

# **STORMWATER MANAGEMENT AND SEDIMENT CONTROL REGULATIONS**

## **ARTICLE I: GENERAL PROVISIONS**

### **1.01: Title**

These regulations shall be cited as the Richland County Stormwater Management and Sediment Control (SWM/SC) Regulations, and are also referred to herein as “these regulations.”

### **1.02: Statutory Authorization**

These regulations are promulgated pursuant to Ohio Revised Code (R.C.) 307.79, which authorizes the Commissioners to manage stormwater, abate soil erosion, and abate water pollution by soil sediment, R.C. 307.37(B)(3), which authorizes the Commissioners to protect surface and subsurface drainage, R.C. 307.85, which authorizes counties to implement federal programs, and any other applicable authority possessed by the Commissioners.

### **1.03: Administration**

The Commissioners designate the Richland County Soil and Water Conservation District as the Stormwater Manager to administer Articles III., IV., V., and VI. of these regulations. The Stormwater Manager shall have the authority to determine compliance with these regulations, issue or deny permits, approve or disapprove plans, and issue notices and stop orders authorized by these articles of the regulations. The agencies and offices designated in Article VII. of these regulations shall implement that article.

### **1.04: Engineering Assistance**

The Commissioners will appoint a Registered Professional Engineer licensed in the State of Ohio to act as the Stormwater Engineer for Articles III., IV., V., and VI. of these regulations. The Stormwater Engineer shall review and recommend the approval, amendment, or disapproval of SWM/SC Plans, inspect construction sites that require a professionally engineered plan to evaluate compliance with SWM/SC Plans and these regulations, provide the Stormwater Manager with engineering assistance where beneficial, and perform all other activities required of the Stormwater Engineer by these Regulations.

### **1.05: Purpose**

A. These regulations establish feasible and economically reasonable standards to prevent drainage problems from the construction of buildings and structures and to abate soil erosion and degradation of water resources from soil sediment in conjunction

with land grading, excavating, filling, or other earth-disturbing activities.

B. Some of the objectives of these regulations include:

1. Permitting development while keeping downstream flooding, erosion and sedimentation at existing levels.
2. Preventing damage to receiving water resources and drainage systems that may be caused by increases in the quantity and/or rate of water discharged and impairment of their capacity that may be caused by sedimentation.
3. Maintaining or designing stormwater drainage systems that shall prevent damage to both upgradient and downgradient properties and assure the long-term adequacy of the stormwater drainage systems.

### **1.06: Scope**

A. Articles III., IV., V., and VI. of these regulations shall apply to all earth-disturbing activities described in sections 3.02 or 4.05 that are performed in unincorporated areas of Richland County, Ohio except the following:

1. Farming and silvicultural activities, including storm water runoff from orchards, cultivated crops, pastures, range lands, and forest lands, except that this exemption does not include earth-disturbing activities (a) at silvicultural point sources as defined in 40 CFR §122.27 and (b) in the unincorporated urbanized areas of Richland County, for the construction of farm buildings and structures and any other farming activity subject to the NPDES program for stormwater discharges into municipal separate storm sewer systems;
2. Strip mining operations as defined in R.C. 1513.01;
3. Surface mining operations as defined in R.C. 1514.01;
4. Public highways, transportation and drainage improvements or maintenance thereof undertaken by a government agency or political subdivision, provided that its standard sediment control policies have been approved by the Richland County Board of Commissioners, or by the Chief of the Division of Soil and Water Conservation and that the applicable sediment control policies are no less restrictive than these regulations; and
5. Refuse disposal sites controlled by other regulations.

B. Article VII. Shall apply to all buildings and structures described in subsection A. of section 7.01 that are constructed in the unincorporated areas of Richland County.

### **1.07: Disclaimer of Liability**

Neither the approval of a plan under these regulations nor compliance with these regulations shall relieve any person or other entity from responsibility for damage to any person or property otherwise imposed by law, nor shall it create a duty by or cause of action against the Commissioners, the Stormwater Manager, or the Stormwater Engineer to those damaged by the developments subject to these regulations. Furthermore, where it is noted that an Owner/Operator's activities may be subject to permitting and regulatory requirements of programs other than those required by these regulations, this information is provided for the Owner/Operator's convenience and may not constitute a complete list of all other applicable requirements. These regulations shall not relieve an Owner/Operator of the responsibility to determine the applicability of any other legal requirements.

### **1.08: Severability**

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.

### **1.09: Nuisance Abatement and Other Actions**

These regulations shall not be construed as authorizing any person to maintain a private or public nuisance, and compliance with the provisions of these regulations shall not be a defense in any action to abate such a nuisance. These regulations shall not impair, abridge, estop, or waive any claim or cause of action by the Commissioners or any other person under regulation, statute, equity, or common law. Compliance with these regulations shall not be a defense to a claim or cause of action brought under any other authority, including regulation, statute, equity, or common law.

### **1.10: Responsibility**

The failure of the Commissioners, Stormwater Manager, Stormwater Engineer, or any other county official, employee, contractor, or agent to observe or recognize hazardous or unacceptable conditions or to recommend corrective measures shall not relieve an Owner/Operator from the responsibility for the condition or damage resulting therefrom and shall not result in the Commissioners, the Stormwater Manager, the Stormwater Engineer, or the Commissioners' officers, employees or agents being responsible for any conditions or damage resulting therefrom.

### **1.11: Effective Date**

These regulations shall replace the existing regulations on the 31st day after adoption by the Commissioners.

## **ARTICLE II: DEFINITIONS**

### **2.01: Interpretation of Terms and Words**

For the purpose of these regulations, certain rules or word usage apply to the text as follows:

A. Words used in the present tense include the future tense, and the singular includes the plural, unless the context clearly indicates the contrary.

B. The term “shall” is always mandatory and not discretionary; the word “may” is permissive. The term “should” is permissive but indicates strong suggestion.

C. The word or term not interpreted or defined by this article shall be construed according to the rules of grammar and common usage so as to give these regulations their most reasonable application.

D. In instances where mention is made of the Ohio Revised Code, hereby referred to as the “R.C.,” it means that the actual wording of the current code is to be used. Any summary or paraphrasing of the Ohio Revised Code is provided only as a guide to that which is being referred to in the actual code.

### **2.02: Definitions**

Appeals Board: A group of individuals knowledgeable in matters relating to stormwater management and erosion control, representing diverse interests appointed by the Commissioners to consider appeals to these regulations. This Board shall include one representative of the County Engineer’s Office, two representatives of the development or building industry, one representative of the Township Association, one representative of the Richland Soil and Water Conservation District, and one representative of the Regional Planning Commission. The Commissioners shall maintain a list of those persons on an annual basis.

Best Management Practice (BMP): Techniques used to lessen the environmental impacts of land use. These techniques may involve structures, vegetation, or altering construction operations. BMPs include schedules of activities, prohibitions of practices, maintenance procedures, and other management practices (both structural and non-structural) to prevent or reduce the pollution of surface waters of the state. BMPs also include treatment requirements, operating procedures, and practices to control plant and/or construction site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Commissioners: The Richland County Board of Commissioners.

Construction Plan: A site plan submitted and stamped by a Registered Engineer in the State of Ohio.

Critical Storm: That storm which is calculated by means of the percentage increase in volume of runoff by a proposed development. The critical storm is used to calculate the maximum allowable stormwater discharge rate from a developed site.

Cut: An excavation that reduces an existing elevation, as in road or foundation construction.

Detention Basin: A permanent stormwater management facility for the temporary storage of runoff, which is designed so as not to create a permanent pool of water.

Development Drainage Area: Any contiguous area operated as one development unit.

Ditch: An open earthen channel, either dug or natural, for the purpose of drainage or irrigation with intermittent flow.

Drainage Improvement: As defined in R.C. 6131.01(C), and/or conservation works of improvement under R.C. Chapters 1511 and 1515.

Earth-Disturbing Activity: Any clearing, grading, excavating, grubbing, and/or filling of the earth's surface where natural or man-made ground cover is destroyed. Earth-disturbing activities also include equipment movement, driveways, equipment staging, material storage, soil borrow areas, material disposal areas, soil stockpiles, and other soil-disturbing activities associated with the clearing, excavating, grubbing, and/or filling that are on the same property or a contiguous property. Both development and redevelopment projects are included.

Engineer: A Registered Professional Engineer licensed in the State of Ohio.

Erosion: The process by which the land surface is worn away by the action of wind, water, ice or gravity or by man made disturbance of the soil.

Erosion and Sediment Control: A system of structural and vegetative measures that minimize soil erosion and offsite sediment pollution.

Farming: Any development whose primary purpose is the bona fide commercial production of crops, livestock, trees, and/or other agricultural products. Also includes any soil used to grow agricultural crops for sale or self-consumption. Farming does not include a farm residence, nor does it include buildings or developments on a farm that will be used primarily for purposes other than farming.

Improvement Drawings: Grading, street resurfacing, curbs and gutter, sidewalks, crosswalks, water mains, sanitary sewers, storm sewers, drainage facilities and structures, street lights, street trees, and the appropriate appurtenances required to render land suitable for the use proposed.

Impervious: Not allowing infiltration. Impervious areas include gravel drives, roofs,

compacted unimproved work areas, concrete, and asphalt.

Include or Including: Includes but is not limited to.

Multi-family Development: Apartments, condominiums, or other similar buildings containing two or more dwelling units.

Natural Drainage Course: A means to convey water across existing lands or topography from one end of a watershed to the other. It could appear in the form of a grassed swale, waterway, or small intermittent eroded channel that has not been physically altered from its natural state other than cleaning, mowing, clearing, or the removal of vegetation.

Owner/Operator: Any Person that (1) owns or leases a property subject to these regulations, or (2) is a developer or construction contractor for the property that either (a) has operational control over construction plans and specifications for the project or (b) has day-to-day operational control over the activities at a project necessary to comply with these regulations (e.g., it has the authority to direct workers at a site to carry out the activities required by these regulations).

Person: Any individual, corporation, partnership, limited liability company, trust, business trust, estate, joint venture, agency, unincorporated association, municipal corporation, county or state agency or entity, township, the federal government, any other entity, or any combination thereof.

River: A natural body of running water flowing on or under the earth and having a detectable current. Also see Stream.

Retention Structure: A permanent stormwater management facility that provides for the storage of runoff by means of a permanent pool of water.

Riprap: Sometimes known as channel rock protection. A permanent cover of rock typically in the form of limestone. It is used to stabilize stream banks, provide in-stream channel stability, and provide a stabilized outlet at culvert or tile outlets.

Runoff: The portion of rainfall, melted snow, or irrigation water that flows across the earth's surface and is naturally released back to streams.

Sediment: Soils or other surface materials that can be transported or deposited by the action of wind, water, ice, or gravity as a product of erosion (sedimentation).

Sediment Basin: A barrier or other suitable retention structure built across an area of water flow to intercept runoff and allow transported sediment to settle and be retained prior to discharge into waters of the State.

Sediment Pollution: Degradation of water resources by sediment as a result of failure to

apply management or conservation practices to abate wind or water soil erosion.

Soil and Water Conservation District (SWCD): As organized under R.C. Chapter 1515; referring either to the Soil and Water Conservation District Board, or its designated employee(s), hereinafter referred to as the Richland SWCD.

Soil Stabilization: Vegetative or structural soil cover controlling erosion, including permanent and temporary seed, mulch, sod, netting, jute mat, and silt fence.

Special Flood Hazard Area: The land in the floodplain subject to a one percent or greater chance of flooding in any given year. Areas of special flood hazard are designated by the Federal Emergency Management Agency as Zones A, AE, AH, AO, A1—A30, and A99.

Stormwater: Stormwater runoff, snow melt runoff, and/or surface runoff and drainage.

Stormwater Engineer: An individual, organization or agency appointed by the Commissioners to perform the engineering duties required of the Stormwater Engineer by the SWM/SC Regulations.

Stormwater Management: Runoff water safely conveyed or temporarily stored and released at an allowable rate to minimize erosion and flooding.

Stormwater Management and Sediment Control Plan: An erosion and sediment control strategy or plan to minimize erosion and prevent off-site sedimentation by containing sediment on-site, or by passing sediment-laden runoff through a sediment control measure prepared and approved in accordance with the specific requirements of the Stormwater Manager and Articles IV. and V. of these regulations. This is hereinafter referred as “SWM/SC Plan.”

Stormwater Manager: The Richland County Soil and Water Conservation District, which is appointed by the Richland County Board of Commissioners to manage the SWM/SC Regulations.

Stream: A body of flowing water on the earth’s surface confined within a bed and banks and having a detectable current. Typically is a natural water course containing water at least part of the year and can at times appear on USGS maps as a blue solid line or intermittent dashed line. USGS maps are available at the Richland County Tax Map Office.

Subsoil: That portion of the soil below the topsoil down to bedrock parent material.

Topography: The depiction of the general shape of the land, including its relief and the position of its natural and man-made features through the use of contour lines of elevation.

Topsoil: The upper layer of soil that is usually darker in color and higher in organic matter and nutrients than the subsoil.

Vegetation: Actively growing grass, wheat, oats, ground cover, or other plant life.

Watercourse: A definite channel with bed and banks, within which concentrated water flows either continuously or intermittently, e.g. streams.

Water Resources: All rivers, streams, lakes, ponds, wetlands, watercourses, drainage systems, and all other bodies or accumulations of surface water, natural or artificial, that are situated wholly or partly within or border upon this state, or are within its jurisdiction, except those private waters that do not combine or effect a junction with natural surface waters.

Watershed: The total drainage area contributing runoff to a single point.

## **ARTICLE III: PERFORMANCE STANDARDS FOR STORMWATER MANAGEMENT, DRAINAGE CONTROL, AND SEDIMENT CONTROL**

### **3.01: Introduction**

Article III. provides performance standards that apply to all earth-disturbing activities subject to these regulations. An engineered plan must also be submitted pursuant to section 4.05 if earth-disturbing activities will disturb soil on one or more acres of land on a single lot or tract, or on less than one acre that is part of a larger common plan of development or sale (e.g., a subdivision) if the larger common plan will ultimately disturb at least one acre. Some projects, whether or not required to submit engineered plans, must comply with the post-construction standards in Article V. and enter into an Inspection and Maintenance Agreement where necessary to control stormwater after completion of construction.

### **3.02: Applicability**

A. The performance standards in this Article III. apply to all developments that have any of the following characteristics:

1. The development will involve at least 3,000 square feet of earth-disturbing activities;
2. The development is part of a larger common plan that will involve at least 3,000 square feet of earth-disturbing activities, such as a subdivision or subdivided land;
3. The development will (a) create at least 2,000 square feet of impervious surface, (b) add impervious surface to a development already possessing at least 2,000 square feet of impervious surface, or (c) add impervious surface that in combination with existing impervious surface creates a total of at least 2,000 square feet of impervious surface;
4. The proposed development will significantly change the use (e.g., from residential to commercial) of a development previously subject to this Article; or
5. The development will involve earth-disturbing activities within 100 feet of a stream, a wetland, or Special Flood Hazard Area (see the Richland County Floodplain Regulations for additional requirements).

For developments in progress on the effective date of these regulations in which at least the threshold amount of the activities identified in section 3.02 A. will occur after the effective date, the activities occurring after the effective date are subject to the newly promulgated requirements of Article III. Other activities subject to the previous regulations shall continue to comply with the standards and other

requirements of the previous regulations and any permits, plans, agreements, and other obligations established pursuant to the previous regulations. (E.g., if 5,000 square feet of a 20,000 square foot development are disturbed before the effective date, that 5,000 square feet would be subject to the previous regulations while the remainder would be subject to the new regulations.)

B. Where a performance standard in this Article III. is expressly limited to earth-disturbing activities of a specific acreage, that performance standard applies only to earth-disturbing activities of that size.

### **3.03: Initiation of Work**

A. At least 30 days prior to initiating earth-disturbing activities for which SWM/SC Engineered Plans are not required under Article IV., the Owners/Operators shall submit to the Stormwater Manager a permit application by completing an application form provided by the Stormwater Manager and submitting the information required by the checklist for applications contained in the Appendix to these regulations. The Stormwater Manager shall review and act on the approval or disapproval of these permit applications. No earth-disturbing activities or construction shall commence prior to the issuance of the permit.

B. The Owners/Operators shall notify the Stormwater Manager at least 48 hours prior to commencement of earth-disturbing activities for all developments subject to these regulations. The Owners/Operators shall notify the Stormwater Manager within 24 hours after project completion.

### **3.04: Protection of Adjacent Properties**

A. Properties adjacent to the site of land disturbance, including public lands and waters, shall be protected from sediment deposition. This shall be accomplished by preserving a well-vegetated buffer strip around the lower perimeter of the land disturbance, by installing perimeter controls such as sediment barriers, filters, dikes or sediment basins, or by a combination of such measures.

B. Prior to conducting Earth-Disturbing Activity that may affect county or township roads or rights-of-way within Richland County, the Owners/Operators shall consult with and obtain the concurrence of the County Engineer or the affected township official for selecting measures to protect public roads and rights-of-way from adverse effects caused by sedimentation. The Owners/Operators shall contact the County Engineer or affected township official to arrange a time and place for the consultation.

### **3.05: Vegetative Cover**

A. A permanent vegetative cover shall be established on graded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover of at least 75% is achieved that is mature enough to control soil erosion

satisfactorily and to survive severe weather conditions.

B. Seed types, fertilizers, and mulches shall be selected and utilized that shall produce a healthy growth of vegetation during the time of year the seeding will take place. For assistance in selecting seed types, fertilizer, and mulches, the Owners/Operators are referred to Tables 6 or 7 of Appendix A of these regulations or the ODOT 659 Seeding Schedule. Recommendations for seed types, fertilizers, and mulches are also available from the Natural Resources Conservation Service (NRCS) or your local seed supplier.

C. Oats, wheat or winter rye may be used for temporary vegetative cover.

D. All seeded areas shall be appropriately mulched with straw cover or other suitable materials. The type and rate can be found in Table 6 of Appendix A or from the current edition of the Ohio Department of Natural Resources' handbook entitled "Rainwater and Land Development: Ohio's Standards for Stormwater Management Land Development and Urban Stream Protection."

### **3.06: Soil Stabilization**

A. When required by the Stormwater Manager, silt fences and sediment basins shall be installed in accordance with manufacturer's recommendations prior to any earth-disturbing activities.

B. Temporary soil stabilization shall be applied within seven days after rough grading on non-vegetated areas that will remain idle (not be re-graded) for longer than 30 days, unless an extension is granted by the Stormwater Manager.

C. Permanent vegetation shall be installed on any portion of the site on which final grade has been achieved within seven days after final grading. Soil stabilization measures shall be selected that are appropriate for the time of the year, site conditions, and estimated length of use.

D. Soil stockpiles shall be protected with soil stabilization measures or sediment trapping measures to prevent soil from leaving the site.

E. All areas within 50 feet of a stream, wetland, or body of water shall be stabilized immediately after achieving final grade.

### **3.07: Stormwater Runoff Control and Treatment**

A. Treatment of stormwater runoff requires the use of BMPs and/or the proper geotextile product that may include grassed/vegetated areas or sedimentation basins to remove sediment and/or contaminants. Treatment must occur and remain on the development site to comply with section 3.04.

B. Owners/Operators shall control waste such as discarded building materials, chemicals, litter, and sanitary waste to prevent them from reaching water resources.

Any cleaning or washing of concrete trucks, well drilling equipment, and related equipment shall be conducted in a manner that shall prevent the wash water and pollutants from reaching water resources.

C. Vegetated filter strips of a correct width and length may be utilized when sheet or overland flow is planned (i.e., when stormwater is not collected). Whenever a vegetated filter strip alone is ineffective in stopping sediment movement onto adjacent property, additional perimeter controls shall be provided.

D. Roof drains shall be a reasonable distance from the property line to avoid flooding and excess discharge of water into road ditches or storm drains. Splash pads should be used whenever possible.

### **3.08: Sediment Basins/Traps**

When five or more contiguous acres are disturbed in one watershed, stormwater runoff from that development area shall pass through a sediment basin or other suitable sediment trapping facility. The sediment basins shall be designed with the equivalent of 67 Cubic Yard /Acre or greater storage capacity. The Stormwater Manager may require sediment basins or traps for smaller disturbed areas where deemed necessary. The sediment basin requirement may be eliminated if the Stormwater Manager finds that site conditions do not warrant its construction. Sediment basins or traps are temporary and shall be removed following final stabilization of the site.

### **3.09: Installation of Sediment Controls**

Sediment basins, traps, silt fences, sediment barriers and other measures to trap sediment on-site shall be constructed as a first step in grading and be made functional before upslope land disturbance or building construction takes place. Earthen structures such as dams, dikes, and diversions shall be seeded and/or mulched within seven days (or as weather conditions permit) after installation is complete.

### **3.10: Storm Sewer Inlet Protection**

All storm sewer conduit and catch basin inlets made operable during construction shall be protected so that sediment-laden water will not enter the conveyance system without first being filtered or otherwise treated to remove sediment. Treatment shall consist of either temporary or permanent measures or the use of geo-textile products and BMPs.

### **3.11: Cut and Fill Slopes**

Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion. Consideration should be given to the length and steepness of the slope, the soil type, upslope drainage area, groundwater conditions and other applicable factors. Slopes that are eroding excessively during the first 12 months after construction shall be provided with additional slope stabilizing measures until the problem is corrected. The

following guidelines are provided to aid in developing an adequate design:

- A. Roughened soil surfaces are generally preferred to smooth surfaces on slopes.
- B. Concentrated stormwater should not be allowed to flow down cut or fill slopes unless contained within an adequate channel, flume, or slope drain structure.
- C. Wherever a slope face crosses a water seepage plane that endangers the stability of the slope, adequate drainage or other protection should be provided.
- D. On long or steep slopes or easily eroded soils, silt fencing may be required on the contours to minimize erosion and allow vegetation to be established.
- E. Protection is required to ensure final stabilization for a period of 12 months after construction.

### **3.12: Stabilization of Waterways and Outlets**

All on-site stormwater conveyance channels, except roadway ditches, shall be designed and constructed to withstand the expected velocity of flow from a 10 year frequency design storm (24-hour duration) without erosion. Adequate stabilization to prevent erosion shall also be provided at the outlets of all pipes and paved channels. Roadway ditches shall be designed according to the Richland County Subdivision Regulations and Public Improvement Standards.

### **3.13: Working in or Crossing Watercourses**

A. Construction vehicles shall be kept out of water resources to the extent possible. Where in-channel work is necessary, precautions shall be taken to stabilize the work area during construction to minimize erosion. The channel (including bed and banks) shall always be re-stabilized immediately after in-channel work is completed.

Note: Permits from other government agencies, including the U. S. Army Corps and/or Ohio EPA, may be necessary to perform in-stream channel projects. For further information on Ohio EPA or Army Corps permits, you may call Ohio EPA's Division of Surface Water at (614) 644-2001 or the Army Corps' Huntington District at (304) 529-5210 or Buffalo District at (419) 898-3491.

B. When construction vehicles regularly traverse a live (wet) watercourse during construction, a temporary vehicular stream crossing shall be constructed and used to protect the stream bed from disturbance.

### **3.14: Maintenance of Erosion and Sediment Control Measures**

All temporary and permanent erosion and sediment control practices shall be maintained and repaired as needed to assure continued performance of their intended

functions. The Owners/Operators shall be responsible for such maintenance until the final inspection by the Stormwater Manager. For long-term maintenance, see subsection E. of section 4.02.

### **3.15: Removal and Disposal of Temporary Measures**

All temporary erosion and sediment control measures, including silt fences, shall be disposed of in accordance with directions from the Stormwater Manager within 30 days after final site stabilization is achieved. Trapped sediment and other disturbed soil resulting from the temporary measures shall be properly removed and stabilized.

### **3.16: Incorporation of Some Standards by Reference**

The standards and details for stormwater management, sediment control, and stream protection practices required by this Article III. include the following:

- The standards and details published by the Ohio Department of Natural Resources in the current edition of “Rainwater and Land Development: Ohio’s Standards for Stormwater Management Land Development and Urban Stream Protection.”
- The standards and details that may be published by the Stormwater Manager.
- Natural Resources Conservation Service (NRCS) TR-55 & TR-20 Urban Hydrology for Small Watersheds.

### **3.17: Stormwater Control/Design Methods**

A. To provide adequate stormwater management for 5,000 square feet or larger construction projects, the following criteria shall be used to control the increased peak rates and volumes of runoff:

1. The peak discharge rate of runoff from the critical storm event shall be controlled. The drainage area and runoff volumes under post-development conditions shall not exceed the peak discharge rate of runoff occurring under pre-development conditions for a one-year frequency, 24-hour storm.
2. Storms of less frequent occurrence (longer return periods) than the critical storm up to and including the 100-year storm shall have peak runoff discharge rates no greater than the peak runoff rates from equivalent size storms under pre-development conditions. Calculations of the 1, 2, 5, 10, 25, 50, and 100-year storms shall be considered adequate in designing and developing to meet this standard.

B. The critical storm for a specific development drainage area is determined as follows:

1. Use the Natural Resources Conservation Service (NRCS) TR-55, Urban Hydrology for Small Watersheds or TR 20 to determine the total volume (acre-feet) of runoff from a one year, 24-hour storm occurring on the development drainage area before and after development.
2. After the volumes have been determined using C-1 above, use Table 1 to determine the percent increase in volume of runoff due to development and, using this percentage, select the 24-hour critical storm from the following table:

If the percentage of increase in volume of runoff is:		
Equal to or greater than:	Less than:	The critical storm will be:
--	10	1 year
10	20	2 year
20	50	5 year
50	100	10 year
100	250	25 year
250	500	50 year
500	----	100 year
<p>To calculate the critical storm</p> $\frac{(\text{Post Developed 1 yr Storm Q}) - \text{Pre-Developed 1 yr Storm Q}}{\text{Pre-Developed Storm Q}} \times 100$ <p>= % change for critical storm</p>		
Table 1		

(For example, if the percent increase between the pre-development and post-development runoff volume for a one - year storm is 35%, the critical storm is a 5-year storm. The peak discharge rate of runoff for all storms up to this frequency shall be controlled so as not to exceed the peak discharge rate from the one-year frequency storm under pre-development conditions in the development drainage area. The post-development runoff from all less frequent storms need only be controlled to meet the pre-development peak discharge rate for each of those same storms.)

C. Methods for controlling increases in the rate, volume, and discharge of stormwater runoff shall include the following:

1. The use of grass-lined road ditches rather than paved street gutters where practical, and discharging roof water to vegetated areas or grass and/or rock-lined drainage channels.
2. Grading and construction of terraces or diversions to slow runoff by diffusion,

or use of grade control structures and geo-textile products.

3. Induced infiltration of increased stormwater runoff into the soil where practical. For example, constructing special infiltration areas or the use of under drains where soils are suitable, retaining topsoil for all areas to be re-vegetated, or providing good infiltration areas with proper emergency overflow facilities.
4. Provisions for detention and/or retention of stormwater, with properly designed retention basins being preferred. Ponds and lakes may be used as stormwater basins that provide multiple use areas for stormwater detention, recreation, wildlife, fire protection, and aesthetics. Constructed wetlands, dry detention basins, or subsurface storage areas are other options.

### **3.18: Additional Standards for Single Family Residential Lots**

The following additional performance standards shall apply to earth-disturbing activities associated with single family homes, whether developed individually or as part of a larger common plan of development or sale (e.g., a subdivision):

- A. Pre-existing vegetation shall be retained on idle portions of the building lot as long as construction operations allow.
- B. Clearing shall be done so only active work areas are bare.
- C. Temporary seed (annual rye, oats.) and/or mulch shall be applied to areas that are bare and are not being worked actively for a period of 30 days.
- D. Soil stockpiles shall be stabilized or protected with sediment trapping measures where needed to prevent off-site soil loss.
- E. Silt fences shall control sediment loss from building lots. Silt fences shall not be constructed in pre-existing natural drainage courses or areas of concentrated flow.
- F. Other sediment control measures such as inlet protection and sediment traps shall be used as needed to control runoff of sediment.
- G. All access drives shall have gravel or crushed rock applied to the driveway area and maintained during construction.
- H. Mud tracked into the street or sediment settled around inlets or in roadside gutters or ditches shall be removed at least daily or more frequently if needed to prevent accumulation.
- I. Sediment on streets shall be removed by shoveling and scraping and shall not be washed off paved surfaces or into storm drains.

J. Silt fence shall be erected prior to any earth-disturbing activities to reduce sediment loss from building lots. Silt fence shall be erected in accordance with manufacturers' instructions.

K. The grading plan shall be maintained as close to the original ground topography as possible within platted subdivisions.

L. All concrete washouts shall be done on-site in the locations indicated by the site drawing.

## **ARTICLE IV: ADMINISTRATIVE PROVISIONS**

### **PART ONE: GENERAL REQUIREMENTS FOR PERMIT APPLICATIONS**

#### **4.01: General Requirements Applicable to SWM/SC Permits and Plans**

A. SWM/SC permit applications and engineered plans contain technical information and analysis to assist the Stormwater Manager in determining whether a proposed new development or redevelopment project meets the performance standards in these regulations. The permit applications and plans also provide the Owners/Operators with a description of sediment and drainage controls to implement during and after construction.

B. Permits must be obtained for the developments described in sections 3.02 and 4.05. These permits must include engineered plans for the developments described in section 4.05.

C. This section describes the typical contents and general procedures for permit applications, plans, site meetings, and inspection procedures. The level of detail involved in the permit applications and/or plans shall depend on the project size and the individual site and development characteristics.

D. The Owners/Operators shall follow these steps in the following order for obtaining an SWM/SC permit:

1. Complete a site drawing pursuant to section 4.03 below for the project site. Stormwater management requirements may be affected by the locations, construction details, and areal extent of structures and facilities required or authorized by a township zoning permit, a septic system layout plan approved by the local health department, an Ohio EPA permit to install wastewater facilities, an Ohio EPA permit or section 401 certification for wetlands, and/or Army Corps section 404 permit for wetlands. These permits also affect the amount of acreage that will be disturbed by earth-disturbing activities, and this information may determine which provisions of these regulations apply. Therefore, the site drawing shall show the locations of any such structures or facilities. To avoid unnecessary and costly changes during the stormwater permit process, the applicant may initiate the stormwater permit process by submitting the pre-application site visit form and site drawing only after obtaining the necessary approvals for these structures and facilities from the applicable authorities. If located within a Special Flood Hazard Area, approval from the Richland County Floodplain Administrator may also be required.
2. Obtain an address from the local township and then a parcel identification from the Tax Map Office of the County Recorder's Office for the project site.
3. Complete and submit a pre-application site visit form to the Stormwater

Manager (this may be done online by visiting the SWCD web page at [www.richlandswcd.net](http://www.richlandswcd.net)). Submit it with the site drawing and a copy of any required township zoning permit, approved septic layout plan, Ohio EPA permit to install, Ohio EPA permit or section 401 certification for wetland development, and/or Army Corps section 404 permit for wetlands. At that time, also provide a copy of the site drawing approved pursuant to any required township zoning permit. Contact the Stormwater Manager to schedule a date and time for the pre-application meeting. Hold the pre-application meeting at the project site. If a permit is required under the Building Code, the pre-application visit form shall be submitted, and the request for a meeting made, at the same time as the application for the building permit.

4. At least 30 days prior to initiating earth-disturbing activities complete and submit to the Stormwater Manager the permit application, including a preliminary SWM/SC plan for any development subject to section 4.05. These submittals shall be made at least 15 days prior to the continuation of earth-disturbing activities that are in progress on the effective date of these regulations. At the time of application, also pay the applicable fee for permit processing and field inspections and, if applicable, plan review.
5. For any development subject to section 4.05, submit a final SWM/SC plan incorporating any changes to the preliminary SWM/SC plan required by the Stormwater Manager. The final SWM/SC plan shall be incorporated into and made part of the SWM/SC permit.
6. Permits shall not be issued pursuant to the Building Code until any required SWM/SC permit has been issued.
7. The Stormwater Manager will mail a confirmation letter to the applicant enclosing a copy of the permit. All required silt fences shall be installed prior to the initiation of any earth-disturbing activity. The permit will describe any other action that must be taken prior to excavating.
8. The SWM/SC permit shall authorize construction during a period of one year following the date of issuance, unless the Stormwater Manager grants an extension(s) to the expiration date. Notwithstanding the expiration of authorization to construct, any Inspection and Maintenance Agreement incorporated as part of the permit to establish permanent stormwater control facilities and/or other permanent stormwater BMPs shall stay effective and binding on the Owners/Operators in perpetuity, including future Owners/Operators.

#### **4.02: SWM/SC Permits**

A. The Owners/Operators for developments subject to sections 3.02 and 4.05 shall obtain an SWM/SC permit prior to initiating earth-disturbing activities. All

Owners/Operators shall sign the permit application. Where an Owner/Operator is a business, church, school, or other entity, a designated representative shall sign the permit application. All Owners/Operators shall be responsible for complying with the permit. All SWM/SC permit applications submitted with the exception of those submitted by a public agency shall be accompanied by the applicable fees for SWM/SC permit processing and field inspections and, where applicable, plan review, set by the Commissioners' fee schedule. Permit applications shall be submitted to the Stormwater Manager in accordance with the applicable deadline established by subsection D. of section 4.01. This permit shall be obtained by following the steps outlined in this Article IV. Stormwater permits shall be granted when the permit application demonstrates that all performance standards and other criteria required by these regulations will be met.

B. Before completion of construction, any person becoming a new Owner/Operator in substitution for an existing Owner/Operator may continue the construction activities authorized by the permit upon the transfer of the permit provided that: (1) the transferor will no longer be an Owner/Operator of the property; (2) the transferor is in compliance with the permit at the time of transfer; (3) the period during which construction activities are authorized has not expired; and (4) at least 15 days prior to the transfer, the transferor and transferee sign and submit a letter notifying the Stormwater Manager of the transfer, the name, address, telephone number, and contact person for the transferee, and the transfer's effective date, at which time the transferee shall be responsible for complying with the permit. If a new Owner/Operator will be added without terminating any current Owners/Operators, the new Owner/Operator shall be authorized to conduct construction activities under the permit provided that: (1) ) the period during which construction activities are authorized has not expired; and (2) the new Owner/Operator signs and submits a letter notifying the Stormwater Manager of this transaction, the name, address, telephone number, and contact person for the new Owner/Operator, and the effective date of the transaction, at which time the new Owner/Operator shall be responsible for complying with the permit jointly with existing Owners/Operators. All new Owners/Operators shall comply with the permit.

C. The permit application shall be submitted by completing an application form provided by the Stormwater Manager or online at [www.richlandswcd.net](http://www.richlandswcd.net). The application shall also provide the information required by the checklist for applications contained in the Appendix to these regulations. Where an SWM/SC plan is required, the information required by the checklist may be incorporated into the plan rather than submitting the information separately.

D. The Owners/Operators shall perform all earth-disturbing activities in accordance with the provisions and requirements of the permit, including any plans incorporated into the permit.

E. The permit may require Owners/Operators to install and maintain permanent stormwater BMPs, including permanent stormwater control facilities such as retention basins, to minimize the discharge of sediment into water resources and to minimize

erosion of the water resources by controlling peak rates and volumes of runoff. Construction of any such BMPs shall be performed in accordance with the permit. The Owners/Operators shall execute an Inspection and Maintenance Agreement providing for inspections and maintenance of these facilities and/or practices, which agreement shall be part of the permit. This Agreement shall be executed as a conservation easement under R.C. 5301.67 et seq., an environmental covenant under R.C. 5301.80 et seq., an equitable servitude, and/or any other instrument as determined by the Stormwater Manager. The Agreement shall be on a form approved by the County Prosecutor, and signed by all persons having a vested interest in the property, and be recorded with the deed for the property. All present and future Owners/Operators shall be bound by and comply with the Agreement in perpetuity. Where an Agreement requires permanent stormwater control facilities and/or other permanent BMPs for partially or fully constructed facilities, all new Owners/Operators are bound by and shall comply with the Inspection and Maintenance Agreement whether or not construction activities will continue. The Agreement shall do the following:

1. identify the long-term maintenance requirements and schedules for all post-construction BMPs;
2. contain long-term maintenance inspection schedules, including the printed name and contact point of the post-construction landowner (e.g., president of the homeowners' association, store manager, apartment complex manager, etc.);
3. identify the person or entity who will physically perform the inspections and maintenance of the post-construction BMPs;
4. identify the person or entity financially responsible for maintaining the permanent inspection and maintenance of post-construction BMPs;
5. identify the method of ensuring that funding will be available to conduct the long-term maintenance and inspections of all post-construction BMPs;
6. provide access to the property at any reasonable time for an inspection by the Stormwater Manager and/or Stormwater Engineer in order to document the condition and status of the stormwater control facilities and other BMPs;
7. prohibit unauthorized alterations to the facility;
8. require the Owner/Operator to notify the Stormwater Manager at least 15 days prior to transferring the property to a new Owner/Operator; and
9. provide that all future Owners/Operators of the property are bound by and must comply with the Agreement in perpetuity.

F. For projects required to implement post-construction stormwater controls, the Owner/Operator shall provide Richland County with future access to all areas on which

permanent stormwater control facilities and/or other permanent BMPs must be maintained or conducted pursuant to these regulations by providing the county with easements complying with the following:

1. The easements shall be recorded in the name of Richland County;
2. The width and locations of the easements shall be established as required by the Stormwater Manager;
3. The areas subject to the easements shall be restricted against the planting of trees, shrubbery, or plantings with woody growth, and against the construction of buildings, accessory buildings, fences, walls, or any other obstructions, that would obstruct the free flow of stormwater and the movement of inspectors and maintenance equipment; and
4. The final grade in the areas subject to the easements shall not be changed from that described by the grading plan.

G. No Owner/Operator shall violate or fail to comply with any provision or requirement of any permit issued under these regulations, including any SWM/SC Plan and Inspection and Maintenance Agreement for the project.

\*\*\* Note: The disturbance of one acre or more, or a smaller disturbance that is part of a larger common plan of development or sale that will ultimately disturb at least one acre, may also require a permit for stormwater discharges from the Ohio EPA. It is the landowner's responsibility to determine whether an Ohio EPA permit is required and, if so, to obtain the permit. Ohio EPA's web site contains a copy of its General Permit for Storm Water Discharges Associated with Construction Activity and its application forms for coverage under that general permit or individual stormwater construction permits.

Owners/Operators are also reminded to call the Ohio Utilities Protection Service (OUPS) at 1-800-362-2764 to locate and mark underground utilities prior to starting construction. While this call is not a requirement of these regulations, state law requires this call for the protection of utility lines and construction personnel. In addition, there may be some oil/gas facilities in your area not registered with OUPS. As an additional precaution, the Owner/Operator may call the Oil & Gas Producers Underground Protection Service (OGPUPS) at 1-800-925-0988.

#### **4.03: Site Drawings for Site Analysis and Inventory**

Prior to submitting the permit application, the permit applicant shall prepare and submit to the Stormwater Manager a site drawing that describes and maps the following existing site conditions and features:

- A. Topography, using a scale of 1"=50' or larger on all dimensions;

- B. Drainage patterns and basins;
- C. Intermittent and perennial streams;
- D. Vegetation;
- E. Existing development;
- F. Existing stormwater facilities, tiles, and other drainage components;
- G. Characteristics of adjacent areas (e.g., buildings, woods) with distances;
- H. Property lines and any easements and rights-of-way;
- I. Any existing structures;
- J. Distances to streets, alleys, and property lines;
- K. Any floodplain locations with base flood elevations;
- L. Locations of proposed buildings, structures and facilities; and
- M. Designated concrete washout area.

#### **4.04: Pre-Application Meeting and Joint Site Visit**

A. The owner or developer shall obtain and complete the form for a pre-application site visit form from the Stormwater Manager or online and submit it to the Stormwater Manager along with the site drawing and a copy of any required township zoning permit, approved septic layout plan, Ohio EPA permit to install wastewater facilities, Ohio EPA permit or section 401 certification for wetlands, and/or Army Corps section 404 permit for wetlands. At that time, the applicant shall also provide a copy of the site drawing approved pursuant to any required township zoning permit. The pre-application form can be obtained online or from the office. Once the applicant submits all information required by this paragraph, the applicant shall contact the Stormwater Manager to arrange a time and day for the pre-application meeting. The pre-application meeting shall be held within 10 days thereafter.

B. The excavator and either the developer or an owner familiar with the plan of development for the project shall attend the pre-application meeting at the project site with the Stormwater Manager to outline the stormwater management requirements and other regulations for all developments for which a permit is required under section 4.02. The Stormwater Manager may request the Stormwater Engineer to attend this meeting where beneficial.

C. The purpose of this meeting is to establish a constructive partnership and generate a conceptual outline of the stormwater management plan and strategies. The meeting will also assist the owner with land management, drainage, and assessment of constraints, opportunities, and potential for stormwater design concepts. A major objective is to make permitting and plan approval requirements clear at an early stage, making the approval process proceed faster and more smoothly.

D. The attendees at the meeting shall discuss the locations of BMPs, roads, driveways, discharge of stormwater, and areas of site activity. The parties shall walk over the site to assist them in identifying and anticipating problems and potential issues, defining general expectations, and establishing general boundaries of natural feature protection and conservation areas.

#### **4.05: SWM/SC Plans**

A. The applicant for an SWM/SC permit shall submit an SWM/SC plan as part of the permit application for earth-disturbing activities that will disturb soil on one or more acres of land on a single lot or tract, or on less than one acre that is part of a larger common plan of development or sale (e.g., a subdivision) if the larger common plan will ultimately disturb at least one acre. An SWM/SC plan may be submitted, but is not required, for smaller projects subject to the performance standards of these regulations.

B. If an Owner/Operator has control over only part of a larger common plan of development or sale (e.g., one of four homebuilders in a subdivision), that Owner/Operator is responsible for implementing a plan only on its portion of the project. For such a development, two or more Owners/Operators may collectively submit a common plan that each shall implement on its portion of the project, or each Owner/Operator can submit a separate plan for its portion of the project. Each Owner/Operator shall ensure, through direct action or coordination with other Owners/Operators, that its activities do not impair another Owner/Operator's pollution control activities.

C. The plans shall contain the information and activities necessary to comply with the performance standards in Articles III., IV., and V. of these regulations. A Professional Civil Engineer registered in the State of Ohio must stamp and approve any engineered plan. The Stormwater Engineer shall review the engineered plans and make a recommendation on their approval, amendment, or disapproval to the Stormwater Manager. The Stormwater Manager will consider the Stormwater Engineer's recommendation in acting on the permit application.

D. For developments in progress on the effective date of these regulations in which at least the threshold amount of the activities identified in section 4.05 will occur after the effective date, the activities occurring after the effective date are subject to the newly promulgated requirements of Articles III., IV., and V. Other activities subject to the previous regulations shall continue to comply with the standards and other requirements of the previous regulations and any permits, plans, agreements, and other obligations

established pursuant to the previous regulations. (E.g., if 5,000 square feet of a 20,000 square foot development are disturbed before the effective date, that 5,000 square feet would be subject to the previous regulations while the remainder would be subject to the new regulations.)

E. Any plan approved under a permit application is incorporated into and made a part of the permit issued in response to the permit application. No modifications shall be made to the plan without the approval of the Stormwater Manager.

F. After issuing the permit, the Stormwater Manager shall have the authority to make immediate written adjustments to the plan to ensure compliance with these regulations or to remove unnecessary requirements. The plan as amended is incorporated into and made a part of the permit.

## **PART TWO: PONDS AND LAKES**

### **4.06: Additional Requirements for SWM/SC Plans for Ponds and Lakes**

The following additional requirements shall apply to the construction of ponds and lakes that section 4.05 requires to submit SWM/SC plans:

- A. Show on the site drawing all BMPs that shall be implemented on the site to reduce erosion, elevations of the water level, and top of the dam; and
- B. Indicate the outlet point of the principal discharge as well as the emergency overflow and protect them with riprap or other means to control discharge velocity and reduce erosion.

## **PART THREE: FILL AND BORROW AREAS**

### **4.07: Additional Requirements for Fill and Borrow Areas**

The following additional performance standards apply to fill and borrow areas with earth-disturbing activities of one acre or larger:

- A. Properly installed and maintained drive entrances are required at all times; and
- B. All disturbed area shall be seeded and mulched within seven days after final grading.

## **PART FOUR: COMMERCIAL DEVELOPMENTS**

### **4.08: Additional Requirements for SWM/SC Plans for Commercial Developments**

The requirements of sections 4.08 to 4.08.3 apply to all commercial developments that section 4.05 requires to submit SWM/SC plans. The plans shall consist of four sections as described in sections 4.08.1 to 4.08.3 and shall contain the following:

- A. A brief narrative section, including stormwater run-off calculations, total acres contained on the site, area disturbed, and construction limits;
- B. Construction plan sheets, containing drainage area, erosion/sediment control measures, and scale of drawing;
- C. Three copies of each plan drawing and calculation. One copy will be returned with the permit; and
- D. BMP information and water quality volumes shall be incorporated into construction drawings, details, and special notes to contractors.

#### **4.08.1: Narrative Section**

The narrative section shall include the following:

- A. Project Description: Briefly describe the nature and types of land-disturbing activity. Specifically note the items not self-evident from the plan drawings.
- B. Existing Site Conditions: Include topography, vegetation, and on-site drainage, consistent with information in TR-55, TR-20 or other acceptable stormwater model calculations, for both pre-developed and post-developed run-off.
- C. Critical Areas: Describe the BMPs required to protect areas that have a high potential for serious erosion problems, such as stream crossings, steep slopes, etc. Other areas requiring special consideration include adjacent properties, nearby streams, downstream ponds, and roadways that might be affected by construction site run-off.
- D. Stormwater run-off: Include estimations and calculations for both pre-development and post-development peak discharge, using the TR 20 or TR-55 method. Include critical storm determinations and demonstrate how the run-off from upper watershed areas has been considered in these calculations. (There is no requirement to detain water from other properties.) Provide a summary of calculations on the “Storm Water Calculation Summary” appended to these regulations.
- E. Names and addresses: Supply this information for the Professional Engineer in responsible charge of the plan, the property owner(s), and the operator(s) having responsibility for the overall development area.

#### **4.08.02: Site Construction Plans, Drawings, and Details**

This section of the plan shall include:

- A. Vicinity map: Show the site in relation to the surrounding area.

B. Construction plan sheets: Use a maximum scale of 1" = 100' overall, and 1" = 50' for those areas of concentrated earth-moving activity. Show existing topography, using 2' contours, over the development area. Specifically include locations of neighboring, lakes, wetlands, and houses within 100 feet of site.

C. Grading plan: Show all existing and proposed buildings, grading limits, and other earth-disturbing activities along with final contours and relevant construction boundaries.

D. Existing and proposed drainage patterns: Include watershed lines, subareas, direction(s) of flow, and watershed acreage.

E. Location of BMPs and stormwater control structures to be used. Include details and directions for installation in the contractor's notes. All of the detention and retention basins shall be drawn to scale, showing the amount of area contributing to the drainage.

F. Construction sequence: Include an estimated time frame as required for the following phases of site development in order as follows:

1. Pre-construction meeting shall take place no more than seven working days before any work is started. In attendance shall be the Stormwater Engineer, Stormwater Manager, Professional Architect, the Professional Engineer that approved the plans on behalf of the applicant, contractor responsible for the job site, owner, and developer.
2. Driveway and culvert installation, including stone application of adequate length and width to prevent tracking of mud and debris onto the roadway. (See County Engineer or local township for additional requirements.)
3. Installation of BMPs, whether temporary and/or permanent, with all of the perimeter controls installed within seven days of clearing and grubbing.
4. Excavation of sediment traps, and/or sediment retention/detention basins and related components. Seed and mulch those areas within seven days of excavation.
5. Initial clearing and grubbing, using "phasing" technique, in order to leave more undisturbed vegetation. Road grading and all other excavation work.
6. Construction of buildings and parking areas.
7. Installation of utilities.
8. Final grading, paving, landscaping (permanent cover), soil stabilization.
9. Removal of temporary erosion control measures.

G. Special notes for contractor:

1. Specify stabilization, using seeding mixtures and rates, lime and fertilizer application rates, type and quantity of mulching, for both temporary and permanent vegetation control measures in accordance with section 3.05 above.
2. Submit a maintenance schedule, along with persons responsible for the inspection and repair of erosion and sediment control measures, until all construction has been completed.
3. Location and elevation of proposed structures shall be indicated on all stormwater designs. Show the elevations of all components, including invert of outlet, inlet, critical storm inlet, catch basins, emergency overflow, and riprap. Indicate the location of all water quality structures and size.
4. Detail drawings, indicating structural practices that shall be used.

**4.08.03: Step by Step Procedures Required by the Stormwater Manager**

The following are steps that must be taken to develop the SWM/SC plan:

A. Step 1 - Collect the following data:

1. Topography with minimum 2' contours;
2. Drainage areas;
3. Soils;
4. Ground cover;
5. Adjacent areas; and
6. Any other required data.

B. Step 2 - Analyze the following data:

1. Topography - slope gradients, lengths;
2. Drainage – existing and proposed drainage patterns;
3. Soil erodibility and permeability;
4. Ground cover - trees, grassy areas, unique vegetation; and
5. Adjacent areas - streams, roads, buildings, ponds, floodplain and wetlands.

### C. Step 3 - Site Plan Development

1. Develop site plan, by:
  - a. Fitting development to surrounding terrain;
  - b. Locating construction in the least critical areas;
  - c. Minimizing paved areas and maximizing green/common space; and
  - d. Utilizing “natural” drainage systems.
2. Calculate runoff discharge rates/volumes:
  - a. The use of TR-55 or TR-20 is recommended for compiling the information for the plan;
  - b. If grassed swales or biofilters are used to offset runoff, describe their size and location on the plan; and
  - c. Utilize the summary sheet in the Appendix to these regulations entitled “Storm Water Calculation Summary.”

### D. Step 4 - Develop the plan for erosion and sediment control:

1. Determine limits of clearing and grading;
2. Divide the site into drainage areas; and
3. Show the location of sediment controls and each type used.

## **PART FIVE: MULTI-FAMILY, PLANNED UNIT DEVELOPMENT, AND CONDOMINIUM SITES**

### **4.09: Additional Requirements for SWM/SC Plans for Multi-Family, Planned Unit Development and Condominium Sites**

The requirements of sections 4.08 to 4.08.03 apply to all multi-family, planned unit development, and condominium projects that section 4.05 requires to submit SWM/SC plans.

## **PART SIX: SUBDIVISIONS**

### **4.10: Additional Requirements for SWM/SC Plans for Subdivisions:** (See also the Subdivision Regulations and the Public Improvement Standards available from the Regional Planning Commission.)

The requirements of sections 4.08 to 4.08.3 and 4.10.1 to 4.10.5 apply to all major subdivisions that section 4.05 requires to submit SWM/SC plans.

#### **4.10.01: General Requirements**

A. Applications for major subdivision plat approvals are available from the Regional Planning Commission.

B. The construction plans for subdivisions constructed under the Subdivision Regulations for Richland County shall contain a comprehensive plan for the control of stormwater and sediment runoff during and after construction. These plans shall be included in the general construction plans for the subdivision and contain details and specifications for the installation of both temporary and permanent facilities. Stormwater management and sediment control plans for all subdivision projects must be reviewed by the Stormwater Manager, prior to submission to the Regional Planning Commission for final approval.

C. For the purposes of administration, maintenance, repair, and replacement, all permanent stormwater management facilities in major subdivisions shall be considered "Public Watercourses" in accordance with the terms and conditions of the Inspection and Maintenance Agreement under section 4.10.5.

#### **4.10.02: Stormwater Manager Plan Review**

A. The SWM/SC Plan shall be submitted to the Stormwater Manager, after acceptance of the preliminary plan by the Richland County Regional Planning Commission, along with the concurrent submittal of construction drawings to the Richland County Engineer. The Stormwater Manager's approval of the SWM/SC Plan shall be a condition precedent to final plat approval by the Richland County Regional Planning Commission, and shall be incorporated into the final plat approval. No construction shall commence until the Planning Commission has approved the final plat and the improvement drawings.

B. Where the plan contains permanent stormwater management facilities and/or control measures, the Stormwater Manager may require that structures and facilities be designed to minimize stormwater maintenance costs. An Inspection and Maintenance Agreement prepared under section 4.10.05 shall be incorporated into the SWM/SC Plan.

C. Within 15 days after receiving an SWM/SC Plan, the Stormwater Manager shall notify the applicant or his appointed representative as to whether the plan complies with these regulations. Any notice of non-compliance shall include specific plan deficiencies, as well as the procedures for filing a revised plan.

D. At the time a revised plan is submitted, a new 15 day review period begins. Construction is authorized during a period of one year from date of approval.

#### **4.10.03: Maintenance Fund**

A. Upon completion of the work, or when suitable surety is established in accordance with the Richland County Subdivision Regulations, the Stormwater Manager will request a hearing before the Board of Commissioners to establish procedures and assessments for the maintenance of any permanent stormwater management facilities within the development.

B. Maintenance assessments will begin the year after acceptance of the subdivision, based upon an assessment schedule prepared by the Stormwater Manager and approved by the Board of Commissioners. All maintenance assessments shall be paid into a Ditch Maintenance Fund under R.C. Chapter 6137 that is established for the sole benefit of the subdivision in question.

C. Annual inspections, as well as all necessary maintenance work, shall be performed by or under supervision of the Stormwater Manager or by the Stormwater Engineer at the request of the Stormwater Manager. All expenditures from the Maintenance Fund shall be approved by the Board of Commissioners after consideration of recommendations from the Stormwater Manager.

#### **4.10.04: Maintenance Fund Characteristics and Calculations**

A. The maintenance funds for the stormwater management facilities shall be derived from an annual assessment levied against all benefiting owners of lots within the subdivision and are accumulated until they are needed to perform maintenance, repair or replacement as the facilities age. The amount of the maintenance fund is based on the original construction cost of the stormwater management facilities in the subdivision. The maintenance fund may never have an unencumbered balance of more than twenty percent (20%) of the cost of the original stormwater management facilities, as adjusted to current costs. Once the fund has reached the 20% maximum, assessments shall abate until such time as monies are withdrawn from the fund to maintain, repair or replace some element of the stormwater management facilities. The annual assessment is determined by dividing the maximum maintenance fund balance by six years. The entire maintenance fund amount is apportioned to the lots within the subdivision on a fair and equitable formula in order to establish the appropriate amount to be assessed to each property.

B. Upon special request, the rate of assessment may be partially abated over the initial five year period following subdivision approval. This abatement allows developers time to sell individual lots without creating an undue strain on cash flow during the early phases of development. Beginning with the fifth year of the schedule, the assessment shall be collected at the full rate. Generally, when using this assessment schedule where payments in the first five years are partially abated, it requires between nine and ten years to reach its maximum balance, provided no monies have been withdrawn.

Year	Typical Stormwater Maintenance Fund Assessment Schedule	Special Abated Stormwater Maintenance Fund Assessment Schedule
Year 1	100% of Total Annual Assessment	5% of Total Annual Assessment
Year 2	100% of Total Annual Assessment	10% of Total Annual Assessment
Year 3	100% of Total Annual Assessment	25% of Total Annual Assessment
Year 4	100% of Total Annual Assessment	50% of Total Annual Assessment
Year 5	100% of Total Annual Assessment	100% of Total Annual Assessment
Year 6	100% of Total Annual Assessment	100% of Total Annual Assessment
Year 7-10		100% of Total Annual Assessment

**4.10.05: Maintenance of Permanent Stormwater Facilities**

A. When permanent stormwater control facilities and/or other permanent stormwater BMPs are required, the Inspection and Maintenance Agreement shall comply with subsection E. of section 4.02 and shall provide for long-term future maintenance in accordance with sections 4.10.03 and 4.10.04.

B. The Inspection and Maintenance Agreement must provide access to the facility, at any reasonable time, for an inspection by the Stormwater Manager and/or Stormwater Engineer, in order to document the condition of the facility. The agreement shall also provide for access by public agencies to the stormwater management facilities for purposes of management, repair, and/or replacement of the facilities.

C. The location, dimensions, and bearings of such facilities shall be incorporated into the final plat, prior to approval by the Richland County Regional Planning Commission, and reference shall be made thereon, as to the individual(s) or entity who shall be responsible for the long-term maintenance.

D. Permanent stormwater facilities must be installed and made functional prior to acceptance by the Richland County Board of Commissioners and approval of the assessment schedule. A record drawing must be completed by qualified personnel and submitted to the Stormwater Manager, prior to the start of the Stormwater Manager’s scheduled inspection period.

E. The Owners/Operators may submit a petition for the permanent maintenance of all stormwater control structures and/or facilities to the Board of County Commissioners under the Ohio Drainage Law, R.C. Chapter 6131, when the area of benefit involves two or more property owners.

## **ARTICLE V: STANDARDS FOR POST-CONSTRUCTION FACILITIES**

### **5.01: Post-Construction Standards**

A. Where permanent stormwater control facilities, such as retention basins, and/or other permanent BMPs are necessary to minimize the discharge of sediment into water resources and to minimize erosion of the water resources; the Owners/Operators shall include post-construction BMPs in their permit applications in compliance with the following requirements:

1. Descriptions of BMPs that is appropriate for each construction operation and the rationale for their selection. The rationale must address the anticipated impacts on the channel and floodplain morphology, hydrology, and water quality;
2. BMPs shall meet the standards and specifications in the current edition of the *Ohio Rainwater and Land Development* manual;
3. BMPs shall preserve the existing natural conditions to the maximum extent practicable;
4. Structural measures shall be placed on upland soils to the degree attainable; and
5. BMPs may include the following structural and/or non-structural measures:
  - a. Permanent stormwater detention ponds that provide extended detention of the water volume;
  - b. Flow attenuation by use of open vegetated swales and natural depressions;
  - c. Onsite infiltration of runoff;
  - d. Sequential systems that combine several practices;
  - e. Permanent conservation easements, preferably with the easement being held by a third party with no vested interest in ever seeing the property developed;
  - f. Re-creating floodplains;
  - g. Allowing roof water from buildings to run across lawn areas to remove pollutants;
  - h. Onsite sewage disposals system replacement or conversion to sanitary sewers;

- i. Low Impact Development Design; and/or
- j. Aquatic benches in retention basins and ponds.

B. Plans for Development Sites Smaller than Five Acres: This subsection applies to any projects for which section 4.05 requires SWM/SC plans and for which post-construction BMPs are required, except for projects with earth-disturbing activities on five or more acres of land and except for projects that are part of a larger common plan of development or sale that will have earth-disturbing activities on five or more acres of land. The plan for any project subject to this subsection shall contain the following information:

1. Stormwater Issues: A statement as to how the decreased stormwater quality that will be caused by the planned development project will be handled;
2. Description of Measures: A description of the BMPs that will be installed during the construction process to control pollutants in stormwater discharges that will occur after construction operations have been completed;
3. Map: A map of the entire site showing the overall development;
4. Riparian and/or Wetland Setback: All riparian and wetland setback areas shall be identified on the plan. They shall also be marked in the field prior to the start of construction; and
5. Technical Basis: The plan shall describe the rationale for selecting the BMPs used to control pollution and to maintain and protect water quality.

C. Development Sites Five Acres or Larger: The SWM/SC plan for any development site required to adopt post-construction BMPs that will have earth-disturbing activities on five or more acres of land, or that will have such activities on less than five acres but is a part of a larger common plan of development or sale that will have such activities on five or more acres of land, shall contain the following information:

1. Stormwater Detention: The post-construction BMP(s) chosen must be able to detain stormwater runoff for protection of the stream channels, stream erosion control, and improved water quality;
2. Structural BMPs: Structural (designed) post-construction stormwater treatment practices shall be incorporated into the permanent drainage system for the site. Non-structural BMPs may also be used where appropriate;
3. Properly Sized BMPs: The BMP(s) chosen must be sized to treat the water volume (WQv) and ensure compliance with Ohio's Water Quality Standards in OAC Chapter 3745-1. The WQv shall be equivalent to the volume of runoff

from a 0.75-inch rainfall and shall be determined according to one of the two following methods:

- a. Through a site hydrologic study approved by the local municipal permitting authority that uses continuous hydrologic simulation and local long-term hourly precipitation records; or
- b. Using the following equation:

$WQ_v = C * P * A / 12$  where:  $WQ_v$  = water quality volume in acre-feet  
 $C$  = runoff coefficient appropriate for storms less than 1 inch (see Table 1)  
 $P$  = 0.75 inch precipitation depth  
 $A$  = area draining into the BMP in acres.

Table Runoff Coefficients Based on the Type of Land Use

Land Use	Runoff Coefficient
Industrial & Commercial	0.8
High Density Residential (>8 dwellings/acre)	0.5
Medium Density Residential (4 to 8 dwellings/acre)	0.4
Low Density Residential (<4 dwellings/acre)	0.3
Open Space and Recreational Areas	0.2

- 4. Where land use will be mixed, the runoff coefficient shall be calculated using a weighted average. For example, if 60% of the contributing drainage area to the stormwater treatment structure is Low Density Residential, 30% is High Density Residential, and 10% is Open Space, the runoff coefficient is calculated as follows  $(0.6)(0.3) + (0.3)(0.5) + (0.1)(0.2) = 0.35$ ;
- 5. An additional volume equal to 20 percent of the  $WQ_v$  shall be incorporated into the BMP for sediment storage and/or reduced infiltration capacity. The BMPs shall be designed according to the methodology included in the Ohio *Rainwater and Land Development* manual, or the ODOT Post-Construction stormwater standards;
- 6. BMPs shall be designed such that the drain time is long enough to provide treatment, but short enough to provide storage available for successive rainfall events as described in Table 2 below:

Table 2: Target Draw Down (Drain) Times for Structural Post-Construction Treatment Control Practices

Best Management Practices	Drain Time of WQv
Infiltration	24 – 48 hours
Vegetated Swale and Filter Strip	24 hours
Extended Detention Basin (Dry Basins)	48 hours
Retention Basins (Wet Basins)*	24 hours
Constructed Wetlands (above Permanent Pool)	24 hours
Media Filtration, Bioretention	40 hours

\*Provide both a permanent pool and an extended detention volume above the permanent pool, each sized at  $0.75 * WQv$ .

7. The Owner/Operator may request approval from the Stormwater Manager to use alternative structural post-construction BMPs if the Owner/Operator can demonstrate that the alternative BMPs are equivalent in effectiveness to those listed in Table 2 above. The use of alternative or vendor supplied post-construction BMPs shall be limited to redevelopment projects where the Owner/Operator demonstrates that the traditional BMPs in Table 2 are technically and economically infeasible;
8. A development is not required to install a structural BMP where the Owner/Operator demonstrates the WQv that would be provided by that BMP is instead being provided within an existing structural post-construction BMP as part of a larger common plan of development or sale or if the structural post-construction BMPs for this development are addressed in a regional or local stormwater management plan;
9. For redevelopment projects (i.e., developments on previously developed property), post-construction practices shall ensure a 20 percent net reduction of the site's impervious area, provide for treatment of at least 20 percent of the WQv, or achieve a combination of the two;
10. Site description:
  - a. The prior land uses of the site;
  - b. The nature and type of construction activity (e.g., low density residential, shopping mall, highway, etc.);

- c. Total area of the site and the total area of the site that is expected to be affected by earth-disturbing activities, as that term is defined in the definitions section of these regulations;
- d. Amount of the impervious area and percent imperviousness created by the construction activity; and
- e. Name and/or location of the immediate receiving stream or surface water(s), the first subsequent named receiving water, and the major river watersheds in which it is located;

11. A vicinity sketch locating:

- a. The development area;
- b. The larger common plan of development or sale; and
- c. All pertinent surrounding natural features within 200 feet of the development site including, but not limited to:
  - i. Water resources such as wetlands, springs, lakes, ponds, rivers and streams (including intermittent streams with a defined bed and bank);
  - ii. Conservation easements; and
  - iii. Other sensitive natural resources and areas receiving runoff from the development;

12. The existing and proposed topography shown in the appropriate contour intervals;

13. 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 or sale;

14. Existing and proposed watershed boundary lines, direction of flow, and watershed acreage; and

15. The location of any existing or planned riparian and/or wetland setback areas on the property.

## **ARTICLE VI: FEES, ENFORCEMENT AND APPEALS**

### **6.01: Applicability**

This Article applies to developments regulated by Articles III., IV. And V. of these regulations.

### **6.02: Fees**

A. The Fee Schedule for SWM/SC permit processing, plan review and field inspections is provided in a separate regulation. The current schedule adopted by the Commissioners may also be requested from the Stormwater Manager.

B. Plan review fees and inspection fees for subdivisions and planned unit developments are included in the fee schedule prescribed by the Richland County Subdivision Regulations.

### **6.03: Inspections**

A. The Stormwater Manager and the Stormwater Engineer are authorized to conduct inspections of the properties regulated under these regulations. Access shall be allowed at all times during regular working hours. If the site is to be secured during those times, then arrangements must be made at the time the permit is issued to allow inspectors to view the project.

B. Inspections will be made during the construction process to ensure that the site and all components operate and are maintained. If the inspector finds a violation of the permit, the inspector may mail a letter to the Owners/Operators requesting repairs and specifying a time frame for making the repairs. The owner or operator shall notify the Stormwater Manager when repairs were made.

### **6.04: Stop Work Orders**

A. If the Commissioners or the Stormwater Manager determine that a violation of these regulations exists, the Commissioners or the Stormwater Manager may issue an immediate stop work order if the violator failed to obtain any federal, state or local permit, including an SWM/SC permit, necessary for sediment and erosion control, earth movement, clearing, or cut and fill activity. In addition, if the Commissioners or Stormwater Manager determines such a regulatory violation exists, regardless of whether or not the violator has obtained the proper permits, the Commissioners or the Stormwater Manager may authorize the issuance of a notice of violation. If the violation continues for at least 30 days after the issuance of the notice of violation, the Commissioners or the Stormwater Manager shall issue a second notice of violation. Except as provided in subsection D. of this section, if the violation continues for at least 15 days after the issuance of the second notice of violation, the Commissioners or the Stormwater Manager may issue a stop work order after obtaining the written approval

of the prosecuting attorney of the county, if in the opinion of the county prosecuting attorney, the violation is egregious.

B. Once a stop work order is issued, the Commissioners or the Stormwater Manager shall request in writing that the county prosecuting attorney seek an injunction or other appropriate relief in a court of appropriate jurisdiction to abate excessive erosion or sedimentation and secure compliance with these regulations.

C. The stop work order shall inform the person to whom it is issued of that person's right to appeal the order to the Court of Common Pleas of Richland County seeking equitable or other appropriate relief from that order. No work subject to the stop work order shall continue unless and until the Court of Common Pleas orders to the contrary or the stop work order is modified or revoked to allow resumption of the work.

D. No stop work order shall be issued under this section against any public highway, transportation, or drainage improvement or maintenance project undertaken by a government agency or political subdivision in accordance with a statement of its standard sediment control policies that is approved by the Commissioners or the chief of the Division of Soil and Water Conservation in the Department of Natural Resources.

E. No person shall violate any of these regulations, a permit issued pursuant to these regulations, or an order issued by the Commissioners or the Stormwater Manager. Notwithstanding subsection A of this section, if the Commissioners determine that a violation of any of these regulations or an administrative order exists, the Commissioners may request in writing that the prosecuting attorney of the county seek an injunction or other appropriate relief in a court with appropriate jurisdiction to abate excessive erosion or sedimentation and secure compliance with the regulations or order.

#### **6.05: Corrective Actions**

Any Owner/Operator allowing the discharge of sediment from its property shall correct the offending condition as soon as possible given existing weather conditions, as follows:

A. In the case of damage to private property, the Owners/Operators shall make arrangements with any owner whose property has been damaged to correct the offending condition. Written confirmation, listing the corrective measures to be taken, must be provided to the Stormwater Manager.

B. In the case of damage to public property, such as roads, ditches, utilities, or any other property owned by the State, County, Township, or Municipality, the Owners/Operators shall correct the offending condition to the full satisfaction of the public authority.

## **6.06: Appeals**

Any person who is aggrieved by the Stormwater Manager's issuance, denial, amendment, or revocation of any SWM/SC permit may appeal to the County Commissioners' duly appointed Appeals Board. The standard of proof at such hearing before the Appeals Board shall be preponderance of the evidence. The burden of proof shall be on the person appealing to the Appeals Board, except that the Stormwater Manager has the burden of proof when a permittee appeals a permit amendment initiated by the Stormwater Manager. If a simple majority of the participating members of the Appeals Board finds in favor of the person appealing, relief shall be granted to that person in the form of a written order by the Appeals Board.

## **ARTICLE VII : DRAINAGE**

### **7.01: Applicability**

A. Article VII. protects surface and subsurface drainage from impairment by the construction of any single-family, two-family, and three-family dwelling and any other building or structure that has any of the following characteristics:

1. The development will involve at least 3,000 square feet of earth-disturbing activities;
2. The development will create at least 2,000 square feet of impervious surface;
3. The development will involve earth-disturbing activities within 100 feet of a stream, a wetland, or Special Flood Hazard Area. (see the Richland County Floodplain Regulations for additional requirements);
4. The proposed development will significantly change the use (e.g., from residential to commercial) of a development previously subject to this Article; or
5. The proposed development will modify a development previously approved under this Article by changing the nature of the stormwater collection or discharge, or by modifying the retention/detention volume of the stormwater retention facilities.

B. Notwithstanding the foregoing, this Article does not apply to the following:

1. Buildings or structures that may not be regulated under the Ohio Building Code;
2. Dwellings or structures for agricultural purposes that are exempted under R.C. 3781.06 (but it does apply to dwellings or structures for agricultural purposes that may be regulated under R.C. 3781.06); or
3. The location, erection, construction, reconstruction, change, alteration, maintenance, removal, use, or enlargement of any buildings or structures of any public utility or railroad, whether publicly or privately owned, or the use of land by any public utility or railroad for the operation of its business;
4. Any major subdivision that a platting authority has approved under R.C. 711.05, 711.09, or 711.10. However, this limitation shall not be construed to prohibit the platting authority from applying drainage requirements pursuant to its own regulations and procedures, nor shall it be construed to prohibit the application of any other drainage requirements applicable to major subdivisions. This Article does apply to any minor subdivision approved under R.C. 711.131; or
5. Subsurface drainage from household sewage treatment systems as defined in

R.C. 3709.091.

**7.02: Performance Standards**

A. Both during and after construction, the Owners/Operators shall ensure that the development does not impair the surface or subsurface drainage of other persons' properties.

B. The Owners/Operators shall provide the development with a drainage system capable of handling stormwater and seepage flowing onto the development site from other areas as well as the water from the development site itself. The Owners/Operators may change the pre-existing surface or subsurface drainage on the Owners/Operators' property, but only to the extent that these changes will not and do not result in the flooding or saturation of upgradient or downgradient properties or otherwise harm any person or any person's property.

C. Provided that the Owners/Operators comply with subsections A., B., and D. of this section, the Owners/Operators may install and maintain a covered storm sewer under or across private property along a natural drainage course to improve the property. This installation and maintenance shall conform with specifications and plans approved by the County Engineer and local township regulations.

D. Water collected from roofs, parking lots, driveways, foundation drains, and other impervious surfaces shall not be discharged, directly into public ditches or other public stormwater drainage facilities, but first must be discharged into private ditches or other permeable surface drainage facilities on the property on which collected. This will allow some water to infiltrate into the soil before reaching public drainage facilities, thus reducing the flow into them and preserving their capacity. However, minor subdivisions whose stormwater retention or detention systems have been approved under R.C. 711.131 may discharge water directly into public storm sewer facilities where connection thereto will not significantly disrupt public streets. Installation of storm sewer facilities in the public right-of-way shall conform with the approval of the County Engineer and local township regulations.

**7.03: Application Procedures**

The procedures of this section shall be followed for any development subject to Article VII.

A. The applicant and a representative of the Richland County Department of Building Regulations shall attend a meeting at which the proposed development shall be examined for specific effects on drainage. The meeting shall be held within thirty days after an application for a building permit is filed or a review is requested unless the applicant agrees in writing to extend that time period or to postpone the meeting to another date, time, or place. The meeting shall be scheduled within five days after an application for a building permit is filed or a review is requested.

B. Written notice of the date, time, and place of that meeting shall be sent by regular mail to the applicant. The written notice shall be mailed at least seven days before the scheduled meeting date.

C. The Richland County Department of Building Regulations, in consultation with the Stormwater Manager, shall complete the review of the drainage effects of the proposed development not later than thirty days after the application for a building permit is filed or a review is requested, unless the applicant has agreed in writing to extend that time period or postpone the meeting to a later time, in which case the review shall be completed not later than two days after the date of the meeting. A complete review shall include the issuance of any order of the Richland County Department of Building Regulations regarding necessary reasonable drainage mitigation and necessary reasonable alterations to the proposed development to prevent or correct any adverse effects on existing surface or subsurface drainage so long as those alterations comply with the state residential and nonresidential building codes adopted pursuant to R.C. 3781.10. If the review is not completed within the thirty-day period or an extended or postponed period that the applicant has agreed to, the proposed development shall be deemed to have no adverse effects on existing surface or subsurface drainage, and those effects shall not be a valid basis for the denial of a building permit.

D. A written statement shall be provided to the applicant at the meeting or in an order for alterations to a proposed new construction informing the applicant of the right to seek appellate review of the denial of a building permit by filing a petition in accordance with R.C. Chapter 2506.

#### **7.04: Enforcement**

A. The Commissioners, upon consulting with the County Engineer, may enter into an agreement with the County Engineer or any other qualified person or entity to carry out the necessary inspections and evaluate alterations necessary to prevent or correct any adverse effects that a proposed development may have on drainage.

B. No Owner/Operator shall violate or fail to comply with any provision or requirement of any permit issued under these regulations.

C. Any authority available to the county for addressing compliance with building code requirements, and other available authority, may be utilized to enforce the requirements of Article VII.

## **APPENDIX TABLE A:**

**Table 5. Fertility for Area Type Seeding.**

<b>Lime</b>	<b>Nitrogen<sub>1</sub></b>	<b>Phosphorous (P2O5)</b>	<b>Potash (K2O)</b>
As needed per site condition	50- 60 Lbs/Acre 1.25 Lbs/1000 ft sq.	50- 60 Lbs/Acre 1.25 Lbs/1000 ft sq.	50- 60 Lbs/Acre 1.25 Lbs/1000 ft sq.

1/ For Warm Season Mixes do not apply Nitrogen.

**Table 6. Permanent Seeding**

<b>Seeding Mixture<sub>1,3,4,9</sub></b>	<b>lbs/acre<sub>2</sub></b>	<b>Suitable Purposes</b>	<b>Suitable Site Drainage<sub>5</sub></b>	<b>Desirable pH Range</b>
Creeping Red Fescue + Perennial Ryegrasses + Kentucky Bluegrass	20 - 40 10 - 20 20 - 40	WW, CA	WD	4.5 - 7.5
Tall Fescue	40 - 50	WW, CA, HU, R	All	5.0 - 8.0
Turf-Type Tall Fescue + Kentucky Bluegrass	90 - 100 5 - 10	WW, CA, HU, R	All	5.0 - 8.0
Orchard grass + Red Clover,	8 - 20 8 - 10	CA, R	MWD	5.5 - 7.5
Alsike Clover	3 - 6		All	5.0 - 7.5
Bluegrass + Ryegrass	100 - 120 100 - 120	"Lawn Seeding"	All	4.5 - 7.5

1/ One (1) bushel/acre of rye or wheat or oats; or 5 lbs/acre of annual or perennial rye may be added to the mix for quicker green-up or stabilization.

2/ Standard Seeding Dates (Spring March 15 - May 31; Summer August 1 - September 15; Dormant December 1 - March 14). Seeding may be considered from June 1 thru July 31 if the area is mulched with 95-100% cover (approx. 3-4 bales per 1,000 sq. ft. of straw); timely watering may be needed during this period to provide establishment. Seeding may also be considered between September 16 and November 30 (except for waterway type areas); apply the standard seeding rate during this time and apply an additional 50% of the seeding rate during the dormant period.

3/ Use the higher seeding rates for steeper slopes, reclamation areas, or poorer site conditions.

4/ Drainage: WD=Well Drained; MW=Moderately Well Drained; SPD=Somewhat Poorly Drained; PD=Poorly Drained.

\* Straw Bale Wt. #40 per bale. Increase the amount of applied straw on steep slopes by 50%

**Table 7. “Temporary Seeding” for Lawns**

Seed Mixture	lbs/acre	Spring Seed Period	Summer Seed Period	Fall Seed Period
Oats	128 (4 bu/acre)	3/1 to 6/1	6/1 to 8/1	NA
Annual or Perennial Ryegrass	40	3/1 to 6/1	6/1 to 8/1	8/1 - 11/1
Oats + Sudangrass	64 80	NA	6/1 to 8/1	NA
Cereal Rye	50 - 100 lbs/ac	Begin March 1	All Summer	8/1 to 11/1

**Table 10. Site preparation for Lawns and Area Seeding.**

<b>SEEDBED PREPARATION (Where grasses will be seeded)</b>
<p>*On sites that involve considerable earthmoving, reapply the topsoil or apply new topsoil.</p> <ol style="list-style-type: none"> <li>1. Prepare a firm seedbed with a disk or similar equipment and work seedbed to a depth of three (3) inches on all areas accessible to equipment. Other areas not accessible to equipment shall be worked by hand tools to a depth of one (1) inch. Where rocks, clods, stumps, and other debris will interfere with the future use of the area, they shall be removed to the degree necessary to meet the goals of the planned use.</li> <li>2. Prepare the seedbed within 48 hours after applying the needed lime and fertilizer. On areas that are not accessible to seedbed preparation equipment the fertilizer can be broadcast or hydraulically applied; however, the effectiveness is reduced and the seed should not contact the fertilizer. After seeding, the appropriate amount of mulch shall be applied to <b>all</b> seeded areas. To achieve a successful planting of grass, frequent watering will be necessary to maintain healthy growth.</li> </ol> <p>NOTE: After preparing the seedbed, the seeding and mulch application shall be done immediately to prevent erosion in the event of rainfall</p>

STORM WATER CALCULATION SUMMARY							
STORM EVENT	1 YR	2 YR	5 YR	10 YR	25 YR	50 YR	100 YR
PRE CONSTRUCTION (Q)							
	cfs	cfs	cfs	cfs	cfs	cfs	cfs
POST CONSTRUCTION (Q)							
	cfs	cfs	cfs	cfs	cfs	cfs	cfs
Allowable Discharge from detention basin							
	cfs	cfs	cfs	cfs	cfs	cfs	cfs
CRITICAL STORM CALCULATION (Q-1yr Post - Q-1 yr Pre)							X 100
				Q-1 yr Pre			
% INCREASE IN RUNOFF VOLUME =							
CRITICAL STORM EVENT =				Year Storm			
REQUIRED BASIN VOLUME							
REQUIRED BASIN VOLUME PROVIDED							

# STOP WORK ORDER

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Richland Soil and Water Conservation District  
Department of Stormwater Management  
1495 W Longview Ave. Suite 205 B  
Mansfield, Ohio 44906  
PHONE 419-747-8686

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The address of this location is:

---

Is hereby ordered to cease all excavating activity  
By the authority of Ohio Revised Code Section 307.79

For the following reason: \_\_\_\_\_

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Until such time written permission and directives of the violation have been addressed and actions approved by the above office and the Richland County Commissioners.

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Commissioner

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Commissioner

---

Commissioner

---

Date

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Stormwater Manager



Richland County  
 Office of Stormwater Management  
 1495 W Longview Ave Ste 205B  
 Mansfield, Ohio 44906

## PRE – APPLICATION SITE VISIT Request Form

**Project site address:** \_\_\_\_\_

**Parcel ID Number:** \_\_\_\_\_

**Project Type:**  New Home  Grading (pond, grubbing, Prep)   
**Storage Bldg.**  Multi-Family/Business  Addition  
 Residential  Commercial  Addition

**Project site owner:** \_\_\_\_\_

**Owner's Representative:** \_\_\_\_\_

**Mailing Address:** \_\_\_\_\_  
 (City, State, Zip) \_\_\_\_\_

**Phone No:** \_\_\_\_\_ **Fax No.** \_\_\_\_\_

**Project description:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Proposed excavation, fill and other grading:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Proposed foundation type(s):** \_\_\_\_\_  
 \_\_\_\_\_

**Authorization to conduct Site Visit:**

I am the (owner, owner's authorized representative) of the above addressed property and hereby give permission to the Richland Soil & Water Conservation District to enter the above addressed property to conduct a Pre-Application Site Visit. I agree to inform the property's tenants, if any, of the site visit.

I am aware that if conditions at the addressed site present a hindrance to the inspector, such as uncontrolled dogs or uncooperative tenants, the Pre-Application Site Visit will not be conducted.

Signed: \_\_\_\_\_

Dated: \_\_\_\_\_

Daytime Phone No.: \_\_\_\_\_

**Please circle one of the following:**  
 Owner                      Renter/lessee      Vacant  
 Occupied                      Occupied

Has there been impervious surface area added since 2000

**Instructions for completing and submitting:**

**Pre-Application Site Visit Request Form:**

- Fill-out Request Form completely; be sure to fill-out all the boxes and sign where noted in the Authorization box.
- Request Forms will not be accepted without address and Parcel ID Number.
- Attach a plot plan to this Request Form; either attach a previously prepared plot plan or carefully draw a plot plan on the attached Plot Plan grid sheet.

**Submit Request Form and Plot Plan by:**

- Bring the Request Form and Plot Plan to the Stormwater Office (address below or)
- Mail the Request Form, Plot Plan and a check (payable to "Richland County Treasurer") for the proper amount to:  
 Richland County Soil & Water Conservation District  
 Office of Stormwater Management  
 1495 W Longview Ave, Suite 205B  
 Mansfield, Ohio 44906

