

RESOLUTION CONTROLLING POST-CONSTRUCTION STORMWATER RUNOFF IN URBANIZED AREAS

Whereas, flooding and stream bank erosion in Richland County are a significant threat to public health and safety and public and private property, and stormwater quantity control slows runoff and reduces its erosive force and flood damage;

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

Whereas, there is a regional effort to improve the quality of water in the rivers, streams, ponds, and lakes within various watersheds in Richland County and to protect and enhance the water resources of the County, and Richland County recognizes its obligation as a part of the region to protect water quality by controlling runoff within its borders;

Whereas, Richland County has experienced and continues to experience significant costs associated with inadequate surface water quality including legal fees, engineering services, and increased state and federal regulation;

Whereas, Title 40 Code of Federal Regulations (C.F.R.) Parts 9, 122, 123, and 124, referred to as NPDES Stormwater Phase II, require designated communities, including Richland County, to develop a Stormwater Management Program to address the quality of stormwater runoff, among other components, during and after soil disturbing activities in urbanized areas; and,

Whereas, to promote public health and safety and sound economic development in Richland County, it is important to provide homebuilders, developers, and landowners with consistent, technically feasible, and operationally practical standards for water quality runoff management;

Now, therefore, pursuant to R.C. 307.79, R.C. 307.85, and any other applicable authorities, the Board of Commissioners for Richland County, State of Ohio, enacts the following regulations:

SECTION 1: COMPREHENSIVE STORMWATER MANAGEMENT PLAN

The Post-Construction Water Quality Plan developed to comply with these regulations shall be coordinated and combined with the Stormwater Management and Sediment Control Plan required for the same site by Richland County's Stormwater Management and Sediment Control Regulations. These plans shall be titled and numbered in one consecutive sequence to make a Comprehensive Stormwater Management Plan for the site, which shall be incorporated into the permit issued by the Stormwater Manager pursuant to the Stormwater Management and Sediment Control Regulations. This Comprehensive Stormwater Management Plan may serve as the Storm Water Pollution Prevention Plan (SWP3) required for the site by Ohio EPA pursuant to its NPDES Permit for Storm Water Discharges Associated with Construction Activity.

SECTION 2: PURPOSE

The intent of these regulations is to:

1. Allow development while reducing damage to receiving water resources and drainage systems that may be caused by new development or redevelopment activities.
2. Protect and maintain the receiving stream's physical, chemical, biological characteristics and stream functions.
3. Provide perpetual management of stormwater runoff quality and quantity.
4. Establish consistent technically feasible and operationally practical standards to achieve a level of stormwater quantity and quality control that will minimize damage to public and private property and degradation of water resources, and will promote and maintain the health, safety, and welfare of the residents of Richland County.
5. Control stormwater runoff resulting from soil disturbing activities.
6. Preserve, to the maximum extent practicable (MEP), the natural drainage characteristics of the building site.
7. Preserve, to the maximum extent practicable (MEP), natural infiltration and groundwater recharge, and maintain subsurface flow that replenishes water resources, wetlands, and wells.
8. Assure that stormwater quality controls are incorporated into site planning and design at the earliest possible stage.
9. Reduce the need for costly treatment and mitigation for the damage to and loss of water resources that are the result of inadequate stormwater quality control.
10. Reduce the long-term expense of remedial projects needed to address problems caused by inadequate stormwater quality control.
11. Require the incorporation of water quality protection that encourages and promotes habitat preservation into the construction of stormwater management practices.
12. Ensure that all stormwater quality practices are properly designed, constructed, and maintained.
13. Implement the NPDES program for municipal separate storm sewer systems in the unincorporated urbanized areas of Richland County.

SECTION 3: 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 Richland County, the Commissioners, County Engineer, or any other county agency, officer, employee, or agent to those damaged by the projects subject to these regulations. These regulations shall not relieve the Owner/Operator of the responsibility to determine the applicability of any other legal requirements.

SECTION 4: CONFLICTS, SEVERABILITY, NUISANCES AND RESPONSIBILITY

1. Where this ordinance imposes a greater restriction upon land than is imposed or required by other Richland County provisions of law, resolution, contract or deed, the provisions of this ordinance shall prevail.
2. 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.
3. These regulations shall not be construed as authorizing any person to maintain a private or public nuisance. Compliance with the provisions of this regulation shall not be a defense in any action to abate such nuisance.
4. Failure of Richland County to observe or recognize hazardous or unsightly conditions or to recommend corrective measures shall not relieve the owner from the responsibility for the condition or damage resulting therefrom, and shall not result in Richland County, the Commissioners, County Engineer, or any other county agency, officer, employee, or agent being responsible for any condition or damage resulting therefrom.

SECTION 5: SCOPE

This resolution applies to all Earth-Disturbing Activities that (1) are conducted for commercial, industrial, residential, or other purposes, (2) are located in the unincorporated urbanized areas of Richland County, and (3) disturb one acre or more of land, or are part of a larger common plan of development or sale that will disturb one acre or more of land, except for:

1. Strip mining operations as defined by R.C. 1513.01;
2. Surface mining operations as defined by R.C. 1514.01;
3. Linear construction projects (e.g., pipeline or utility line installation) that do not result in the installation of impervious surface and are independent of other construction projects (not part of a larger common plan of development or sale). However, linear construction projects must be designed to minimize the number of stream crossings and the width of disturbance;

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 Districts and that the applicable sediment control policies are no less restrictive than these regulations; and

5. Any introduction of pollutants from non-point source agricultural and silvicultural activities, including stormwater runoff from orchards, cultivated crops, pastures, range lands, and forest lands, except to the extent regulated by federal and state NPDES requirements for MS4s;

It is not the role of Richland County to point out each and every part of the rules and how to implement them on the individual job sites. It is the owner/operator's responsibility to be proactive in meeting the intent, purpose and requirements of these regulations.

SECTION 6: DEFINITIONS, as used in these regulations:

APPEALS BOARD: A group of individuals knowledgeable in matters relating to stormwater management and erosion control, representing diverse interests appointed by the County Commissioner 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 Richland County Board of Commissioners shall maintain a list of those persons on an annual basis.

BEST MANAGEMENT PRACTICE (BMP): 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. BMPs may, where appropriate, include any post-construction structural or non-structural BMP listed in Ohio EPA's NPDES permit for small municipal separate storm sewer systems.

CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC): A person that has subscribed to the Code of Ethics and has met the requirements established by the CPESC Council of Certified Professionals In Erosion and Sediment Control, Inc. to be a Certified Professional in Erosion and Sediment Control. Nothing in these regulations shall preclude a professional engineer or architect registered in the State of Ohio from providing services to a client in order to comply with these regulations.

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

CONSERVATION: The wise use and management of natural resources.

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.

DEVELOPER: The person or persons responsible for the development area or the person or persons performing the work for the development area.

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

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

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 activities are included.

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

EXISTING: In existence at the time of the enactment of these regulations.

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

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

IMPERVIOUS COVER: Any surface that cannot effectively absorb or infiltrate water. This includes roads, streets, parking lots, rooftops, sidewalks, gravel surfaces, asphalt concrete surfaces and concrete surfaces.

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

LARGER COMMON PLAN OF DEVELOPMENT OR SALE: A contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan.

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

NPDES: The National Pollutant Discharge Elimination System established by the Federal Clean Water Act, which Ohio EPA implements in Ohio pursuant to authorization from USEPA.

NPDES PERMIT: A permit issued by Ohio EPA pursuant to its authorized NPDES program.

OHIO EPA: The Ohio Environmental Protection Agency.

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

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, joint venture, agency, unincorporated association, municipal corporation, township, county, state agency, the federal government, or any combination thereof.

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

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

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

RICHLAND SOIL AND WATER CONSERVATION DISTRICT: A subdivision of the State of Ohio organized under R.C. Chapter 1515, working with the Richland County Commissioners.

RIPARIAN SETBACK: Land located alongside streams on which any government prohibits or restricts changes in land use and/or the building of structures.

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

SEDIMENT BASIN: A temporary sediment pond that releases runoff at a controlled rate. It is designed to slowly release runoff, detaining it long enough to allow most of the sediment to

settle out of the water. The outlet structure is usually a designed pipe riser and barrel. The entire structure is removed after construction. Permanent stormwater detention structures can be modified to function as temporary sediment basins.

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

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

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

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

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

URBANIZED AREA: An area defined as an urbanized area by the U.S. Bureau of the Census, and which is subject to NPDES requirements for municipal separate storm sewer systems.

USEPA: The United States Environmental Protection Agency.

WATER RESOURCES: All streams, lakes, ponds, wetlands, water courses, waterways, drainage systems, and all other bodies or accumulations of surface water, either natural or artificial, which are situated wholly or partly within, or border upon this state, or are within its jurisdiction, except those private waters which do not combine or affect a junction with natural surface waters.

WETLAND: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs, and similar areas.

WETLAND SETBACK: Land located alongside wetlands on which any government prohibits or restricts changes in land use and/or the building of structures.

SECTION 7: ADMINISTRATION AND CONSULTATIONS

The County Engineer is authorized to administer these regulations. In implementing these regulations the County Engineer or other County officials may consult with the Richland County SWCD, state and federal agencies and other technical experts as necessary. Any costs associated with such consultations may be assessed to the applicant or his or her designated representative.

SECTION 8: CONTENTS OF THE POST-CONSTRUCTION WATER QUALITY CONTROL PLAN

The Owners/Operators of each project subject to these regulations shall submit a Post-Construction Water Quality Plan to the County Engineer complying with the following requirements:

1. This plan shall describe the post-construction controls appropriate for each construction operation covered by these regulations.
2. The BMPs used to satisfy the conditions of these regulations shall meet the standards and specifications in the current edition of the Ohio *Rain Water and Land Development* manual, or the ODOT Post-Construction stormwater standards.
3. This plan must make use of practices that preserve the existing natural condition to the Maximum Extent Practicable (MEP).
4. This plan must describe the Post-Construction BMPs that shall be installed during construction for the site and the rationale for their selection. The rationale must address the anticipated impacts on the channel and floodplain morphology, hydrology, and water quality.
5. This plan shall identify the person or entity responsible for continued maintenance of all vegetative and/or mechanical BMPs following the completion of construction.
6. This plan shall identify the long-term maintenance requirements and schedules for all Post-Construction BMPs.
7. This plan shall 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.).
8. This plan shall identify the person or entity financially responsible for maintaining the permanent inspection and maintenance of permanent stormwater conveyance and storage structures and other conservation practices.
9. This plan shall identify the method of ensuring that funding will be available to conduct the long-term maintenance and inspections of all permanent stormwater, soil erosion, sediment control, and water quality practices.
10. This plan shall contain the following information depending on the size of the development sites as well as any additional information required by the County Engineer.
 - A. **Development Sites Smaller than Five Acres:** 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 other project subject to these regulations 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) Upland Areas: Structural measures placed on upland soils to the degree attainable.
- (4) Map: A map of the entire site showing the overall development.
- (5) 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.
- (6) BMPs: Best Management Practices used in the plan may include but are not limited to 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.
- (7) Technical Basis: The plan shall describe the rationale for selecting the BMPs used to control pollution and to maintain and protect water quality.

B. Development Sites Five Acres or Larger: The plan for any development site 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:

$WQv = C * P * A / 12$ where: WQv = 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 WQv 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 County Engineer to use alternative structural Post-Construction BMPs if the Owner/Operator can demonstrate that the alternative BMPs comply with Ohio EPA’s NPDES requirements and 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 as determined by the County Engineer (generally two-foot contours are used).

(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.

(15) The person or entity responsible for continued maintenance of all permanent Post-Construction BMPs.

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

SECTION 9: EASEMENTS

The Owner/Operator shall provide Richland County with future access to all areas on which permanent Post Construction 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. Such easements shall be at least 25 feet in width, in addition to the width of the ditch, channel, or other facility it is to serve. Such an easement shall be provided on one side of each flood control or storm drainage ditch, channel, or similar-type facility.
3. Access along the initial drainage system shall be provided by easements. Such easements shall be not less than 25 feet in width, with a minimum 10 foot width on each side of the centerline.
4. Access adjacent to storage facilities shall be provided by a 25 foot easement for detention (dry) basins, and a 25 foot easement with a 25 foot level bench for retention (wet) basins, measured from the top of the bank. The easements shall also provide access to the area occupied by the storage facilities.
5. Easements for the emergency flow ways shall be at least 25 feet in width, or larger if required by the County Engineer.
6. Flood control or storm drainage easements containing underground facilities shall have a minimum width of 25 feet.
7. 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 to the free flow of stormwater and the movement of inspectors and maintenance equipment. The final grade in the areas subject to the easements shall not be changed from that described by the grading plan.

SECTION 10: MAINTENANCE

All portions of the permanent Post-Construction water quality management systems, including on-site and off-site treatment/storage facilities constructed by the Owner/Operator, shall be continuously maintained into perpetuity.

1. Detail drawings and maintenance plans must be provided for all Post-Construction BMPs.
2. Maintenance plans must ensure that pollutants collected within Post-Construction BMP structures will be disposed of in accordance with local, state and federal guidelines.
3. Maintenance plans shall be provided by the Owner/Operator to the County Engineer.
4. Maintenance Fund for Subdivisions

(a) Maintenance Assessments

Upon completion of the work, or when suitable surety is established in accordance with the Richland County Subdivision Regulations, the County Engineer 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.

Maintenance assessments shall begin the year after acceptance of the subdivision, based upon an assessment schedule prepared by the County Engineer 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.

Annual inspections, as well as all necessary maintenance work, shall be performed by or under supervision of the County Engineer. All expenditures from the Maintenance Fund shall be approved by the Board of Commissioners after consideration of the recommendation of the County Engineer.

(b) Maintenance Fund Characteristics and Calculations:

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 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.

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

5. Commercial and Industrial Developments: The plans shall clearly state that the owner of the property shall be continuously responsible for Post-Construction maintenance and inspections into perpetuity.
6. Maintenance Design: Low maintenance requirements are a priority in the design and construction of all facilities. Multi-use facilities incorporating assets such as aesthetics and recreation may be incorporated into the design of the drainage facilities. All permanent drainage, soil erosion, sediment control, water quality management systems and BMPs, including on-site and off-site structures and vegetation that are constructed or planted, must be inspected and maintained into perpetuity by the responsible party designated in the plans and the requirements of this resolution. Inspections and maintenance shall be incorporated periodically throughout the year to ensure that the facilities are properly operational.
7. Perpetual Maintenance Inspections: One inspection with a written report shall be performed each year. The written report shall be given to the County Engineer by May 1 of each year after the BMP has been completed and shall include:
 - A. Structures that require a permit from the Ohio Division of Water: A written and stamped report from a professional engineer on the status of all structural BMPs that require a permit from the Ohio Department of Natural Resources (ODNR) Division of Water. This

applies to all BMPs that require a permit either at the time of construction or fall under the jurisdiction of ODNR Division of Water at any time after construction is completed.

- B. Easements: A written report from an inspector on the status of all stormwater management easements for each project shall be submitted to the County Engineer by May 1 of each year into perpetuity. These reports shall document whether restricted plantings, fences and structures are on the areas subject to the easement and shall identify the location of the noted easement restriction violations.
- C. BMPs not posing potential risks: A written and stamped report from a professional engineer, architect, landscape architect or Certified Professional In Erosion and Sediment Control (CPESC) shall be submitted by May 1 of each year for perpetuity to the County Engineer for all BMPs that the County Engineer determines do not pose a potential risk for loss of life, bodily injury, or damage to structures or infrastructure in the event of failure. The report shall describe the status of permanent soil erosion, sediment control, water quality management systems and the status of the related easements.
- D. BMPs posing potential risks: A written and stamped report covering the status of all BMPs that the County Engineer determines have a potential for loss of life, bodily injury, or damage to structures or infrastructure in the event of failure shall be prepared by a professional engineer.

SECTION 11: MINIMUM STANDARDS

The Owner/Operator shall comply with the following standards.

- 1. Standards and Specifications: Post-Construction runoff practices used to satisfy these standards shall meet the standards and specifications in the current edition of the *Rainwater and Land Development* manual, the NRCS Field Office Technical Guide, or Ohio EPA requirements, whichever is most stringent.
- 2. Water Quality Basins:
 - A. Pool Geometry: The minimum length-to-width ratio for the pond is 3:1 (the length shall be three times the width).
 - B. Riser in Embankment: The riser shall be located within the embankment for purposes of maintenance access. Access to the riser shall be by manholes.
 - C. Water Drains: Each retention basin shall have a drainpipe that can completely drain the pond. The drain shall have an elbow within the pond to prevent sediment deposition from plugging the drain.
 - D. Adjustable Gate Valves: Both the Water Quality and the Stormwater Management Basin drains shall have adjustable gate valves. Valves shall be located inside of the riser at a point where they shall remain dry and can be operated in a safe and convenient

manner. During the annual inspections the valves shall be fully opened and closed at least once, and the certifying official shall attest to this on the inspection form. To prevent vandalism, the handwheel shall be chained to a ringbolt or manhole step.

- E. Principal Spillway: Each principal spillway shall be designed in accordance with the Natural Resources Conservation Service (NRCS) standards and specifications for the office serving Richland County. Each principal spillway shall have the capacity to pass the 100 year design storm flows. The inlet or riser size for the pipe drops shall be designed so that the flow through the structure goes from weir flow control to pipe flow control without going into orifice control in the riser. The crest elevation of the primary spillway shall be no less than one foot below the emergency spillway crest. Premium joint pipe is required and a removable trash rack shall be installed at each location. Anti-seep collars shall be provided for all pipe conduits through an embankment.
- F. Emergency Spillway: An emergency spillway shall be provided on each Water Quality and Stormwater Management basin. Emergency spillways shall convey flood flows safely past the embankment, and shall be designed in accordance with NRCS standards and specifications for the office serving Richland County. Emergency spillways shall have a 100-year design storm capacity.
- G. Embankments: Each dam embankment shall be designed in accordance with the NRCS standards and specifications for the office serving Richland County. Anti-seep collars shall be provided for all pipe conduits through an embankment.
- H. Safety Features:
 - 1) The primary spillway opening shall not permit access to the public and other non-maintenance personnel.
 - 2) The perimeter of all water pool areas that are deeper than three feet shall be surrounded by benches that meet the following:
 - a) A safety bench, with a maximum slope of 3%, which extends outward, on dry land, from the shoreline. This bench shall be a minimum of 25 feet wide to provide for the safety of individuals and maintenance vehicles that are adjacent to the water pool. The safety bench may be landscaped, without the use of structures, to prevent access to the water pool.
 - b) Side slopes between the safety bench and the aquatic bench shall not be steeper than 3:1 (3 feet horizontal for every 1 foot vertical).
 - c) An aquatic bench that extends inward from the shoreline far enough to ensure public safety and that has a maximum depth of 15 inches below the normal water surface elevations. The aquatic bench may be landscaped to prevent access to the deeper water pool. The aquatic bench may also be incorporated into the Post-Construction Water Quality Plan.

- d) Side slopes beyond the aquatic bench and below the permanent water level shall not be steeper than 2:1 (2 feet horizontal for every 1 foot vertical).
 - e) The contours of the pond shall be designed and managed to eliminate drop-offs and other hazards. Side slopes approaching the pond shall not exceed 3:1 and shall terminate on a safety bench.
- I. Water Quality Basin: If a water quality basin is needed and cannot be incorporated into an existing or planned detention or retention basin, then a separate water quality basin shall be planned, designed, constructed and maintained into perpetuity. Water quality basins shall not be constructed in any permanent or intermittent stream channel.

SECTION 12: CONSTRUCTION AND MAINTENANCE GUARANTEE

The Owner/Operator shall provide a construction and maintenance guarantee for all permanent improvements, soil erosion, and sediment control and water quality practices. Subdivisions shall also comply with the maintenance fund requirements in section 10, paragraph 4 above.

The Owner/Operator shall provide a Security Bond, Escrow Account, Certified Check, or Cash for the life of the construction to guarantee that the planned temporary and permanent soil erosion, sediment control and water quality practices will be constructed in a timely manner, as determined by the County Engineer.

1. The Guarantee: The guarantee of both performance and maintenance shall be in the form of a Security Bond, Escrow Account, Certified Check, or Cash. Richland County may use the Security Bond, Escrow Account, Certified Check, or Cash to complete any guaranteed construction or removal of improvements or temporary and permanent soil erosion, sediment control and water quality practices that are not adequately completed, maintained or removed by the Owner/Operator in a timely manner, as determined by the County Engineer. The Security Bond, Escrow Account, Certified Check or Cash shall be in the total amount of both the performance guarantee and the maintenance guarantee. Richland County will require performance bonds or other guarantees for water management improvement as stated in R.C. 711.101.
2. No Earth-Disturbing Activities shall occur before a Security Bond, Escrow Account, Certified Check, or Cash has been posted to the satisfaction of the County Engineer sufficient for Richland County to perform the obligations otherwise to be performed by the Owner/Operator. The Security Bond, Escrow Account, Certified Check, and Cash shall be released only after all work required by these regulations has been completed to the satisfaction of the County Engineer and all permit and inspection fees required by these regulations have been paid in full.
3. Performance Guarantee: The furnishing of a performance guarantee shall be maintained in an amount of no less than 100% of the estimate approved by the County Engineer, of installation of the deferred improvements.

4. Maintenance Guarantee: The maintenance guarantee shall be maintained for a period of not less than two years after final acceptance of the County Engineer's acceptance of the work required by the Post-Construction Water Quality Plan and the removal of temporary erosion and sediment control measures such as silt fences.
5. Time Extension: The County Engineer may extend the time allowed for the installation of the improvements for which the performance guarantee has been provided with the receipt of a written request from the Owner/Operator.
6. Completion: The Owner/Operator shall notify the County Engineer upon the completion of the work required by the Post-Construction Water Quality Plan and the removal of temporary soil erosion and sediment control measures.
7. Inspection: Richland County will not release the Security Bond, Escrow Account, Certified Check, or Cash guarantee until the County Engineer has inspected the site to ensure that the guaranteed item(s) have been completed and/or removed.
8. Release: The Construction Maintenance Guarantee shall not be released by Richland County until all temporary soil erosion and sediment control measures that are no longer needed have been removed, properly disposed of and any trapped sediment has been stabilized.

SECTION 13: APPLICATION PROCEDURES FOR POST-CONSTRUCTION WATER QUALITY PLANS

1. The Post-Construction Water Quality Plan shall be combined with the Stormwater Management and Sediment Control Plan that has also been developed for the site.
2. A plan approved by Richland County in accordance with these regulations does not relieve the Owner/Operator of responsibility for obtaining all other necessary permits and/or approvals from federal, state, county, and local agencies and departments.
3. At least 30 days prior to date on which Earth-Disturbing Activities will commence, the Owner/Operator shall submit three sets of the Post-Construction Water Quality Plan and all necessary data required by these regulations to the County Engineer. The plan shall contain all information required by these regulations. The text material in the plan shall be on 8.5 by 11 inch paper and drawings shall be on paper no larger than 24 inch by 36 inches.
4. The County Engineer shall review the Post-Construction Water Quality Plan and shall approve or return the plan with comments and recommendations for revisions, within 30 working days after receipt of the plan as described above. A plan returned because of deficiencies shall be accompanied by a report stating specific problems and the procedures for filing a revised plan. At a time of receipt of a revised plan another 30 day review period shall begin.
5. The approved Post-Construction Water Quality Plan shall be combined with the Sediment Stormwater Management and Sediment Control Plan approved by the Stormwater Manager under the Stormwater Management and Sediment Control Regulations. The combined

Comprehensive Stormwater Management Plan shall be incorporated into the Stormwater Management and Sediment Control Permit issued pursuant to the Stormwater Management and Sediment Control Regulations.

6. No Earth-Disturbing Activities shall occur prior to issuance of the Stormwater Management and Sediment Control Permit.
7. After approving the plan, the County Engineer shall have the authority to make immediate written adjustments to the plan to ensure compliance with these regulations or to remove unnecessary requirements. These amendments shall be deemed to be incorporated into the Stormwater Management and Sediment Control Permit.
8. The Owners/Operators shall implement and comply with all requirements of the Post-Construction Water Quality Plan, including any schedules contained in the plan.
9. Approved plans shall remain valid as long as the Stormwater Management and Sediment Control Permit remains valid.
10. The County Engineer will do construction inspections until the site is permanently stabilized as determined by the County Engineer. The construction shall not be considered completed until the County Engineer has conducted a post-construction inspection.

SECTION 14: FEES

1. The Fee Schedule for plan review and field inspections is provided in a separate resolution. The current schedule adopted by the Commissioners should be requested from the County Engineer.
2. 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.

SECTION 15: INSPECTIONS

1. The County Engineer is authorized to conduct inspections of the properties regulated under these regulations. Any Owner/Operator required to obtain a plan consents to these inspections by submitting the application. 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 plan approval is issued to allow inspectors to view the project.
2. Inspections will be made during the construction process to ensure that the site and all components operate and are maintained. If the inspector finds violations of the approved plan, a letter will be mailed to the Owners/Operators to make repairs. An allowable time frame shall be given to make repairs as described in R.C. 307.79. The owner or operator shall notify the County Engineer when repairs were made.

SECTION 16: STOP WORK ORDERS

1. If the Commissioners or the County Engineer determine that a violation of these regulations exists; the Commissioners or the County Engineer may issue an immediate stop work order if the violator failed to obtain any federal, state or local permit necessary for sediment and erosion control, earth movement, clearing, or cut and fill activity. In addition, if the Commissioners or County Engineer determine such a regulatory violation exists, regardless of whether or not the violator has obtained the proper permits, the Commissioners or the County Engineer 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 County Engineer shall issue a second notice of violation. Except as provided in paragraph 4. 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 County Engineer 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.
2. Once a stop work order is issued, the Commissioners or the County Engineer 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.
3. 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.
4. 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.
5. No person shall violate any of these regulations, a plan approval issued pursuant to these regulations, or an order issued by the Commissioners or the County Engineer. Notwithstanding division 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.

SECTION 17: APPEALS

Any person who is aggrieved by the County Engineer's issuance, denial, amendment, or revocation of any Post-Construction Water Quality Plan may appeal to the County Commissioners' duly appointed Appeals Board. The appeal shall be made by filing with the Appeals Board a writing identifying the action being appealed and describing the grounds for the

appeal. 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 County Engineer has the burden of proof when a permittee appeals a plan amendment or revocation initiated by the County Engineer. 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.

SECTION 18: REMEDIES NOT EXCLUSIVE

The remedies listed in these regulations are not exclusive of any other remedies available under any applicable federal, state or local law. The Commissioners reserve the right to request the County Prosecutor to file civil or criminal actions to enforce these regulations, or to take any other enforcement action authorized by law.

SECTION 19: ADOPTION OF RESOLUTION

The Resolution shall be in full force and effect at the earliest time allowed by law.

THIS RESOLUTION HAS BEEN PASSED AND ADOPTED

this _____ day of _____, 2006, by the following vote:

ATTEST _____
Clerk

Commissioner Vote

Commissioner Vote

Commissioner Vote

Approved as to Form _____