

ORDINANCE NO. 2011-01

**AN ORDINANCE ENACTING CHAPTER 555 OF THE
CODIFIED ORDINANCES OF THE VILLAGE OF PERRY,
OHIO, PROVIDING FOR COMPREHENSIVE STORM WATER MANAGEMENT
AND DECLARING AN EMERGENCY**

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

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

WHEREAS, insufficient control of storm water 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; and.

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

WHEREAS, storm water runoff contributes to increased quantities of pollutants to water resources; and.

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

WHEREAS, there are watershed-wide efforts to reduce flooding, erosion, and water quality problems in the Grand River and Arcola Creek watersheds and to protect and enhance the water resources of the Grand River and Arcola Creek; and.

WHEREAS, the Village of Perry 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 Village of Perry 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, the Village of Perry is a member of the Lake County Stormwater Management Department and recognizes its obligation as a part of this utility to manage storm water within its borders; and

WHEREAS, 40 C.F.R. Parts 9, 122, 123, and 124, and Ohio Administrative Code 3745-39 require designated communities, including the Village of Perry to develop a Storm Water Management Program that, among other components, requires the Village of Perry 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 selfgovernment and to adopt and enforce within their limits such local police, sanitary, and other similar regulations, as are not in conflict with general laws.

NOW THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE VILLAGE OF PERRY, COUNTY OF LAKE AND STATE OF OHIO, AS FOLLOWS:

Section 1. That, effective January 1, 2011, Council hereby approves and enacts the following CHAPTER 555 of the Codified Ordinances of the Village of Perry, Ohio, and same is hereby adopted in its entirety, and shall be hereafter known as "CHAPTER 555- Comprehensive Storm Water Management" of said Codified Ordinances:

**CHAPTER 555
COMPREHENSIVE STORM WATER MANAGEMENT**

555.01 PURPOSE

The purpose of this chapter is to:

- (a) Reduce impacts due to soil erosion and sedimentation caused by construction activities.
- (b) Reduce damage to the receiving streams and drainage systems caused by increases in sedimentation discharged from development activities.
- (c) Reduce deterioration of the quality of the receiving waters.
- (d) Reduce downstream flooding by controlling runoff.
- (e) Establish a basis for design of storm water management facilities.
- (f) Provide for perpetual maintenance of storm water runoff quality and quantity.

555.02 DEFINITIONS

- (a) For the purpose of this chapter:
 - (1) Words used in the present tense include the future tense, and the singular includes the plural unless the context clearly indicates the contrary.
 - (2) The term "shall" is always mandatory and not discretionary; the word "may" is permissive;
 - (3) Any word or term used in these regulations but not defined in this section shall be given the standard or common interpretation.
- (b) As used in this chapter:
 - (1) "Applicant" means the Developer, Owner or Contractor applying for the Zoning Permit.
 - (2) "Best Management Practices" (BMPs) means activities, practices and procedures to prevent or reduce the discharge of pollutants directly or indirectly to the municipal storm drain system and waters of the United

States. BMPs include but are not limited to: treatment facilities to remove pollutants from storm water; operating and maintenance procedures; facility management practices to control runoff; erosion and sediment control practices; and the prohibition of specific activities, practices, and procedures and such other provisions as the Village determines appropriate for the control of pollutants.

- (3) "Village" means the Village of Perry.
- (4) "Channel" means a natural stream that conveys water or man-made structure or ditch excavated for the flow of water.
- (5) "Concentrated Storm Water Runoff" means surface 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.
- (6) "Conservation" means the wise use and management of natural resources.
- (7) "Cut and Fill Slopes" means a portion of land surface or area from which soil material is excavated and/or filled, forming a slope or embankment.
- (8) "Lake Soil and Water Conservation District" means the local section of Ohio Department of Natural Resources, organized under Ohio R.C. Chapter 1515.
- (9) "Denuded Area" means 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.
- (10) "Development Area" means any tract, lot or parcel of land where an earth-disturbing activity is to be performed in accordance with a single plan of development.
- (11) "Drainage Pattern" means the path of flow of storm water runoff and the methods of collecting the water including sheet flows, ditches, swales, storm sewers, culverts, manholes, catch basins, trench drains, detention and retention basins and ponds.
- (12) "Earth-Disturbing Activity" means any clearing, grubbing, grading, excavating, filling or other alteration of the earth's surface where natural or man-made ground cover is destroyed.
- (13) "Engineer"
 - A. "Village Engineer" means the person or firm selected by Village Council to perform Professional Engineering Services and hired by the Village in accordance with the Ordinance or Resolution passed approving such hiring.
 - B. "Staff Engineer" means the person employed by the Village to perform engineering services and coordinate work with the Village Engineer.
- (14) "Erosion" means the process by which the land surface is worn away and relocated by the action of water, wind, ice or gravity.
- (15) "Erosion and Sediment Control Practices" means conservation measures

- used to control wearing away and movement of soils and may include structures, vegetation and management techniques.
- (16) "Federal Clean Waters Act" means the Federal Water Pollution Control Act (33 U.S.C. Section 1251 et seq.) and any subsequent amendments thereto and its aim is to control and regulate the discharge of pollutants into all waters.
 - (17) "Grading" means earth disturbing activity such as excavation, stripping, cutting, filling, stockpiling, dumping or any combination thereof.
 - (18) "Grubbing" means removing, clearing or scalping material such as roots, stumps or sod.
 - (19) "Landslide" means 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
 - (20) "National Pollutant Discharge Elimination System (NPDES) Storm Water Discharge Permits" mean general, group and individual storm water discharge permits which regulate facilities defined in Federal NPDES regulations pursuant to the Clean Water Act.
 - (21) "Notice of Intent (NOI)" means an application form submitted to the Ohio Environmental Protection Agency (OEPA) whereby the applicant certifies their intent to comply with the general permit requirements of the NPDES permit.
 - (22) "Occupancy Permit" means the permit issued by the Lake County Building department.
 - (23) "OEPA" means the Ohio Environmental Protection Agency.
 - (24) "Outfall" means 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.
 - (25) "Permit Holder" means the person or entity with a zoning and or building permit.
 - (26) "Person" means any individual, corporation, partnership, joint venture, agency, unincorporated association, municipal corporation, township, county, state agency, the Federal government or any combination thereof.
 - (27) "Post Development" means the condition and drainage pattern after an earth disturbing activity has been completed.
 - (28) "Project Site" means development area.
 - (29) "Sediment" means 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.
 - (30) "Sediment Barrier" means a sediment control device such as a geotextile Silt Fence or Filter Strip, usually capable of controlling only small flow rates and as defined in "Rainwater and Land Development", (latest edition) Ohio's Standards for Stormwater Management Land Development and Urban Stream Protection (available from Ohio Department of Natural

- Resources. Division of Soil and Water Conservation).
- (31) "Sediment Settling Facility" means a settling pond, meeting or exceeding the design specifications of a temporary sediment basin as defined in "Rainwater and Land Development", (latest edition) Ohio's Standards for Stormwater Management Land Development and Urban Stream Protection (available from Ohio Department of Natural Resources, Division of Soil and Water Conservation).
 - (32) "Sediment Control" means the limiting of sediment transport by controlling erosion or detaining sediment-laden water, allowing sediment to settle out and the implementing of Best Management Practices (BMPs).
 - (33) "Sensitive Area" means an area or water resource (as delineated prior to Storm Water Pollution Prevention Plan approval) that requires special management because of its susceptibility to sediment pollution or because of its importance to the well-being of the surrounding communities, the region or the State and includes:
 - 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 and with average annual flows of less than three and one-half feet per second containing sand or gravel bottoms;
 - C. Drainage areas of a locally or State designated scenic river; and
 - D. Slopes in excess of twenty-five percent. (4H:1V)
 - (34) "Settling Pond" means a storm water runoff detention structure, such as a sediment basin or sediment trap, which detains sediment-laden runoff, allowing sediment to settle out.
 - (35) "Sheet Flow" means water runoff in a thin, uniform layer, or in rills, which is of small enough quantity to be treated by sediment barriers.
 - (36) "Sloughing" means 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.
 - (37) "Soil" means erodible earth material.
 - (38) "Storm Water Pollution Prevention Plan (SWPPP)" means a plan of the Development Area showing the proposed implementation of Best Management Practices, as defined in paragraph (b)(2) hereof.
 - (39) "Stream" means a body of water running or flowing on the earth's surface or the channel in which such flow occurs. Flow may be seasonally intermittent.
 - (41) "Unstable Soil" means a portion of the land surface which is prone to slipping, sloughing or landslides or is identified by Soil Conservation Service, USDA methodology as having a low soil strength.
 - (42) "Water Resources" means all streams, lakes, ponds, wetlands, water courses, waterways, drainage systems and all other bodies or accumulations of surface water, which are situated wholly or partly within

the Village except those private waters which do not combine or effect a junction with natural surface waters.

- (43) "Wetlands" means those areas of land with sufficient moisture, soil type and supporting vegetation consistent with the definition of the United States Army Corp of Engineers (USACE). Wetlands shall be identified by an ecological resource specialist.

555.03 PROJECTS TO WHICH THIS CHAPTER APPLIES

This chapter applies to earth disturbing activities involving new, relocated or expanded underground cables, pipelines, residential or commercial subdivisions, industrial, commercial and public areas, and all other land uses not specifically exempted as described in Section 555.04. This chapter also applies if the earth disturbing activity is only clearing by cutting trees which would change the storm water runoff pattern.

555.04 PROJECTS TO WHICH THIS CHAPTER DOES NOT APPLY

This chapter does not apply to:

- (a) Land disturbing activities related to producing agricultural crops or silvicultural operations regulated by the Ohio Agricultural Sediment Pollution Abatement Rules.
- (b) Strip mining operations regulated by Ohio R.C. Chapter 1513.
- (c) Surface mining operations regulated by Ohio R.C. Chapter 1514.
- (d) Earth disturbing activities involving an individual home site or an area less than one acre.
- (e) Linear construction projects, such as pipeline or utility installation, which do not result in installation of impervious surface and are independent of other construction projects.

555.05 COMPLIANCE WITH OTHER APPLICABLE LAWS

Applicants shall comply with all of the following provisions where applicable:

- (a) The provisions of the Ohio Department of Natural Resources "Ohio Dam Safety Laws".
- (b) The provisions of the National Pollution Discharge Elimination System (NPDES) as administered by the United States and the Ohio Environmental Protection Agencies. If an NPDES permit is required, a Notice of Intent (NOI) must be submitted to the OEPA. A copy of the NPDES permit or an EPA-signed statement saying that the permit is not needed shall be provided to the Village. When required, the "SWPPP" shall be submitted to the Lake County Soil and Water Conservation District for review.
- (c) The provisions of the U.S. Army Corps of Engineers, Section 404 permits for Federally protected water resources, including wetlands, streams and lakeshores.

- (d) The Federal Clean Waters Act (33 U.S.C. Sec 1251 et seq.).

555.06 COMPREHENSIVE STORM WATER MANAGEMENT PLANS REQUIRED

Each application for a Zoning Permit for projects as defined in Section 555.03 shall include a Comprehensive Storm Water Management Plan which plan shall consist of:

- (a) A Storm Water Runoff Control Plan;
- (b) A Water Quality Plan; and
- (c) A Storm Water Pollution Prevention Plan.

Comprehensive Storm Water Management Plans shall comply with the requirements as set forth herein.

555.07 CONTENTS OF COMPREHENSIVE STORM WATER MANAGEMENT PLANS

(a) Contents of Plans: The following information shall be included in each of the Storm Water Pollution Prevention, Storm Water Runoff Control, and Water Quality Plans:

- 1) A general project description including the nature, type, and purpose of earth-disturbing activity and the larger common plan of development.
- 2) A vicinity sketch locating the development area, and all pertinent surrounding features, including water resources, wetlands, riparian buffers, conservation easements and other sensitive natural resources.
- 3) A development plan indicating the area of the site that is expected to undergo excavations, filling and grading or clearing.
- 4) The location of sensitive areas receiving runoff from the development.
- 5) 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 watersheds in which it is located.
- 6) The existing and proposed topography with one-foot contour intervals.
- 7) The location and description of existing and proposed drainage patterns and facilities, including any allied drainage facilities beyond the development area.
- 8) Existing and proposed watershed boundary lines, direction of flow and watershed acreage.
- 9) The limits of clearing and earth-disturbing activity.
- 10) The types of soils within, or affected by, the development as determined by the most current edition of the Lake County Soil Survey.
- 11) The scheduling, phasing, and coordination of construction operations and erosion and sediment control BMPs, including vegetative plantings and mulch.
- 12) Surface water locations including springs, wetlands, streams, lakes, ponds, riparian areas, etc., on or within 200 feet of the site.
- 13) Existing and planned locations of buildings and utilities that may affect soil erosion and sediment control.

- 14) 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.
- 15) Long-term maintenance requirements and schedules of all BMPs used during the construction and post-construction phases of each development.
- 16) Long-term maintenance inspection schedules.
- 17) 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.
- 18) 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.
- 19) The location of any riparian and/or wetland setback areas on the property.
- 20) The plan must clearly describe for each major construction activity the appropriate BMPs and the general timing (or sequence) during the construction process of when the measures will be implemented; and, who will be responsible for implementation.

(b) Storm Water Pollution Prevention Plans: The Storm Water Pollution Prevention Plan shall also include:

- 1) A list of soil erosion and sediment control BMPs and the standards and specifications to be followed by the field contractors during installation.
- 2) A map showing the location of the planned which shall include:
 - a) The location of each BMP.
 - b) The BMPs size, detail 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.
 - d) Settling ponds drawn to scale with basic dimensions and the calculations for size and volume.
 - e) Detailed drawings of all other structural control BMPs.
 - f) Proposed utilities, which may affect soil erosion and sediment control BMPs.
 - g) Any other soil erosion and sediment control related BMPs and items that are required by the Village Engineer.

(c) Storm Water Control Plans: Storm Water Control Plans shall include, at a minimum, the following additional information:

- 1) A general description of the runoff control method proposed to meet this ordinance.

- 2) The location and design calculations for all permanent storm water conveyance, detention and retention structures, and other storm water control structures.
 - 3) Any other storm water control items required by the Village Engineer.
- (d) Water Quality Plans: The Water Quality Plan shall also include:
- 1) A description of the post construction BMPs that will be installed to control construction pollutants in storm water discharges.
 - 2) A description of the water quality standards and projected treatment levels that will be addressed by the water quality BMPs being installed.

1177.08 MINIMUM REQUIREMENTS FOR STORM WATER POLLUTION PREVENTION PLANS

The minimum standards set forth herein shall not limit the right of the Village to impose additional, more stringent requirements or to waive individual requirements. Storm Water Pollution Prevention Plans shall satisfy the minimum standards set forth below and shall meet the specifications in the latest edition of "Rainwater and Land Development". Storm Water Pollution Prevention Plans shall meet following minimum standards:

- (a) All soil erosion and sediment control practices shall be functional throughout all phases of 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 development area is permanently restabilized.
- (b) Clearing and grubbing will be done in two (2) or more phases. The first phase will include only those locations necessary to install the perimeter soil erosion and sediment and storm water control practices. After the perimeter controls are in place and functioning the remaining phase(s) of clearing and grubbing may continue.
- (c) Denuded areas shall have soil stabilization applied within no more than seven (7) days if they are to remain dormant for more than forty-five (45) days. Permanent or temporary soil stabilization shall be applied to denuded areas within no more than seven (7) days after final grade is reached on any portion of the site.
- (d) Concentrated storm water runoff from denuded areas flowing at rates which exceed the design capacity of sediment barriers shall pass through a sediment settling facility. The facility's storage capacity shall be no less than sixty-seven (67) cubic yards per acre of total drainage area. Trapping efficiency should be at least 75%. Permanent storm water control ponds that are designed to trap sediment during construction shall be designed to provide for a slow release of sediment laden water. Velocity dissipation devices shall be placed at the outfall channel as necessary to provide a non-erosive flow velocity from the structure to a watercourse.
- (e) 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) All storm sewer inlets which accept water runoff from the development area shall be protected so that sediment laden water will not enter the storm sewer without first being filtered or otherwise treated to remove sediment, unless the storm sewer system drains to a settling facility.
- (g) Streams including bed and banks shall be re-stabilized immediately after in-channel work is completed, interrupted, or stopped. To the extent practicable, construction vehicles shall be kept out of streams. Where in-channel work is necessary, precautions shall be taken to stabilize the work area during construction to minimize erosion.
- (h) If a stream must be crossed by construction vehicles regularly during construction, a temporary stream crossing shall be provided. Temporary stream crossings shall have hydraulic capacity and/or overflow capability to prevent upstream flooding.
- (i) Measures shall be taken to prevent soil and other solids and pollutants from being transported onto surfaces where runoff is not checked by sediment controls, or onto public roads. Minimize such tracking by installing gravel construction entrances. Where such materials are transported onto a public road surface, the roads shall be cleaned thoroughly at the end of each day, or more frequently as required by the Village Service Director. Said materials shall be removed from paved surfaces by shoveling or sweeping. Street washing shall be allowed only after most of the sediment has been removed by shoveling or sweeping.
- (j) No soil, rock, debris, or any other material shall be dumped or placed into a water resource or into such proximity that it may readily slough, slip, or erode into a water resource unless such dumping or placing is authorized by the Village Engineer or Staff Engineer, and, when applicable, the U.S. Army Corps of Engineers, for such purposes as, but not limited to, constructing bridges, culverts, and erosion control structures.
- (k) Unstable soils prone to slipping or sliding shall not be graded, excavated, filled or have loads imposed upon them unless the work is done in accordance with a qualified professional engineer's recommendations to correct, eliminate, or adequately address the problems.
- (l) Cut and fill slopes shall be designed and constructed in a manner which will minimize erosion. Consideration shall be given to the length and steepness of the slope, soil type, up slope drainage area, groundwater conditions, and slope stabilization.
- (m) Outfalls and constructed or modified channels shall be designed and constructed to withstand the expected velocity of flow from a post development, ten-year (or greater) frequency storm without eroding.
- (n) 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 Village Engineer or

Staff Engineer, covers 80 % or more of the soil surface and provides adequate cover and is mature enough to control soil erosion satisfactorily and to survive adverse weather conditions.

- (o) All temporary 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 Village Planning Commissioner upon a written recommendation of the Village Engineer or Staff Engineer. Trapped sediment shall be permanently stabilized to prevent further erosion, or removed from the site.
- (p) All erosion and sediment control practices shall be designed and constructed to minimize maintenance requirements. They shall be maintained and repaired as needed to assure continued performance of their intended function. Sediment and erosion controls shall be inspected by the applicant or his designee once every 7 days and within 24 hours of 0.5 inch or greater rainfall amount. A written log of these inspections must be kept by the applicant or his designee. This log should indicate the date of inspection, name of inspector, weather conditions, observations, actions taken to correct any problems and the date action was taken. Upon a request of the Village Engineer the owner shall submit these documents.
- (q) During construction of underground utility lines, pipes etc., trench dewatering devices shall discharge in an approved manner which will not adversely affect water resource or off-site property.
- (r) 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 shall be submitted to the Village Engineer within 2 working days of the date that the inspection was conducted.

555.09 MINIMUM REQUIREMENTS FOR STORM WATER CONTROL PLANS

- (a) Storm water control systems shall be designed for the ultimate use of the land. Phased construction projects shall provide a storm water management for the ultimate development of the total project area.
- (b) Storm detention or retention basins and facilities shall be designed so that they will continue to function with minimal maintenance and maximum water quality benefit. Developers and designers shall make all reasonable attempts to avoid wetlands and shall not cut-off the water supply to an identified wetland. Wetland impacts must be coordinated with the USACE and/or OEPA.
- (c) A paved channel for low water flow is required across all detention basins for each point source into the basin.
- (d) Velocity dissipation shall be placed at the outfall structures of all detention or retention basins and along the length of any outfall channel as necessary to provide a non-erosive flow velocity from the structure to a water course. The design criteria shall be applied to each watershed within the development area.
- (e) Detention basins and facilities may be designed to serve the dual purpose of a

sediment trap during construction.

- (f) The runoff rate from the development area shall not be greater after development than it was before development. The applicant shall provide calculations to the Village Engineer, to be approved by the Village Engineer, proving no increase in the runoff rates from the two, five, ten, twenty-five, fifty, and one hundred year frequency storms.
- (g) 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 and all shorter duration storms shall be restricted to the one (1) year pre-development storm runoff rate.
- (h) The critical storm for a specific development area is determined as follows:
 - (1) Determine the total volume of runoff from a one-year frequency, twenty-four hour storm, occurring on the development area before and after development.
 - (2) From the volumes determined above, determine the percent of increase in volume of runoff due to development.
 - (3) Using this percentage, select the critical storm from the following table:

| The Percentage Increase in Volume of Runoff is | | The 24-Hour Critical Storm for Discharge Will Be (yrs.) |
|--|---------------|--|
| Equal to or Greater than | and Less than | |
| 0 | 10 | 1 |
| 10 | 20 | 2 |
| 20 | 50 | 5 |
| 50 | 100 | 10 |
| 100 | 250 | 25 |
| 250 | 500 | 50 |
| 500 | No Limit | 100 |

- (g) Methods for controlling increases in storm water runoff peaks and volumes may include, but are not limited to:
 - (1) Detention or retention basins or subsurface storage areas.
 - (2) Retarding flow velocities by increasing friction.
 - (3) Induced infiltration of increased storm water runoff into soil. Soil limitations shall be determined by the current edition of the Lake Soil and Water Conservation District survey by the Soil Conservation Service.
- (h) Storm sewer design for a ten year storm using the Rational Method to estimate the storm runoff rate "Q". Use Cleveland Regional Rainfall Intensity Frequency-

Duration Curves or other curves appropriate for this region.

- (i) For sites which are currently developed and are scheduled to be redeveloped, the pre-developed condition shall be defined to be 100% of the site as grassland for critical storm and volume storage calculations.

555.10 MINIMUM REQUIREMENTS FOR STORM WATER QUALITY PLANS

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:

- (a) The rationale for BMP selection must address the anticipated impacts on the hydrology, water quality and riparian habitat.
- (b) Water Quality Plans shall contain a description of the post-construction BMPs for the site and the rationale for choosing them. The rationale must address the anticipated impacts on the hydrology, water quality and riparian habitat.
- (c) Detail 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.
- (d) Post construction BMPs shall achieve the following goals:
 - (1) 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 (WQ_v).

- (2) The WQ_v shall be determined through a site hydrologic study approved by the Village Engineer that uses continuous hydrologic simulation and local long-term hourly precipitation records, or by using the following equation:

$$WQ_v = \infty (0.858i^3 - 0.78i^2 + 0.774i - 0.04) * PA/12$$

where:

- WQ_v = water quality volume in acre-feet
- i = watershed impervious ratio (percent total imperviousness divided by 100)
- P = mean storm presentation volume in inches (0.17 inches in Lake County)
- ∞ = regression constant from least-squares analysis (see Table 1)
- A = area draining into the facility in acres

Table 1

Regression Constant and Required Draw Down Time for Structural
Post-Construction Treatment Control Practices

| <i>Best Management Practice</i> | Drain Time of WQ_v 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) | 12 | 1.109 |
| - Solids Removal Only * | N/A | 3.0 |
| - Solids and Dissolved Nutrient Removal** | | |
| Constructed Wetlands (above permanent pool) | 24 | 1.299 |
| Media Filtration, Bio-retention | 40 | 1.500 |
| Other Facilities (if acceptable by the Village Engineer and Ohio EPA) | 24 | 1.299 |

* Provide both a permanent pool and an extended detention volume above the permanent pool, each sized at WQ_v

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

- (3) An additional volume equal to 20 percent 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 Rainwater and Land Development manual, or in another design manual acceptable for use by the Village Engineer.
- (4) Facilities shall be cleaned and maintained such that the full water quality volume is available and that the facility functions as designed.
- (5) Construction activities may 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.
- (6) Construction activities shall maintain or improve ecological function of watercourses by protecting or improving the stream and riparian habitat. Ecological functions include pollution assimilation, flood attenuation, maintenance of the sediment regime, base flow, moderation of temperature and habitat to the maximum extent practicable.
- (7) For 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 WQ_v.
- (8) The Village Engineer may determine that additional BMPs are appropriate. These regulations do not preclude the use of innovation or experimental post-construction storm water management technologies. However, the Village Engineer may require discharges from such structures to be monitored to assure compliance with these or other regulations.

555.11 CONSTRUCTION REQUIREMENTS.

- (a) In conjunction with Chapter 1105 "Enforcement and Penalty", after the Village Engineer issues a permit to construct, the permit holder shall notify the Village Engineer, who provides site inspection, at least two working days prior to any earth disturbing activities in the development area.
- (b) All permitted earth-disturbing activities shall be subject to site inspection by the Village Engineer, to determine compliance with this Chapter. Occupancy Permits may be withheld by the Village Engineer until all requirements of this chapter are met.
- (c) The Village Planning Commission may grant a variance from the provisions of this chapter where the applicant can show that compliance with all or part-of such provisions are not appropriate. A variance may be granted if the probability of off site damage is slight because of exceptional topographic or other physical conditions of the development area. The issuance of a variance does not eliminate obligations to meet Ohio Environmental Protection Agency requirements. Requests for variances shall be submitted in writing to the Village Planning Commission and shall include justification for the granting of the variance.

555.12 MAINTENANCE REQUIREMENTS

- (a) Storm drainage improvements and facilities which are located within public rights-of-way or on public property shall be dedicated to the Village of Perry for ownership and maintenance unless such requirement is specifically waived by the Village.
- (b) Where facilities intended to be owned and/or maintained by the Village, cross or are located on private property, an easement for the maintenance, repair, and replacement of such facilities shall be provided to the Village.
- (c) Storm water management facilities located on private property and intended to be held in private ownership shall provide and agreement and/or plan for the perpetual maintenance of such facilities including provisions for funding maintenance provisions.
- (d) The Village of Perry shall be a beneficial party to all storm water management facilities and provisions and their perpetual maintenance. The Village, through its Engineer, shall have the right, but no obligation, to inspect such facilities and provisions and to require implementation of maintenance and/or repair measures as determined to be necessary and appropriate for the continued proper functioning of such storm water management facilities. Failure to comply with directives to maintain or repair facilities shall constitute a violation of this Chapter.

555.13 PERMITS AND DEPOSITS.

Permits and deposits for plan review services and inspectional services shall be in accordance with the provisions and requirements of the Ordinances and Resolutions of the Village.

555.14 APPEALS

Any person aggrieved by any order, requirement, determination, or any other action or inaction by the Village of Perry in relation to this regulation may appeal to the Lake County Court of Common Pleas. Such an appeal shall be made in conformity with the provisions of Chapter 2506 of the Ohio Revised Code. Written notice of appeal shall be served on the Clerk of the Village of Perry.

555.15 VIOLATIONS

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

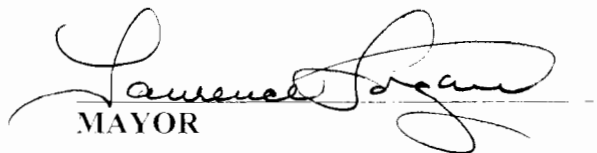
555.99 PENALTY

- 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 Village of Perry instituting an appropriate action or proceeding in a Court of proper jurisdiction to prevent an unlawful development, or to enjoin, 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 Village of Perry.

Section 2. That all formal actions of this Council concerning the passage of this Ordinance were adopted in an open meeting, and all deliberations of this Council, or 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. That any and all Ordinances of parts thereof in conflict with this Ordinance shall be, and same, are hereby repealed.

Wherefore, this Ordinance shall be in full force and effect at the earliest date permitted by law.


MAYOR

ADOPTED: January 13, 2011

ATTEST: Linda L. Hofer
CHIEF FISCAL OFFICER