proof of compliance shall be, but is not limited to, a copy of the Ohio EPA NPDES Permit number of a letter from the site owner explaining why the NPDES Permit is not applicable. The written proof will be provided to the City Building Inspector before a construction permit will be issued.

Federal and State Wetland Permits: The provisions of the U.S. Army Corps of Engineers dredge and fill permits for federally-protected wetlands shall be followed. The provisions of Ohio EPA's Isolated Wetlands Permits shall also be followed. Written proof of compliance with both permit programs will be provided to the Service Director before a construction permit will be issued.

Proof of Compliance: Sections 401 and 404 of the Federal Clean Water Act administered by the U.S. Army Corps of Engineers relating to waters of the United States under its jurisdiction and Isolated Wetlands under the jurisdiction of the Ohio EPA shall be followed. Proof of compliance shall be, but is not limited to, one of the following:

- A. A copy of the U.S. Army Corps of Engineers Individual Permit, if an Individual Permit is required for the development project, showing project approval and any restrictions that apply to the site activities. If a Federal Individual Permit is not required, the site owner shall submit proof of compliance with the U.S. Army Corps of Engineer's Nationwide Permit. This proof of compliance shall include, but is not limited to, one of the following:
 - 1. A letter from the site owner verifying that a qualified professional has surveyed the site and found no wetlands or other waters of the United States. Such a letter shall be noted on site plans submitted to the Community.
 - 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. Wetlands and other waters of the United States shall be delineated by protocols accepted by the U.S. Army Corps of Engineers and the Ohio EPA at the time of the application of these regulations.

944.12

PENALTIES

- A. Whoever violates or fails to comply with any provision of this regulation is guilty of a misdemeanor of the first degree and shall be fined no more than one thousand dollars (\$1,000) or imprisoned for no more than one hundred eighty (180) days, or both, for each offense.
- B. A separate offense shall be deemed committed each day during on or which a violation or noncompliance occurs or continues.

- C. Upon notice from the Service Director that work is being performed contrary to this regulation, such work shall immediately stop. Such notice shall be in writing and shall be given to the owner or person responsible for the development area, or person performing the work, and shall state the conditions under which such work may be resumed; provided, however, in instances where immediate action is deemed necessary for public safety or the public issuance of the written Building Inspector may require that the work be stopped upon verbal order pending insurance of the written order.
- D. The imposition of any other penalties provided herein shall not preclude the City, by or through its Law Director and/or any of their assistants, from 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, or ordinances, rules or regulation or the orders of the Service Director.

944.13

CONSTRUCTION AND MAINTENANCE GUARANTEE

All permanent storm water, soil erosion, sediment control and water quality practices not specifically waived by the City shall be constructed prior to the granting of the Final Plat Approval. Upon the request of the owner, the Community may defer the practice prior to the approval of the final plat where, in the SWMP Director's judgment, such a proper construction or installation is not necessary for the protection of the public health and safety; and where the prior installation or construction of such improvement would constitute an undue hardship on the owner because in the case of new vegetation or weather conditions, or because in the case of concrete, building construction could cause cracking and excessive wear and tear on new structure. In such the Community shall require a Security Board, Escrow Account, Certified Check or Cash to guarantee that such deferred improvements will be properly constructed or installed within an agreed specific time, but not to exceed six (6) months after the filing of such final plat.

The owner will provide maintenance guarantee for all permanent improvements, soil erosion, sediment control and water quality practices.

The City shall require a Security Bond, Escrow Account, Certified Check or Cash to guarantee that the planned temporary and permanent soil erosion, sediment control and water quality practices will be constructed and removed in a timely manner, as determined by the Building Inspector.

- A. The Guarantee: The guarantee of both performance and maintenance will be in the form of a Security Bond, Escrow Account, Verified Check or Cash. The Security Bond, Escrow Account, Verified Check or Cash will be used by the City to complete any guaranteed construction or removal of improvements or temporary and permanent soil erosion, sediment control and water quality practices determined by the City Engineer. The Security Bond, Escrow Account, Verified Check or Cash will be in the total amount

of both the performance guarantee and the maintenance guarantee. Ohio municipalities and counties may require performance bonds or other guarantees for water management improvement as stated in the ORC Chapter 711.101.

1. Security Bond, Escrow Account, Verified Check or Cash shall be deposited with the City prior to review by the City Engineer and/or its consultants to cover professional services of the City Engineer, Building Inspector, Zoning Inspector and/or other experts by the City Engineer, City Council, Mayor or Review Boards.
 2. No soil-disturbing activities shall be permitted until a Security Bond, Escrow Account, Verified Check or Cash has been posted to the satisfaction of the Service Director sufficient for the Community to perform the obligations otherwise to be performed by the owner or person responsible for the development area as stated in this regulation, and to allow all work to be performed as needed in the event that the owner or person responsible for the development area fails to comply with the provisions of this regulation. The Security Bond, Escrow Account, Verified Check or Cash shall be released only after all work required by this regulation has been completed to the satisfaction of the Service Director and all permit and inspection fees required by these regulations have been paid in full.
 3. No project subject to this regulation shall commence without a Soil Erosion and Sediment Control Plan approved by the SWMP Director.
- B. Performance Guarantee: The furnishing of a performance guarantee will be maintained in an amount of not less than 120% of the estimate approved by the SWMP Director, of installation of the deferred improvements.
- C. Maintenance Guarantee: The maintenance guarantee shall be maintained for a period of not less than two (2) years after final acceptance of the storm water, soil erosion, sediment control, and water quality practices in an amount equal to 20% of the estimate approved by the SWMP Director, of the construction of such practices.
- D. Time Extension: The Service Director may extend the time allowed for the installation of the improvements for which the performance guarantee has been provided with the receipt of a written request from the owner.
- E. Completion: Upon completion of the construction of improvements or temporary and/or permanent, soil erosion, sediment control, and water quality practices and the removal of the temporary soil erosion for which the performance guarantee has been provided the owner shall notify the SWMP Director of this fact.
- F. Slow Release Devices: Performance and maintenance, including final removal, guarantees will be maintained on the temporary sediment removal

slow release devices installed in detention and retention basins until at least 95% of the site has reached final soil stabilization.

944.14

APPLICATION PROCEDURES FOR EROSION AND SEDIMENT CONTROL PLANS

- A. Plans developed by the site owners and approved by the City in accordance with this regulation do not relieve the site owner of responsibility for obtaining all other necessary permits and/or approvals from federal, state, county, and local agencies and departments. If requirements vary, the most stringent requirement shall be followed.
- B. The site owner shall submit a report from the local county Soil and Water Conservation District, which reviews the owner's development plans and improvement plans. The applicant or their designated representative will pay any costs associated with obtaining the report(s) from the local county SWCD. These reports shall address:
 - 1. The soil limitations listed in the latest edition of the County Soil Survey and the predicted soil problems.
- C. Plans submitted to the SWMP Director for review and other required permits and documentation relevant to the project shall accompany approval.
- D. Five (5) sets of the plans and necessary data required by this regulation shall be submitted to the Building Inspector as follows:
 - 1. For Subdivision: After the approval of the preliminary plans and prior to the approval of improvement plans or drawings by the City Planning Commission.
 - 2. For Other Construction Projects: Concurrently with the submittal of construction drawings to the City SWMP Director.
 - 3. For General Clearing Projects: Thirteen (13) working days prior to any soil-disturbing activities.
- E. The SWMP Director, with consent of the City Engineer, shall review the plans including the approval report from the local county SWCD, and shall approve or return these with comments and recommendations for revisions, within twenty-one (21) working days after receipt of the plan as described above. A plan rejected because of deficiencies shall receive a report stating specific problems and the procedures for filing a revised plan. At the time of receipt of a revised plan, another twenty-one (21) day review period shall begin.
- F. Approved plans shall remain valid for one (1) year from the date of approval. After one (1) year the plans(s) approval automatically expires.

- G. No soil-disturbing activity shall begin before all necessary local, county, state and federal permits have been granted to the owner or operator.
- H. The City will do construction inspections until the site is stabilized as determined by the City Engineer.

944.15

RIPARIAN AND WETLAND SETBACK REQUIREMENTS

- A. It is hereby determined that the system of wetlands, riparian areas, rivers, streams, and other natural watercourses within the City contributes to the health, safety and general welfare of the residents. The specific purpose and intent of this part of these regulations is to regulate uses and developments within riparian and wetland setbacks that would impair the ability of riparian and wetland areas to:
 - 1. Reduce flood impacts by absorbing peak flows, slowing the velocity of floodwaters, and regulating base flow.
 - 2. Assist in stabilizing the banks of watercourses to reduce bank erosion and the downstream transport of sediments eroded from watercourse banks.
 - 3. Reduce pollutants in watercourse during period of high flows by filtering, settling, and transforming pollutants already present in watercourses.
 - 4. Reduce pollutants in watercourses by filtering, settling and transforming pollutants in runoff before they enter watercourses.
 - 5. Provide watercourse habitats with shade and food.
 - 6. Provide habitat to a wide array of aquatic organisms, wildlife, many of which are on Ohio's Endangered and/or Threatened Species listings, by maintaining diverse and connected riparian and wetland vegetation.
 - 7. Benefit the City economically by minimizing encroachment on wetlands and watercourse channels and the need for costly engineering solutions such as dams, retention basins, and rip rap to protect structures and reduce property damage and threats to the safety of residents; and by contributing to the scenic beauty and environment of the City, and thereby preserving the character of the City, the quality of the life of the residents of the City, and corresponding property values.
- B. The following regulations have been enacted to protect these services of riparian and wetland areas by providing reasonable controls governing structures and uses within a wetland and/or riparian setback along designated watercourses in the City.
- C. Applicability and Compliance:
 - 1. These regulations shall apply to all lands that are within the jurisdiction of the City and that border designated watercourses and wetlands as defined in these regulations.

2. The City shall issue no approvals or permits without full compliance with the terms of these regulations.
- D. Violation: Any person who violates any section of these regulation shall be guilty of a misdemeanor of the first degree and, upon conviction thereof, shall be subject to punishment as provided in the City Codified Ordinance 1301.07, and shall be required to restore the riparian and/or wetland setback through a restoration plan approved by the City.

944.16 ESTABLISHMENT OF DESIGNATED WATERCOURSES AND RIPARIAN SETBACKS

- A. Designated watercourses shall include those watercourses meeting any one of the following criteria:
1. All watercourses draining an area greater than ½ square mile, or
 2. All watercourses draining an area of less than ½ square mile and having a defined bed and bank.
 3. In determining if watercourses have a defined bed and bank, the City may consult with a representative of the local county SWCD or other technical experts as necessary.
- B. Riparian setbacks on designated watercourses are established as follows:
1. A minimum of 25 feet on both sides of all watercourses draining an area less than one half square miles and having a defined bed and bank as determined above.
- C. Riparian Setback Map:
1. The City shall use the latest edition of the official soil survey to show drainage features, on the paper maps in the back of the book, as the map identifying designated watercourses and their riparian setbacks. The drainage features identified on the paper maps in the official soil survey and the information contained therein shall be believed to be accurate.
 2. At the time of application of this regulation, if any discrepancy is found between the Riparian Setback Map and the criteria for designated watercourses or riparian setbacks as set forth in these regulations, the criteria shall prevail.
 3. In reviewing and interpreting the maps the City may consult with a representative if the local county SWCD and other technical experts as necessary.
- D. The following conditions shall applying riparian and wetland setbacks:
1. Riparian and wetland setbacks shall be measured in a perpendicular and horizontal direction and outward from the ordinary high water mark of each designated watercourse and defined wetland boundary.

2. Except as otherwise provided in this regulation, riparian and wetland setbacks shall be preserved in their natural state and shall be established prior to any soil disturbing or land clearing activities.
 3. Where the 100-year floodplain is wider than a riparian setback on either or both sides of a designated watercourse, the riparian setback shall be extended to the outer edge of the 100-year floodplain. The 100-year floodplain shall be determined by the project engineer conducting a hydrologic analysis of the project area in conformance with standard engineering practices and approved by the City Engineer.
 4. Where wetlands are identified with a riparian setback, the minimum riparian setback width shall be extended to the outer boundary of the wetland. In addition, wetlands shall be protected to the extent detailed in these regulations.
 5. Wetlands shall be delineated by a site survey approved by the Flood Plain Manager in delineation protocols accepted by the U.S. Army Corps of Engineers and the Ohio EPA at the time of application of this regulation. If a conflict between the delineation protocols of these two agencies, the delineation protocol that results in the most inclusive area of wetland shall apply.
- E. The applicant or their designated representative shall be responsible for delineating riparian and wetland setbacks, including any expansions or modifications as required by these regulations, and identifying these setbacks on all subdivisions, land development plans, and/or building permit applications submitted to the Flood Plain Manager. This delineation may be done by a metes and bounds survey and shall be subject to review and approval by the Flood Plain Manager. As a result of this review the Flood Plain Manager may consult with a representative of the County SWMP board or other technical expert as necessary.
- F. Prior to any soil-disturbing activity, riparian and wetland setbacks shall be clearly delineated on site by the applicant or their designated representative, and such delineation shall be maintained throughout soil disturbing activities.
- G. No approvals or permits shall be issued by the Flood Plain Manager prior to on-site review of riparian & wetland setbacks in conformance with these regulations.
- H. Upon completion of an approved subdivision, land development, or other improvement, riparian and wetland setbacks shall be permanently recorded on the plat records of the Flood Plain Manager.

944.17

ESTABLISHMENT OF WETLAND SETBACKS

Wetland setbacks shall be determined by Flood Plain Manager using practical guidelines.

PROCEDURE FOR WETLAND SETBACKS

- A. Upon filing a request for approval of a preliminary permit, the applicant or their representative shall retain a qualified professional to survey the proposed development site for wetlands. If no wetlands are found, the applicant or their representative shall submit a letter with the preliminary plat or permit application verifying that a qualified professional has surveyed the site and found no wetlands. If wetlands are found, the following procedures shall be followed:
1. A qualified professional acceptable to the City Engineer, shall determine the presence of Ohio EPA Category 2 or 3 wetlands (or current equivalent Ohio EPA classification) on the proposed development site using the latest version of the Ohio Rapid Assessment Method for wetlands evaluations approved at the time of this regulation. Acceptance of this determination shall be subject to approval by the Flood Plain Manager (FPM).
 2. If Ohio EPA Category 2 or 3 wetlands (or current equivalent Ohio EPA classification) are located on the proposed development site, the applicant or their designated representative shall delineate these wetlands and the wetland setback in conformance with these regulations. The applicant or their designated representative shall identify all delineated wetlands and their associated setbacks on all subdivisions plans, land development plans, and/or permit applications submitted to the FPM.
 - a. Wetlands shall be delineated by a site survey, approved by the FPM using BMP protocols.
 - b. Wetland setbacks shall be delineated using metes and bounds survey approved by the FPM.
 3. Prior to any soil-disturbing activity, the applicant or their designated representative shall delineate wetland setbacks on the development site, and the delineation shall be maintained throughout construction.
 4. No approvals or permits shall be issued by the FPM prior to delineation of wetland setbacks in conformance with this regulation.
- B. Upon completion of an approved subdivision, land development or other improvement, wetland setbacks shall be permanently recorded on plat records FPM.

USES PERMITTED IN RIPARIAN AND WETLAND SETBACKS

- A. By-Right Uses Without A Permit: Open space uses that are passive in character shall be permitted in riparian and wetland setbacks, including but not limited to, those listed in these regulations. No use permitted under these regulations shall be construed as allowing trespass on privately held lands.

1. Recreational Activity. Passive recreational uses, as permitted by federal, state, and local laws, such as hiking, fishing, hunting, picnicking, and similar uses.
 2. Removal of Damaged or Diseased Trees. Damaged or diseased trees may be removed.
 3. Revegetation and/or Reforestation. Riparian and wetland setbacks may be revegetated with non-invasive plant species.
- B. By-right uses with a permit: Open spaces used under permit of FPM.
1. Selective Harvesting of Timber: Selective harvesting of timber may be allowed upon presentation of a Forest Management and Harvest Plan accepted by the City Forester or the Service Director.
 - a. Any landowner harvesting timber for sale shall post a \$1,000 performance guarantee with the Forester or Service Director. This guarantee may be a Security Bond, Escrow account (with instructions), Certified Check or Cash, and it shall be held until completion of the time-harvesting operation. It will be returned when harvested area meets Forester or Service Director's standards.
 - b. Due to the potential for felled logs and branches to damage downstream properties and City storm sewers & ditches, all logs greater than 6 inches in diameter must be removed from the property. Harvested trees that are approved Stream Bank Stabilization and Erosion Control Measures as approved by the SWMP Director shall be allowed to remain in a designated watercourse.
 2. Stream Bank, Stabilization and Erosion Control Measures: Stream Bank Stabilization and Erosion Control Measures may be allowed provided that such measures are ecologically compatible and substantially utilize natural materials and native plant material and native plant species where practical. This program is under the control of the Forester or Service Director.
 3. Crossings: Crossings of designated watercourses and through riparian setbacks by publicly and privately owned sewer and/or water lines and private utility lines may only be approved by the Service Director upon receipt of a plan reviewed by the City Engineer.
 4. Conservation Easements: Placing permanent conservation easements on riparian wetland setback areas is encouraged by the FPM.

944.20

USES PROHIBITED IN RIPARIAN AND WETLAND SETBACKS

Any use not authorized under these regulations shall be prohibited. Prohibited uses are:

- A. Construction. There shall be no structures of any kind.

- B. Dredging or Dumping. There shall be no drilling, filling, dredging, or dumping of soil, spoils, liquid, or solid materials, except for non-commercial composting of uncontaminated natural materials, and except as permitted under the USES PERMITTED IN RIPARIAN AND WETLAND SETBACKS section of these regulations.
- C. Roads and Driveways. Installing roads and driveways in riparian and/or wetlands without permission in writing from the Service Director are prohibited. The Service Director must insure that roads and driveways are not significantly impacting the setbacks. The SWMP Director must concur.
- D. Motorized Vehicles. There shall be no use of motorized vehicles other than City Service and Safety Vehicles & Equipment, except as permitted under Uses Permitted in Riparian and Wetland Setbacks section of these regulations.
- E. Disturbance of Natural Vegetation. There shall be no disturbance of the natural vegetation, except for such conservation maintenance that the landowner deems necessary to control noxious weed; for such plantings as are consistent with this regulation; for such disturbances as are approved under the Uses permitted in Riparian and Wetland Setbacks section of these regulations; and for the passive enjoyment, access, and maintenance of landscaping or lawns existing at the time of passage of this regulation. Nothing in this regulation shall be construed as requiring a landowner to plant or undertake any other activities in riparian and wetland setbacks.
- F. New Surface and/or Subsurface Sewage Disposal or Treatment Areas. Riparian and wetland setbacks shall not be used for the disposal or treatment of sewage except in accordance with local county Board of Health regulations in effect at the time of application of this regulation.
- G. Crossings. Crossings of designated wetland setbacks by publicly and privately owned sewer and/or water lines and public and private utility transmission lines without a permit utility transmission lines without a permit issued by the U.S. Army Corps of Engineers and/or the Ohio EPA, and approved by the Service Director.

944.21

NON-CONFORMING STRUCTURES OR USES IN RIPARIAN AND WETLAND SETBACKS

- A. A non-conforming use within a riparian and wetland setback which is in existence at the time of passage of this regulation, and which is not otherwise permitted under these regulations, may be continued. However, the use shall not be changed or enlarged unless it is changed to use permitted under these regulations.
- B. A non-conforming structure within a riparian and wetland setback which is in existence at the time of passage of this regulation, and which is not otherwise permitted under these regulations, may be continued. However,

the existing building footprint or roofline may not be expanded or enlarged in such a way that would move the structure closer to the stream or wetland.

- C. A non-conforming use or deteriorated structure within a riparian and wetland setback which is in existence at the time of passage of this regulation, and which is discontinued, terminated, or abandoned for a period of six (6) months or more, may not be revived, restored, or re-established.

944.22

VARIANCES WITHIN RIPARIAN AND WETLAND SETBACKS

- A. The Flood Plain Manager with approval of the City Engineer may grant a variance from this regulation as provided herein. In determining whether there is unnecessary hardship or practical difficulty such as to justify the granting of a variance, the Flood Plain Manager shall consider the potential harm or reduction in riparian and/or wetland area functions that may be caused by a proposed structure or use.
- B. In making a variance determination, the Flood Plain Manager may consider the following:
 - 1. The soil type natural vegetation of the parcel, as well as the percentage of the parcel that is in the 100-year flood plain. The criteria of the City's flood damage prevention regulations may be used as guidance when granting variances in the 100-year flood plain.
 - 2. The extent to which the requested variance impairs the flood control, erosion control, sediment control, water quality protection, or other functions of the riparian and/or wetland area. This determination shall be based on sufficient technical and scientific data.
 - 3. The degree of hardship this regulation places on the landowner, and the availability of alternatives to the proposed activity.
 - 4. Soil-disturbing activities permitted in a riparian and/or wetland setback through variances should be implemented in order to minimize clearing to the extent possible, and to include Best Management Practices necessary to minimize erosion and maximize sediment control.
 - 5. The presence of significant impervious cover, or smooth vegetation such as maintained lawns, in riparian setback areas compromises their benefits to the City.
 - 6. Variances should not be granted for asphalt or concrete paving in riparian and wetland setbacks. Variances may be granted for gravel driveways in riparian setbacks when necessary (except walking or biking trails).
 - 7. Varying the front, rear and side yard setback before the riparian and wetland setbacks are varied.

944.23

BOUNDARY INTERPRETATION & APPEALS PROCEDURE

- A. When an applicant or their designated representative disputes the boundary of a riparian or wetland setback or the ordinary high water mark of a watercourse, the applicant or their designated representative shall submit documentation to the Flood Plain Manager which describes the boundary, the applicant's or their designated representative's proposed boundary, and justification for the proposed boundary change.
- B. The Flood Plain Manager shall evaluate this documentation and shall make a written determination within a reasonable period of time, not to exceed sixty (60) days, a copy of which shall be submitted to the applicant or their designated representative. If during this evaluation, the Flood Plain Manager requires further information, it may require the applicant or their designated representative provide this. In the event that the Flood Plain Manager requests such additional information, the sixty (60) day limit in the Flood Plain Manager's review shall be postponed until such information is provided by the applicant or their designated representative.
- C. Any party aggrieved by any wetland or riparian setback determination under this regulation may appeal to the Board of Zoning Appeals.

944.24

INSPECTION OF RIPARIAN AND WETLAND SETBACK

- A. The delineation of riparian and/or wetland setbacks shall be inspected by the Flood Plain Manager, as follows:
 - 1. The Flood Plain Manager under a subdivision, land development plan, and/or building permit shall prior to any soil disturbing activities authorize the inspection. The applicant or their designated representative shall provide the Flood Plain Manager with at least five (5) working days notice prior to starting a soil-disturbing or land clearing activities.
 - 2. Prior to starting any of the activities authorized by the Flood Plain Manager under the Uses Permitted in Riparian and Wetland Setbacks section of these regulation, the applicant or their designated representative shall provide the Flood Plain Manager with at least five (5) working days notice prior to starting such activities.
- B. Any time evidence is brought to the attention of the Flood Plain Manager that uses or structures are occurring that may reasonably be expected to violate the provisions of these regulations.

944.25

DEFINITIONS, AS USED IN THIS ORDINANCE

ACCELERATED WATER EROSION: Wearing away of the land surface by water, occurring at a much more rapid rate than geologic or normal erosion, primarily as a result of the influence of the activities of humans.

APPROVING AUTHORITY: The SWMP Director's responsible for administering erosion and sediment control, pollution control, storm water runoff control, riparian setback and wetland setback programs.

BMP (Best Management Practice): Any practice or combination of practices that is determined to be the most effective, practicable (including technological, economic, and institutional considerations) means of preventing or reducing the amount of pollution generated by non-point sources of pollution to a level compatible with water quality goals. BMPs may include structural practices, conservation practices and operation and maintenance procedures.

CERTIFIED PROFESSIONAL EROSION AND SEDIMENT CONTROL SPECIALIST (CPESC): A person certified by Certified Professional in Erosion and Sediment Control, Inc.

CHANNEL: A natural stream that conveys water, or a ditch or channel excavated for the natural flow of water.

CITY ENGINEER: Currently the City contracts with KI&S Associates to fill engineering requirements.

CONCENTRATED STORM WATER RUNOFF: Surface water runoff which converges and flows primarily through water conveyance features such as swales, gullies, waterways, channels or storm sewers, and which exceeds the maximum specified flow rates of filters or perimeter controls intended to control sheet flow.

CONSERVATION: The wise use and management of natural resources.

CUT AND FILL SLOPES: A portion of land surface or area from which soil material is excavated and/or filled, forming a slope of embankment.

DAMAGE OR DIESEASED TREES: Trees that have split trunks; broken tops; heart rot; insect or fungus problems that will lead to imminent death; undercut root systems that put the tree in imminent danger of falling; leaning as a result of root failure that puts the tree in imminent danger of falling, or any other condition that puts the tree in imminent danger of being uprooted or falling.

DENUDED AREA: A portion of land surface on which the vegetation or other soil stabilization features have been removed, destroyed or covered, and which may result in or contribute to erosion and sedimentation.

DESIGNATED WATERCOURSE: A watercourse that is contained within, flows through, or borders the City and meets the criteria set forth in these regulations.

DETENTION BASIN: A storm water management pond that remains dry between storm events. Storm water management ponds include a properly engineered/designed volume which is dedicated to the temporary storage and slow release of runoff waters.

DETERIORATED STRUCTURE: A structure which has sustained substantial damage from any origin whereby the cost of restoring the structure to its before damaged condition would be equal to, or greater than 50% of the market value of the structure before the damage occurred.

DEVELOPMENT AREA: Any tract, lot, or parcel of land, or combination of tracts, lots or parcels of land, which are in one ownership, or are in contiguous and in diverse ownership, where earth-disturbing activity is to be performed.

DITCH: An excavation, either dug or natural, for the purpose of drainage or irrigation, and having intermittent flow.

DUMPING: The grading, pushing, piling, throwing, unloading or placing of soil.

EARTH-DISTURBING ACTIVITY: Any grading, excavating, filling, or other alteration of the earth's surface where natural or man-made ground cover is destroyed.

EARTH MATERIAL: Soil, sediment, rock, sand gravel, and organic material or residue associated with or attached to the soil.

EROSION: The process by which the land surface is worn away by the action of water, wind, ice or gravity.

EROSION AND SEDIMENT CONTROL PLAN: A written and/or drawn soil erosion and sediment pollution control plan to minimize erosion and prevent off-site sedimentation throughout all earth disturbing activities on a development area.

EROSION AND SEDIMENT CONTROL PRACTICES: Conservation measures used to control sediment pollution and including structural practices, vegetative practices and management techniques.

EXISTING: In existence at the time of the passage of this Ordinance and these regulations.

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA): The agency with overall responsibility for administering the National Flood Insurance Program.

FLOOD PLAIN MANAGER: The FPM is responsible for issuing all Flood Plain Permits for shoreline and wetlands. Currently the FMP is the Service Director, and the position reports to the Service Director.

FREQUENCY STORM: A rainfall event of a magnitude having a specified average recurrence interval and is calculated with Natural Resources Conservation Service, USDA Type II twenty-four hour curves or depth-duration frequency curves.

GRADING: Earth-disturbing activity such as excavation, stripping, cutting, filling, stockpiling, or any combination thereof.

GRUBBING: Removing, clearing or scalping material such as roots, stumps or sod.

HIGHLY ERODIBLE SOIL: A portion of land surface that is very susceptible to erosive forces and characterized by steep slopes or long slopes.

IMPERVIOUS COVER: Any surface that cannot effectively absorb or infiltrate water. This may include roads, streets, parking lots, rooftops, and sidewalks.

INTERMITTENT STREAM: A natural channel that may have some water in pools but where surface flows are non-existent or interstitial (flowing through sand and gravel in stream beds) for periods of one week or more during typical summer months.

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.

LANDSLIDE: The rapid mass movement of soil and rock material downhill under the influence of gravity in which the movement of the soil mass occurs along an interior surface of sliding.

LOCAL COUNTY SWCD: The local county Soil and Conservation District.

NATURAL RESOURCES CONSERVATION SERVICE (NRCS): An agency of the United States Department of Agriculture, formerly known as the Soil Conservation Service (SCS).

NPDES PERMIT: A National Pollutant Discharge Elimination System Permit issued by the Ohio EPA under the authority of the USEPA, and derived from the Federal Clean Water Act.

NOXIOUS WEED: Any plant species defined by the Ohio Department of Agriculture as a “noxious weed” and listed as such by the Department. For the purposes of this regulation, the most recent version of this list at the time of application of these regulations shall prevail.

OHIO EPA: The Ohio Environmental Protection Agency.

ORDINARY HIGH WATER MARK: The point of the bank or shore to which the presence and action of surface area is so continuous as to leave a district marked by erosion, destruction or prevention of woody terrestrial vegetation, predominance of aquatic vegetation, or other easily recognized characteristic.

OUTFALL: An area where water flows from a structure such as a conduit, storm sewer, improved channel or drain, and the area immediately beyond the structure which is impacted by the velocity of flow in the structure.

PERSON: Any individual, corporation, partnership, joint venture, agency, unincorporated association, municipal corporation, township, county, state agency, the federal government, or any combination thereof.

PERENNIAL STREAM: A natural channel that contains water throughout the year, except possibly during periods of extreme drought.

PROFESSIONAL ENGINEER: A person registered in the state of Ohio as a Professional Engineer, with specific education and experience in water resources engineering, acting in strict conformance with the Code of Ethics of the Ohio Board of Registration for Engineers and Surveyors.

QUALIFIED FORESTER: Any forester employed by the Ohio Department of Natural Resources, Division of Forestry, or any person attaining the credential of Certified Forester as conferred by the Society of American Foresters.

REDEVELOPMENT: The demolition or removal of existing structures or land uses and construction of new ones.

RETENTION BASIN: A storm water management pond that maintains a permanent pool of water. These storm water management ponds include a properly engineered/designed volume dedicated to the temporary storage and slow release of runoff waters.

RIPARIAN AREA: Naturally vegetated land adjacent to watercourses which, if appropriately sized, helps to stabilize stream banks, limit erosion, reduce flood flows, and/or filter and settle out runoff pollutants, or which performs other functions consistent with the purposes of these regulations.

RIPARIAN SETBACK: Those lands within the City which are alongside streams, and which fall within the area defined by the criteria set forth in these regulations.

SEDIMENT: Solid material, both mineral and organic, that is in suspension, is being transported or has been moved from its site of origin by wind, water, gravity or ice, and has come to rest on the earth's surface either on dry land or in a body of water.

SEDIMENT BARRIER: A sediment control device such as a geotextile Silt Fence or Filter Strip, usually capable of controlling only small flow rates. (Straw bale barriers are not acceptable.)

SEDIMENT BASIN: A temporary Sediment Pond that releases runoff at a controlled rate. It is designed to slowly release runoff, detaining it long enough to allow most of the sediment to settle out of the water. The outlet structure is usually a designed pipe riser and barrel. The entire structure is removed after construction. Permanent storm water detention structures can be modified to function as temporary Sediment Basins.

SEDIMENT CONTOL: The limiting of sediment being transported, by controlling erosion or detaining sediment-laden water, allowing the sediment to settle out.

SEDIMENT POLLUTION: A failure to use management or conservation practices to control wind or water erosion of the soil and to minimize the degradation of water resources by soil sediment in conjunction with land grading, excavating, filling, or other soil-disturbing activities on land used or being developed for commercial, industrial, residential, or other purposes.

SEDIMENT TRAP: A temporary sediment settling pond having a simple spillway outlet structure stabilized with geotextile and rip rap.

SENSITIVE AREA: An area or water resource that requires special management because of its susceptibility to sediment pollution, or because of its importance to the well-being of the surrounding communities, region, or the state and includes, but is not limited, the following:

- A. Ponds, wetlands or small lakes with less than five acres of surface area;
- B. Small streams with gradients less than ten feet per mile with average annual flows of less than 3.5 feet per second containing sand or gravel bottoms.
- C. Drainage areas of a locally designated or an Ohio-designated Scenic River.
- D. Riparian and wetland areas.

SERVICE DIRECTOR: Currently is a chartered position that also fills the position of FLOOD PLAIN MANAGER AND SWMP DIRECTOR.

SETTLING POND: A runoff detention structure, such as Sediment Basin or Sediment Trap, which detains sediment-laden runoff, allowing sediment to settle out.

SHEET FLOW: Water runoff in a thin uniform layer or rills and which is of small enough quantity to be treated by sediment barriers.

SIVICULTURE: The theory and practice of controlling forest establishment, composition and growth.

SLIP: A landslide as defined under "Landslides".

SLOUCHING: A slip or downward movement of an extended layer of soil resulting from the undermining action of water or the earth-disturbing activity of man.

SOIL: Unconsolidated erodible earth material consisting of minerals and/or organic.

SOIL CONSERVATION SERVICE, USDA: The federal agency now titled the “Natural Resources Conservation Services”, which is an agency of the United States Department of Agriculture.

SOIL LOSS: Soil moved from a site due to the forces of erosion and re-deposited at another site on land or in a body of water.

SOIL STABILIZATION: Vegetative or structural soil cover that controls erosion, and includes permanent and temporary seed, mulch, sod, pavement, etc.

SOIL SUREY: The official soil survey produced by the Natural Resources Conservation Service, USDA in cooperation with the Division of Soil and Water Conservation, ODNR and the Board of County Commissioners.

STORM WATER CONTROL STRUCTURE: Practice used to control accelerated storm water runoff from development areas.

STORM WATER CONVEYANCE SYSTEM: All storm sewers, channels, streams, ponds, lakes, etc., used for conveying concentrated storm water runoff, or for storing storm water runoff.

STREAM: A body of water running or flowing on the earth’s surface, or a channel in which such flow occurs. Flow may be seasonally intermittent.

SUBSTANTIAL DAMAGE: Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would be equal to, or greater than 50% of the market value of the structure before the damage occurred.

UNSTABLE SOIL: A portion of land surface or area which is prone to slipping, sloughing or landslides, or is identified by Natural Resources Conservation Service methodology as having low soil strength.

USEPA: The United States Environmental Protection Agency.

100-YEAR FLOOD PLAIN: Any land susceptible to being inundated by water from a base flood. The base flood is the flood that has a one percent (1%) or greater chance of being equally exceeded in any given year. For the purposes of this regulation, the 100-year flood plain shall be defined by FEMA or a site-specific Flood Plain Delineation in conformance with standard engineering practices and approved by the City.

WATERCOURSE: Any natural, perennial, or intermittent channel, stream, river or brook.

WATER RESOURCES: All streams, lakes, ponds, wetlands, watercourses, waterways, drainage systems, and all other bodies or accumulations of surface water, either natural or artificial, which are situated wholly or partly within, or

border upon this state, or are within its jurisdiction, except those private waters which do not combine or affect a junction with natural surface waters.

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, 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). Wetlands shall be delineated by a site survey approved by the City using delineation protocols accepted by the U.S. Army Corps of Engineers and the Ohio EPA at the time of the delineation protocol that results in the most inclusive area of wetlands shall apply.

WETLAND, OHIO EPA CATEGORY 2 WETLANDS: Those wetlands classified by the Ohio Environmental Protection Agency (Ohio EPA) as Category 2 wetlands under OAC 37845-1-54(C)(2), or current equivalent Ohio EPA classification, in accordance with generally accepted wetland functional assessment methods acceptable to the U.S. Army Corps of Engineers and Ohio EPA at the time of application of this regulation.

WETLAND, OHIO EPA CATEGORY 3 WETLANDS: Those wetlands classified by the Ohio EPA as Category 3 wetlands under OAC 3745-1-54(C)(3), or current equivalent Ohio EPA classification, in accordance with generally accepted wetland functional assessment methods acceptable to the U.S. Army Corps of Engineers and Ohio EPA at the time of application of this regulation.

WETLAND SETBACK: Those lands within the City that fall within the area defined by the criteria set forth in these regulations.

WINTER: October 1st to April 1st of each year.

SECTION 2. It is found and determined that all formal actions of this Council concerning and relating to the adoption of this Ordinance were adopted in an open meeting of this Council, and that all deliberations of the Council and any of its committees which 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. This ordinance is hereby declared to be an emergency measure made necessary for the preservation of the public peace, health, safety and welfare of the City of Sheffield Lake, Ohio, the emergency being the immediate necessity of establishing Chapter 944 of the Codified Ordinances of Sheffield Lake regarding Regulation of Pollutants into the Municipal Storm Sewer System.

PASSED THIS _____ DAY OF _____, 2011.

	Yea	Nay	NV
Dennis Bring	_____	_____	_____
Leanna Stark	_____	_____	_____
Diane Huska	_____	_____	_____
Steve Kovach	_____	_____	_____
Rick Rosso	_____	_____	_____
Alan Smith	_____	_____	_____
Eric Elliott	_____	_____	_____

MAYOR
John J Piskura

PRESIDENT OF COUNCIL
Edward R Podmanik

and/or

PRESIDENT PRO TEM
Richard Rosso

CLERK OF COUNCIL
Kay Fantauzzi

I, Kay Fantauzzi, duly appointed Clerk of Council of Sheffield Lake DO HEREBY CERTIFY that this is a true and exact copy of Ordinance#_____. PASSED_____, 2011.

