CITY OF WYOMING
STORM WATER MANAGEMENT PLAN

NPDES Phase II Permit Period 2014-2019
Ohio Environmental Protection Agency Issued Permit No.: 1GQ00070*BG

3-23-16

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City of Wyoming

Storm Water Management Plan Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

_____

Mike Lippert
Asst. Public Works Director/Water Works Director
City of Wyoming, Ohio

Executive Summary

The City of Wyoming is required to prepare a Storm Water Management Plan (SWMP) in accordance with 40 CFR 123.25 and Ohio law (OAC 3745-39). This document outlines the City's program to develop, implement and enforce a storm water management program designed to reduce the discharge of pollutants to the maximum extent practicable, to protect water quality, and to satisfy the appropriate requirements of the Clean Water Act (CWA) in accordance with the Ohio Environmental Protection Agency (OEPA) National Pollutant Discharge Elimination System (NPDES) Phase II program. The SWMP addresses the Six Minimum Control Measures as required by state regulations. The plan also identifies the City's legal authority to implement the requirements of the OEPA's general permit, OHQ000003, in effect from 2014-2019.

The overall goal of the plan is to protect water quality by reducing or preventing pollutants from mixing with stormwater runoff and flowing into the City's owned and operated small municipal storm sewer system (MS4) and into waterways. A MS4 system is a conveyance, or system of conveyances, that are owned and operated by the City that are designed or used for the collecting and conveying solely stormwater into surface waters of the state.

Components of the overall MS4 system consist of the following:

- Municipal streets
- Storm sewer pipe and catch basins
- Roadway curbs and gutters
- Ditches and constructed channels

A copy of the City of Wyoming MS4 Map is provided within Appendix A.

Legal Authority

Resolution No. 25-2009 and Ordinance No. 24-2009 provides the City of Wyoming the authority to control the quality of separate storm water discharge to its MS4. Copies of this resolution and ordinance are provided within Appendix B. The City of Wyoming has both the fiscal resources and legal authority to fully implement its Storm Water Management Plan. The City has adopted this Storm Water Management Plan for the permitting period, 2014-2019. A copy of the OEPA approval letter is provided within Appendix C.

Permit Coverage Area

The SWMP traverses all areas within the incorporated City limits. The City of Wyoming has an estimated population of 8,428 (US Census Bureau-Population Estimates, 2010) and encompasses approximately 2.9 square miles. The City is largely residential, with concentrations of commercial areas along the main thoroughfare, Springfield Pike.

A portion of the City's drainage network discharges to combined storm/sanitary sewers. Storm water management regulations required through the states NPDES permitting

authority do not apply to areas served by combined sewers. A copy of the sewer map identifying the locations of the combined sewers is provided within Appendix D.

Reporting Requirements

The City of Wyoming will annually prepare a report during the permit cycle. The report is required to be submitted to the OEPA by April 1st of each year. The report will include the status of compliance with the permit conditions, an assessment of the appropriateness of the best management practices (BMPs) and progress towards achieving measurable goals for each of the Six Minimum Control Measures.

A summary of the activities the City will undertake during the subsequent annual reporting cycle and any changes to the BMPs or measurable goals will be included in the annual report.

Storm Water Management Plan (SWMP)

The SWMP outlines the Six Minimum Control Measures that are expected to result in reductions in the adverse effects of storm water discharged by the City of Wyoming. The City is located in the Mill Creek Watershed (Hydrologic Unit Code (HUC) 05090203 010). This assessment unit is very large, and does not reflect individual tributaries serving Wyoming. The Wyoming-specific major waterway is West Fork Mill Creek as identified on the MS4 map provided within Appendix A. Because the City is largely built-out, the City's Storm Water Management Plan addresses the means and methods for lessening the effects of urban runoff.

Where applicable, The OEPA requires BMPs to be selected as part of the overall SWMP to address US EPA approved Total Maximum Daily Load (TMDL) recommendations for identified water quality problems associated with MS4 discharges within the City's MS4 watershed. TMDLs identify and evaluate water quality problems in impaired water bodies and propose solutions to bring those waters into attainment.

The Mill Creek Watershed Total Maximum Daily Load report (TMDL) was approved by U.S. EPA on April 26, 2005. TMDLs identify and evaluate water quality problems in impaired water bodies and propose solutions to bring those waters into attainment.

Although many causes of impairment have been identified (nutrient and organic enrichment, heavy metals, pesticides, priority organic chemicals, contaminated sediments, siltation, low dissolved oxygen, habitat and flow alterations, and pathogens), the TMDL addresses only nutrients (phosphorus and nitrogen).

The City has incorporated various goals and proposed Best Management Practices within the SWMP to assist with addressing the stream impairment resulting from nutrients. The following Best Management Practices are a few examples that have been incorporated into the plan:

- Composting and management of grass clippings and yard waste education information;
- Home sewage treatment system maintenance education;

- The development, adoption and implementation of an illicit discharge detection and elimination plan;
- Stormwater outfall dry weather screenings;
- Stream corridor protection requirements; and
- The proper storage and application of fertilizers associated with municipal activities.

The Six Minimum Control Measures (MCMs) are:

1. Public Education and Outreach
2. Public Participation/Involvement
3. Illicit Discharge Detection and Elimination
4. Construction Site Storm Water Runoff Control
5. Post Construction Storm Water Management in New Development and Redevelopment
6. Pollution Prevention/Good Housekeeping for Municipal Operations

Each measure is addressed separately within the plan. Generally, the plan identifies the goals, strategies, existing programs and proposed programs for each minimum control measure. A table of organization outlines who will be responsible for completing each Minimum Control Measure under this permit (Figure 1).

MCM 1: Public Education/Outreach

The City of Wyoming has chosen a mix of BMPs for public education and outreach. This control measure will target homeowners, commercial property owners, and the general public (those visiting Wyoming and non-homeowners).

The program for the City of Wyoming is predicated largely on increasing awareness of how the City's municipal separate storm sewer system (MS4) functions and stormwater pollution prevention through information dissemination. As awareness increases, the program will be enhanced to include more active public participation.

Public education and outreach programming must target at least five different storm water themes or messages over the permit term and reach 50% of the City's total population. The OEPA requires at least one theme or message must be targeted to the development community. The City is essentially a bedroom community with no significant land available for development. The City has decided not to incorporate a theme or message within the overall plan that targets the development community and will concentrate on providing education to the City's existing residents and business owners. The City must report each mechanism used to educate the community, including each storm water theme. The City must also report the audience targeted and estimate how many people were reached through each mechanism.

Education Materials and Strategies

The City of Wyoming has a number of existing programs specifically for the dissemination of information to its citizens. These include a storm water website, an article/brochure for publication to all residents, and use of the City Hall for public announcements and educational materials. The City developed an educational program to include:

1. Alternative information sources (creation of a stormwater website);
2. Educational storm water articles/brochure for publication and distribution;
3. Educational materials to be maintained at City Hall;
4. Water treatment plant tours.

Reaching Diverse Audiences

The planned public education program will use a variety of strategies in which to reach a diverse audience. The City's local strategies include reaching commercial areas through brochures and publications, reaching school age children through the Wyoming City School District, reaching homeowners through City publications and website, and reaching the development community through the placement of codified ordinances on the City's website, as well as publication of educational materials regarding storm water related issues within the City. As a result of this outreach program, diverse audiences will be informed of the importance of reducing storm water pollution, ways they can incorporate pollution reduction in their daily lives, and opportunities for individual or group involvement.

Education Themes and Target Pollutant Sources

The education materials and strategies that the City will implement over the permit period will cover a variety of themes or messages, including but not limited to the following:

1. Nutrient management;
2. Home sewage treatment system (HSTS) management;
3. Commercial/restaurant industry stormwater pollution prevention;
4. Backyard conservation;
5. Illicit discharge detection and elimination.

The distribution of educational material addressing the above mentioned themes will assist with stormwater pollution prevention and improving water quality by targeting the following pollutant sources:

1. Fertilizers/pesticides;
2. Home sewage treatment system discharges;
3. Oils/greases;
4. Litter and other debris common within urban areas.

Minimum Control Measure Evaluation

To evaluate the success of this portion of the overall program, the City will annually review the number of people reached by the outreach efforts and review the tracking of water quality related concerns and complaints received by the City from the public. The program can be modified based upon the results of the annual review and determine if additional means of outreach are needed to target specific audiences or pollutants resulting from the concerns and complaints received.

The City's Assistant Public Works Director/Water Works Director, Executive Assistant, and Administrative Assistant are responsible for the overall management and implementation of the storm water public education/outreach program.

MCM 1: Public Education/Outreach Measurable Goals

- Continue to use existing and develop new outreach mechanisms that provide stormwater pollution prevention education to the target audiences in addressing the chosen themes.
- Distribute education material to at least 50% of City's population over the permit term.
- Annually, determine the effectiveness of the storm water education program and modify as necessary to ensure that the target audiences are being appropriately reached and themes addressed.

BMP	Strategy
Existing Programs	The City will continue with existing programs that have a positive effect on storm water education. • Maintain use of City Hall for educational materials. • Using general literature from the Hamilton County Board of Health, educate homeowners with on-site sewage systems on the proper care and maintenance of their system. Identify percentage of homeowners contacted each year. • Distribute brochures and publish at least one article per year addressing one of the stormwater pollution prevention themes within a City publication. Identify the number of brochures/articles distributed and the method of distribution. Themes/messages to be addressed over the permit period: - Composting, grass clippings and yard waste management - Fertilizer/pesticide application - HSTS management - Restaurant stormwater pollution prevention - Backyard conservation - Illicit discharge detection and elimination

BMP	Strategy
Storm Water Management Plan (SWMP) Updates	The City will review the SWMP that was prepared under the previous OEPA permit coverage term and update the plan to meet the current OEPA permit requirements and incorporate feedback received from the public. • Post the updated SWMP for public review and provide means for the City to receive and evaluate public comments.
Website Updates	Update the City's current stormwater management website to incorporate stormwater education to the general public. • Update the current website to incorporate additional stormwater pollution prevention and water quality educational information based upon the chosen themes and messages indicated within the SWMP. • Provide means for the public to view the City's MS4 map and review the SWMP. • Post OEPA submitted annual reports for public review. • Post links to the City's stormwater code for public reference. • Provide means for the public to contact the City to report water quality concerns. http://www.wyomingohio.gov/stormwatermanagement.cfm
Explore Educational Teaming Opportunities	The City will explore coordinating and/or teaming up within other organizations and groups, including the City's in-house Environmental Stewardship Committee and the Hamilton County Soil and Water Conservation District, to provide additional means of distributing education throughout the community.

MCM 2: Public Participation/Involvement

The City of Wyoming recognizes that a successful storm water program relies not only on the MS4 owners and operators and the regulatory community, but also upon the input, assistance and understanding of the general public. The City's program includes means and methods to give the public opportunity to play an active role in both the development and implementation of the NPDES Phase II program.

The City's public involvement/participation programming must include at least five (5) public involvement activities over the permit term (one per permit year). Documentation of the number of people participating in events and a brief description of each activity is required by the permit.

Strategies

In order to increase public awareness, the City's program will be enhanced to include more active public participation. Given that, the City will reinforce existing methods for receiving information from the public and identify opportunities for school and civic groups to participate in the process. The City will encourage public participation in such events as the Mill Creek clean-up, high school rain garden maintenance, storm sewer marking and Water Plant tours.

Minimum Control Measure Evaluation

To evaluate the success of this portion of the overall program, the City will annually review the number of people that participate in the public events and review the tracking of water quality related concerns and complaints received by the City from the public. The program can be modified based upon the results of the annual review and determine if additional public events are needed to target specific audiences or stormwater themes.

The City's Assistant Public Works Director/Water Works Director, Executive Assistant, and Administrative Assistant are responsible for the overall management and implementation of the storm water public involvement/outreach program.

MCM 2: Public Participation/Involvement Measurable Goals

- Provide at least five public involvement activities over the permit term in addressing the target audience and stormwater themes as identified within the Public Education/Outreach Minimum Control Measure.
- Annually, determine the effectiveness of the storm water public participation/involvement program and modify as necessary to ensure that the target audiences are being appropriately reached.

BMP	Strategy
Storm Water Management Plan (SWMP) Updates	The City will review the SWMP that was prepared under the previous OEPA permit coverage term and update the plan to meet the current OEPA permit requirements and incorporate feedback received from the public. • Post the updated SWMP for public review and provide means for the City to receive and evaluate public comments.
Website Updates	Update the City's current stormwater management website to incorporate stormwater education to the general public. • Update the current website to incorporate additional stormwater pollution prevention and water quality educational information based upon the chosen themes and messages indicated within the SWMP. • Provide means for the public to view the City's MS4 map and review the SWMP. • Post OEPA submitted annual reports for public review. • Post links to the City's stormwater code for public reference. • Provide means for the public to contact the City to report water quality concerns. http://www.wyomingohio.gov/stormwatermanagement.cfm
Mill Creek Clean-ups	The City will encourage residents to participate in the Mill Creek Yacht Club organized Mill Creek clean-up events. The City will annually track the number of participants.

BMP	Strategy
Storm Sewer Inlet Labeling	Continue to work with volunteers to label the MS4 storm sewer inlets. The City will determine the number of inlets that have been marked and note inlets that need marking. The City will develop an inspection program to identify previously marked inlets that are in need of maintenance. The City will annually track the number of volunteers and inlets marked.
Rain Garden Maintenance and Clean-up	The City will continue to participate and encourage public participation associated with the clean-up and maintenance of the high school rain garden and incorporate an educational component into the event. The City will annually track the number of participants.
Water Plan Tours	The City will continue to off Water Plant tours to students and incorporate stormwater quality within the overall program. The City will annually track the number of participants.
Explore Teaming Opportunities	The City will explore coordinating and/or teaming up within other organizations and groups, including the City's in-house Environmental Stewardship Committee and the Hamilton County Soil and Water Conservation District, to provide additional means of providing opportunities for public involvement.

MCM 3: Illicit Discharge Detection and Elimination

The City of Wyoming has minimized the potential for illicit discharges to the storm water system through development of an ordinance. The City has initiated an education program to increase public awareness of the storm water system and illicit discharge control. As the public education and outreach program results in greater awareness of the system, local citizens may become involved using the website to report illicit discharge locations.

The previous OEPA permit requires that the City's program must include or have included an initial dry-weather screening of all storm water outfalls over the permit term. The program must establish priorities and specific goals for long-term system-wide surveillance of its MS4, as well as for specific investigations of outfalls and their tributary area where previous surveillance demonstrates a high likelihood of illicit discharges. Data collected each year will be evaluated and priorities and goals will be revised annually based on this evaluation.

Strategies

The City has completed a storm water system map, including Home Sewage Treatment Systems (HSTS), and will continue to update as necessary throughout the permit period. An outfall inventory was completed by the Hamilton County Storm Water District (HCSWD) in 2010 for streams within the municipal boundary. Stormwater outfall dry weather screenings were conducted under the previous permit term. The City will concentrate additional screening efforts within selected parts of the community as described within the measurable goals section of this plan.

The control of illicit discharges is part of the City Code 933.04 (Hamilton County Storm Water District, Article II, Illicit Discharge Regulations). This section requires that with certain exceptions, only discharge composed entirely of storm water is permitted in the storm sewers. A copy of this regulation is provided within Appendix E.

The City will continue to provide education to residents and business owners associated with illicit discharge detection and elimination by distributing educational flyers/brochures and bring awareness to the community by continuing the storm sewer marking program. The City will additionally continue to work with the Hamilton County General Health District and notify them of noted failing HSTS's that are found to be discharging into the City's MS4.

The City will finalize and adopt an Illicit Discharge Detection and Elimination (IDDE) Plan and provide training to City staff to bring awareness of illicit discharges and reporting protocols. A copy of the IDDE plan is provided within Appendix F.

Minimum Control Measure Evaluation

To evaluate the success of this portion of the overall program, the City will review the results of the stormwater outfall dry weather screenings and compare the results to the screenings conducted under the previous SWMP. The program can be modified based upon the results of the review and determine if additional public education mechanisms are needed to target specific audiences or stormwater pollutants.

The City's Assistant Public Works Director/Water Works Director, Fire Chief, Police Chief, Community Development Director/Building Official and Public Works Director are responsible for the implementation of the City's BMPs for this minimum control measure.

MCM 3: Illicit Discharge Detection and Elimination Measurable Goals

- Develop and implement an Illicit Discharge Detection and Elimination (IDDE) plan.
- Update the City's MS4 map and identify areas within the City where drainage is conveyed by combined sewers.
- Conduct stormwater outfall dry weather screenings and address noted illicit discharges per the prepared IDDE plan.
- Continue to work with the Hamilton County General Health District to provide HSTS maintenance information to homeowners.
- Develop and distribute illicit discharge detection and elimination educational information to commercial/restaurant owners within the community.
- Continue to provide means for the public to contact the City to report illicit discharge concerns and investigate and address the concerns per the IDDE plan.

BMP	Strategy
On-going Programs	The City will continue with existing programs that have a positive effect on stormwater pollution prevention. • Train building inspectors, code enforcement officers and street maintenance personnel on illicit discharge identification. • Track number of calls and web-site receipts regarding the storm water quality concerns. Track resolutions completed.

BMP	Strategy
MS4 Mapping Updates	The City will review the current MS4 map and update to ensure the required OEPA mapping components are mapped and recent MS4 improvements are added. An up-to-date map will assist the City with tracing sources of noted illicit discharges into the MS4 system and investigate surface water outfall locations. The MS4 map will consist of the following components: • Storm pipes • Catch basins • Ditches • Retention/Detention basins • Public/Private water quality Best Management Practices • Stormwater outfall locations • Combined sewer locations • Surface water locations and names
MS4 Outfall Dry Weather Screening	The City will continue to conduct MS4 outfall dry weather screening services and document on an annual basis. • Conduct dry-weather screening of necessary outfalls and investigate areas of potential HSTS failures. • Determine the source of the illicit discharges and notify the responsible parties and required elimination actions. • The City will concentrate efforts at the northwest and northeast portions of the city where there are known septic tanks. The City will additionally investigate Richie Creek down by Springfield Pike to investigate known dry weather flows.
Illicit Discharge Detection and Elimination (IDDE) Plan	The City will prepare an IDDE plan • The plan will identify means to detect and eliminate illicit discharges into the City's MS4 system. • Training will be provide to City staff associated with the implementation of the plan. • A copy of the IDDE plan is provided within Appendix F.

BMP	Strategy
Storm Sewer Inlet Labeling	Continue to work with volunteers to label the MS4 storm sewer inlets. The City will determine the number of inlets that have been marked and note inlets that need marking. The City will develop an inspection program to identify previously marked inlets that are in need of maintenance. The City will annually track the number of volunteers and inlets marked.
Home Sewage Treatment System (HSTS) Maintenance Education	The City will continue to work with the Hamilton County General Health District with the identification of failing home sewage treatment systems. • To the City's knowledge, all septic tank systems drain to privately maintained stormwater conveyance systems. • The City will continue to conduct dry weather screenings at stormwater outfall locations and work with the Board of Health to eliminate noted illicit discharges as a result of failing HSTS's.

MCM 4: Construction Site Storm Water Runoff Control

The City of Wyoming recognizes that sediment laden runoff from construction sites, if unchecked, can deposit more sediment and pollutants in a stream than would be deposited there over the course of decades from other land use types. The resulting siltation, and other pollutants, can cause physical, chemical, and biological harm to the waterways.

The permit requires that the City's program include pre-construction storm water pollution prevention plan review of all construction activities resulting in a land disturbance of greater than or equal to one acre. To ensure compliance, these construction sites must be initially inspected. The frequency of follow-up inspections is on a monthly basis unless the City documents its procedures for prioritizing inspections, such as location to a waterway, amount of disturbed area, compliance of site, etc.

Strategies

Section 933.04 of City code adopts an earth works/erosion and sediment control ordinance which regulates construction activity within the City. Section 933.04 also adopts a stream corridor protection policy.

The City is essentially a bedroom community with no significant land available for development. The City has not approved a development plan of over 1 acre within the MS4 area since August, 2009. In the event of a development proposal of 1 acre or more land disturbance, the City will enforce the adopted earthworks regulations.

The City relies on a two-fold approach to construction site runoff control. First, the City's Engineer will review the Storm Water Pollution Prevention Plans (SWP3s) for all submitted construction drawings within the City associated with land disturbing activities of 1 acre or more. City Code 933.04 (Hamilton County Storm Water District, Article III, Earthwork Regulations) requires developers to prepare a SWP3 in accordance with the OEPA General Permit associated with construction site stormwater runoff. A copy of the City code is provided within Appendix G. Second, The City's Assistant Public Works Director will conduct monthly erosion and sediment control inspections to ensure that the approved SWP3 is being properly implemented. Inspection reports are prepared and submitted to the project contact. A copy of the inspection report to be completed is provided within Appendix H.

Minimum Control Measure Evaluation

To evaluate the success of this portion of the overall program, the City will track the number of SWP3s reviewed and site inspections conducted. The program can be modified based upon the results of the monthly inspections and determine if additional education mechanisms or enforcement procedures are needed in addressing construction site stormwater runoff.

The City's Assistant Public Works Director/Water Works Director and Community Development Director/Building Official are responsible for the overall management and implementation of the construction site storm water runoff control program.

MCM 4: Construction Site Storm Water Runoff Control Measurable Goals

- Review SWP3s that are submitted to the City to ensure compliance with the Hamilton County Storm Water District, Article III, Earthwork Regulations and OEPA's General Permit associated with construction site discharges.
- Review construction site stormwater management requirements with developers and contractors at preconstruction meetings to ensure they understand their roles and responsibilities during the construction of the site improvements.
- Inspect all active construction projects within the City on a minimum monthly basis.
- Continue to provide means for the public to contact the City to report construction site runoff concerns and investigate and address the concerns.

BMP	Strategy
SWP3 Review and Site Inspections	The City will review plans that are submitted to the City and provide monthly site inspections to ensure that the approved plan is being properly implemented. The City will annually track the number of plans reviewed and inspections conducted. • Review SWP3s that are submitted to the City to ensure compliance with the Ohio EPA's General Permit requirements. • Conduct monthly erosion and sediment control site inspections and provide inspection reports to the developers/contractors noting violations and required corrective actions. • Track number of calls and web-site receipts regarding the storm water quality concerns. Track resolutions completed.
Preconstruction Meetings	The City will notify developers and contractors of their required roles and responsibilities during the construction of the site improvements. • Notice of Intent (NOI) and NOI co-permittee submittal requirements • Weekly inspection requirements • BMP installation and maintenance requirements

MCM 5: Post-Construction Storm Water Management in New Development/Redevelopment

The City is largely built out with very little new development. The City addresses the requirement for post-construction storm water management in new development and redevelopment with structural and non-structural BMPs, in keeping with the BMP requirements of the OEPA Construction General Permit, OHC00004. As part of this minimum control, the City seeks to effectively manage quantities of post development flow, diminish the impact of the amount of impervious cover within its system and enhance existing storm water practices through inclusion of water quality components. The City of Wyoming's code section 933.04 contains complete post-construction storm water management and stream corridor regulations (Hamilton County Storm Water District, Article IV, Stream Corridor Regulations and Article V, Post-Construction Storm Water Quality Regulations). Copies of these regulations are provided within Appendix I.

The permit requires that the City's program include pre-construction storm water pollution prevention plan review of all projects from construction activities that result in a land disturbance of greater than or equal to one acre to ensure post-construction storm water management controls are designed per the City's requirements. These sites must be inspected to ensure such controls are installed per design. The City's program must also ensure that long-term operation and maintenance (O&M) plans are developed and agreements in place for these sites.

Strategies.

The City is essentially a bedroom community with no significant land available for development. The City has not approved a development plan of over 1 acre within the MS4 area since August, 2009. In the event of a development proposal of 1 acre or more land disturbance, the City will enforce the adopted post-construction storm water quality and stream corridor protection regulations.

The City relies on a two-fold approach to construction site runoff control. First, the City's Engineer will review the Storm Water Pollution Prevention Plans (SWP3s) for all submitted construction drawings within the City associated with land disturbing activities of 1 acre or more. City Code 933.04 (Hamilton County Storm Water District, Article V, Post-Construction Storm Water Quality Regulations) requires developers to prepare a SWP3 in accordance with the OEPA General Permit associated with construction site stormwater runoff. Second, the project owner, or assigned post-construction operator, is required to facilitate an inspection and maintenance plan in addition to performing annual inspections which is required to be submitted to the City for review.

Minimum Control Measure Evaluation

To evaluate the success of this portion of the overall program, the City will track the number of SWP3s and post-construction operation and maintenance plans reviewed and the number of annual BMP inspections conducted. The program can be modified if it is

determined the plans are not being properly prepared and the required inspections conducted. Additional education to the development community may be necessary based upon the results of the program evaluation.

The City's Assistant Public Works Director/Water Works Director and Community Development Director/Building Official are responsible for the overall management and implementation of the post-construction storm water management program.

MCM 5: Post-Construction Storm Water Management Measurable Goals

- Review SWP3s that are submitted to the City to ensure compliance with the Hamilton County Storm Water District, Article V, Post-construction Storm Water Quality Regulations and the OEPA's General Permit associated with construction site discharges.
- Review post-construction site stormwater management requirements with developers at preconstruction meetings to ensure they understand their roles and responsibilities associated with the inspection and maintenance of the water quality BMP.
- Ensure that the post-construction water quality BMPs are being properly inspected and maintained by the post-construction operator.

BMP	Strategy
SWP3 Review	The City will review plans that are submitted to the City to ensure compliance with the adopted post-construction water quality regulations. The City will annually track the number of plans reviewed and inspections conducted.
Post-construction Water Quality BMP Inspection	The City will ensure that the post-construction water quality BMPs are being properly inspected and maintained. • Annually determine the BMPs that are required to be annually inspected. • Review submitted inspection reports submitted to the City. • Contact post-construction operators and notify them of their inspection and maintenance obligations if reports are not submitted to the City.

MCM 6: Pollution Prevention/Good Housekeeping for Municipal Operations

Strategies

The City has a variety of procedures in place to provide 'good housekeeping'. These procedures include the following:

- The proper disposal of waste oils and greases used in the City's maintenance facilities;
- The careful use of salt during snow removal periods using measures appropriate to conditions;
- The enclosed storage of the City's salt stockpile;
- Very limited pesticide/herbicide use on City-owned property;
- Very limited fertilizer use on City-owned property;
- Removal of pollutants from City maintained streets.

The City will continue to conduct inspections at their maintenance facility to determine if the BMPs are being properly implemented per the prepared SWP3.

Salt is temporarily stored adjacent to the City Public Works garage in a manner so it is not exposed to stormwater. Truck equipment is regularly maintained and calibrated to ensure that the salt that is being spread is not over applied. Weather conditions are closely monitored to ensure that timing and amount of salt is being properly applied. Attention is focused on roads with steep grades. Level roads receive significantly less salt.

Fertilizer is stored in a manner so it is not exposed to stormwater. Material is spread per the manufacturer's recommendations. Weather conditions are closely monitored. Application of material onto impervious areas is avoided. The City stores/applies herbicide/pesticide in a similar manner. In all cases, Wyoming uses a person with a commercial applicator's license for the work – or it is contracted out to a company with such a license. Application of chemicals is kept minimal to protect the environment. No applications are done near streams or waterways per regulations.

The City will continue to take advantage of any training opportunities presented by state or local agencies whenever possible associated with municipal activities and operations water quality improvements. Performance standards under the permit require, at a minimum, one annual employee training.

Minimum Control Measure Evaluation

To evaluate the success of this portion of the overall program, the City will annually review the tracking of pollutants applied, collected and properly disposed of as part of the City's routine municipal activities. Tacking results will be evaluated to determine if pollutant

source applications can be reduced or additional pollutants removed prior to mixing with stormwater and flowing into the MS4. The City will additionally track training events attended the inspections conducted at the City maintenance facility. Inspection results will be reviewed and a determination made if BMPs are in need of maintenance or additional BMPs implemented to improve water quality.

The City's Assistant Public Works Director/Water Works Director and Crew Leaders are responsible for the overall management and implementation of the pollution prevention/good housekeeping program.

MCM 6: Pollution Prevention Measurable Goals

- Develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.

BMP	Strategy
On-going Programs	The City will continue with existing programs that have a positive effect on stormwater pollution prevention. • Continue to document the amount of deicing salt applied to streets. • Continue to document the number of outfalls and curb inlets cleaned annually. Document the amount of material collected and properly disposed of. • Document maintenance activities, schedules, and long-term inspection procedures for controls to reduce pollution to the City's MS4. • Document the amount of pesticides, herbicides, and fertilizers used annually. • Summarize any new or existing flood management projects that were assessed for impacts on water quality. • Document proper disposal of waste oils and grease used in City maintenance facilities. • Continue to list the number of employees that have been trained on proper disposal techniques. List classes taken, as well as offeror.

TABLE OF ORGANIZATION

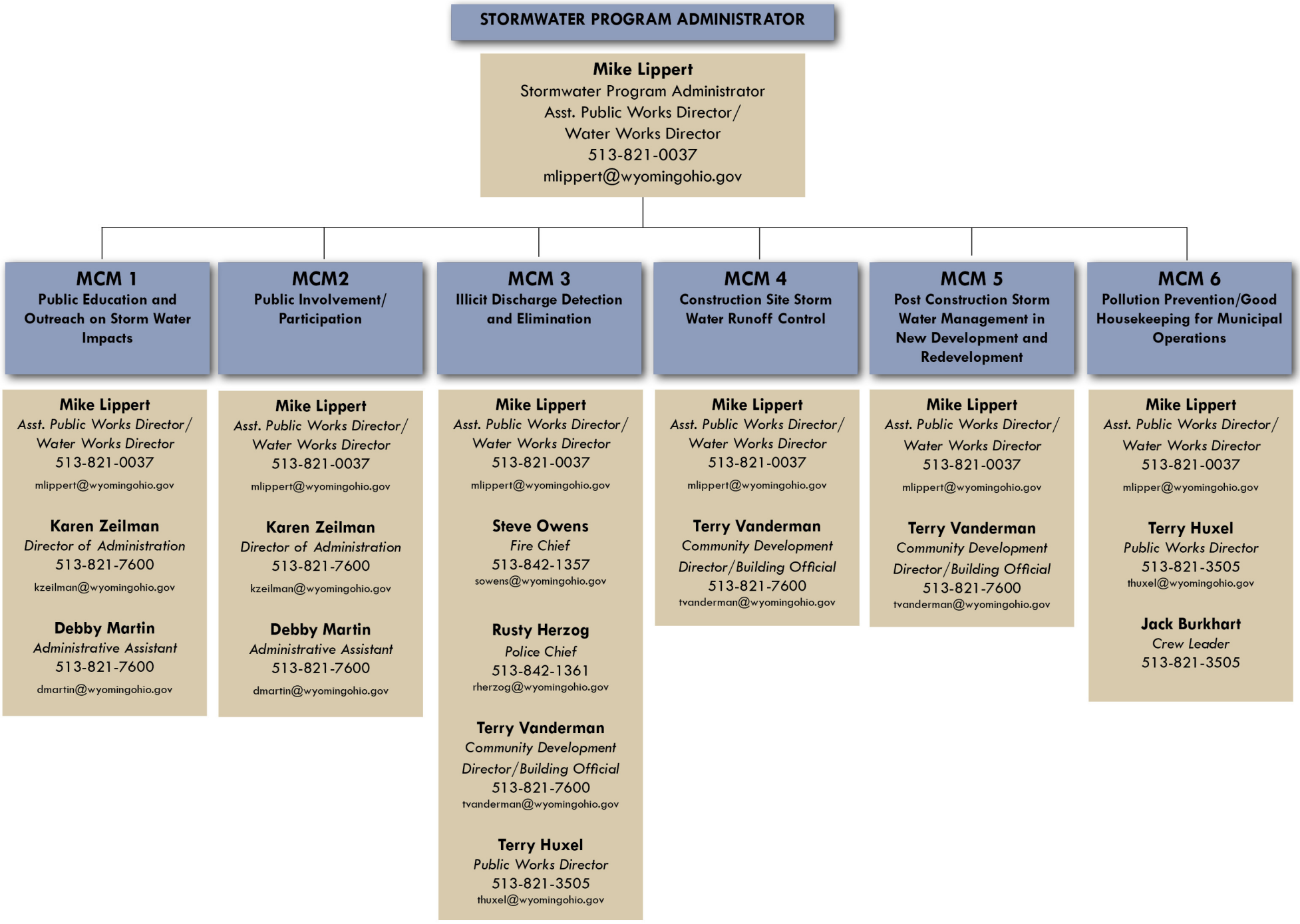


Figure 1

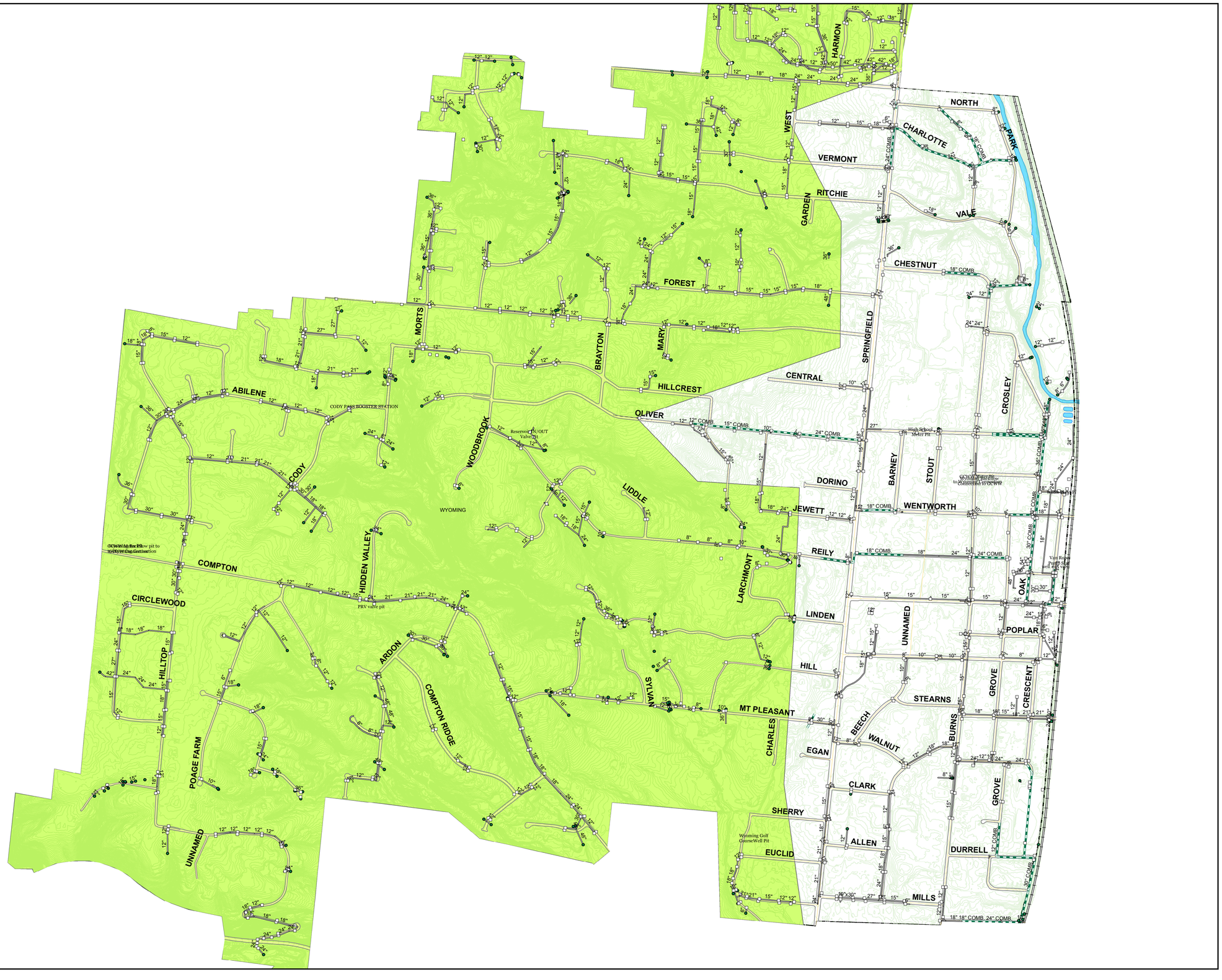
APPENDICES

Appendix A - City of Wyoming MS4 Map
Appendix B - Resolution No. 25-2009 and Ordinance No. 24-2009
Appendix C - OEPA Permit Coverage Approval Letter
Appendix D - City of Wyoming Combined Sewer Map
Appendix E - Hamilton County Storm Water District, Article II, Illicit Discharge Regulations
Appendix F - Illicit Discharge Detection and Elimination Plan
Appendix G - Hamilton County Storm Water District, Article III, Earthwork Regulations
Appendix H - Erosion and Sediment Control Inspection Form
Appendix I - Hamilton County Storm Water District, Article IV, Stream Corridor Regulations and Article V, Post-Construction Storm Water Quality Regulations

Appendix A

City of Wyoming MS4 Map

CITY OF WYOMING STORM SEWER & WATER FACILITIES



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90	89	88	87	86	85	84	83	82
81	80	79	78	77	76	75	74	73
72	71	70	69	68	67	66	65	64
63	62	61	60	59	58	57	56	55
54	53	52	51	50	49	48	47	46
45	44	43	42	41	40	39	38	37
36	35	34	33	32	31	30	29	28
27	26	25	24	23	22	21	20	19
18	17	16	15	14	13	12	11	10
9	8	7	6	5	4	3	2	1

Legend

- CatchBasins
- OutFalls
- Combined Sanitary and Storm Lines
- NONCombined_sewer_Area

DATE	REVISIONS

Appendix B

Resolution No. 25-2009 and Ordinance No. 24-2009

CITY OF WYOMING • 800 OAK AVENUE • WYOMING, OHIO 45215
(513) 821-7600
FAX (513) 821-7952

December 30, 2009

Hamilton County
Board of County Commissioners
138 East Court Street, Rm 603
Cincinnati, Ohio 45202

Honorable Commissioners:

The City of Wyoming is currently a signatory to the General Plan of Drainage, which is the framework of the Hamilton County Regional Storm Water District. At the June 15, 2009 Wyoming City Council meeting, the Council adopted a report recommending that the City withdraw from the Regional Storm Water District. A letter was sent to Board of County Commissioners dated August 19 providing notice of the intent to withdraw from the District. At the September 21, 2009 meeting City Council adopted a resolution (attached) withdrawing from the Stormwater District consistent with Section III, District Boundary on page 4, in paragraph 3, provides the guidelines for withdrawal from the District.

The City's official last date in the Hamilton County Regional Stormwater District shall be December 31, 2010.

Please feel free to contact me if there are questions about the City's intent.

Yours truly,

Robert W. Harrison

Robert Harrison
City Manager

Cc: Todd Long, Hamilton County Stormwater District
Mike Lippert, Wyoming Assistant Public Works Director

RESOLUTION NO. 25 -2009

RESOLUTION AUTHORIZING THE CITY OF WYOMING TO WITHDRAW FROM THE HAMILTON COUNTY STORM WATER MANAGEMENT DISTRICT

WHEREAS, the City of Wyoming pursuant to Ordinance No. 24-2009 passed on August 17, 2009 adopted Rules and Regulations for illicit discharges, earthworks, stream corridors and post construction water quality to apply to the City of Wyoming; and

WHEREAS, the City of Wyoming is a party to an agreement with the Hamilton County Storm Water Management District and wishes to withdraw from the Hamilton County Storm Water Management District in light of the City of Wyoming's creation of its own Storm Water District Rules and Regulations.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF WYOMING, HAMILTON COUNTY, OHIO:

Section 1. The City Council does hereby direct the City Manager to take any and all necessary actions to notify Hamilton County that the City of Wyoming is withdrawing from the Hamilton County Storm Water District and to take any other such action necessary to affect such withdrawal.

PASSED IN THE COUNCIL CHAMBERS OF THE CITY OF WYOMING, OHIO, THIS 21st DAY OF SEPTEMBER, 2009.

Barry S. Porter, Mayor

ATTEST:

Patricia A. Calvert
Clerk of Council

APPROVED AS TO FORM:

Franklin A. Klaine, Jr., City Solicitor

1989493_1.DOC

Mike

ORDINANCE NO. 24 -2009

ORDINANCE ADOPTING THE HAMILTON COUNTY STORM WATER DISTRICT RULES AND REGULATIONS AS THE CITY OF WYOMING'S RULES AND REGULATIONS FOR ILLICIT DISCHARGES, EARTH WORKS, STREAM CORRIDORS AND POST CONSTRUCTION WATER QUALITY

WHEREAS, it is necessary in the City of Wyoming to adopt rules and regulations for illicit discharges, earth works, stream corridors and post construction water quality; and

WHEREAS, the Hamilton County Storm Water District Rules and Regulations are attached hereto as Exhibit A consisting of Articles I-V which the City of Wyoming wishes to adopt as the City of Wyoming's Rules and Regulations for illicit discharges, earth works, stream corridors and post construction water quality; and

WHEREAS, the Rules and Regulations attached hereto as Exhibit A shall apply to the City of Wyoming; and

WHEREAS, the purpose of these Rules and Regulations is to provide for the health, safety and general welfare of the citizens of the City of Wyoming.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF WYOMING, OHIO:

Section 1. The City Council does hereby adopt the Rules and Regulations for illicit discharges, earth works, stream corridors and post construction water quality as set forth in the attached Exhibit A consisting of Articles I-V.

Section 2. The City of Wyoming hereby agrees to enforce these Rules and Regulations within the City of Wyoming corporate boundaries and hereby agrees to report enforcement actions to the District in an approved format.

Section 3. The Council hereby agrees to use all necessary authorities it possesses to assist the District to enforce these Rules and Regulations within the City of Wyoming jurisdictional boundaries.

Section 4. That any person, firm or other entity that has violated or continues to violate the Rules and Regulations shall be liable to criminal prosecution to the fullest extent of the law, and shall be subject to a criminal penalty of $1,000 per violation per day and/or imprisonment for a period of time not to exceed 80 days.

Section 5. The City of Wyoming may recover all attorneys' fees, court costs and other expenses associated with the enforcement of the Rules and Regulations

including but not limited to sampling and monitoring expenses.

Section 6. That the remedies listed in this ordinance are not exclusive of any other remedies available under any applicable federal, state or local law and it is within the discretion of the authorized enforcement agency to seek cumulative remedies.

Section 7. That the provisions of this ordinance are hereby declared to be severable. If any provision, clause, sentence or paragraph of this ordinance or the application thereof to any person, establishment, or circumstances shall be held invalid, such invalidity shall not affect the other provisions or application of is ordinance.

Section 8. That the Clerk of the City Council is hereby directed to certify a copy of this ordinance to the Board of County Commissioners of Hamilton County.

Section 9. This ordinance shall go into effect the first date permitted by law.

PASSED IN THE COUNCIL CHAMBERS OF THE CITY OF WYOMING, OHIO, THIS ~~15th~~ 17th DAY ~~JUNE~~ AUGUST, 2009.

Barry S. Porter, Mayor

ATTEST:

Patricia Calvert

Clerk of Council

APPROVED AS TO FORM:

Franklin A. Klaine, Jr., City Solicitor

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Appendix C

OEPA Permit Coverage Approval Letter

Division of Surface Water - *Notice of Intent (NOI) For Coverage Under Ohio Environmental Protection Agency General NPDES Permit*

(Read accompanying instructions carefully before completing this form.)

Submission of this NOI constitutes notice that the party identified in Section I of this form intends to be authorized to discharge into state surface waters under Ohio EPA's NPDES general permit program. Becoming a permittee obligates a discharger to comply with the terms and conditions of the permit. Complete all required information as indicated by the instructions. Do not use correction fluid on this form. Forms transmitted by fax will not be accepted. A check for the proper amount must accompany this form and be made payable to "Treasurer, State of Ohio." (See the fee table in Attachment C of the NOI instructions for the appropriate processing fee.)

I. Applicant Information/Mailing Address

Company (Applicant) Name: City of Wyoming, Ohio

Mailing (Applicant) Address: 800 Oak Avenue

City: Wyoming **State:** Ohio **Zip Code:** 45215

Contact Person: Mike Lippert **Phone:** 513-821-0037 **Fax:** 513-821-7952

Contact E-mail Address: mlippert@wyomingohio.gov

II. Facility/Site Location Information

Facility Name: City of Wyoming, Ohio

Facility Address/Location: 800 Oak Avenue

City: Wyoming **State:** Ohio **Zip Code:** 45215

County(ies): Hamilton **Township(s):** Springfield

Facility Contact Person: Mike Lippert **Phone:** 513-821-0037 **Fax:** 513-821-7952

Facility Contact E-mail Address: mlippert@wyomingohio.gov

(For Construction & Coal, must complete lat/long & attach map) **Latitude:** **Longitude:**

Receiving Stream or MS4: See Storm Water Managemwent Plan (SWMP)-2010

III. General Permit Information

General Permit Number: OHQ000003 Small MS4 **Initial Coverage:** ☐ **Renewal Coverage:** ☑

Type of Activity: Small MS4 Fee = $200 **SIC Code(s):**

Existing NPDES Permit Number: 1GQ00070*AG **ODNR Coal Mining Application Number:**

If Household Sewage Treatment System, is system for: ☐ new home construction or ☐ replacement of failed

Outfall:	Design Flow (MGD)	Associated Permit Effluent Table:	Latitude:	Longitude:
		Choose an item.		

Are These Permits Required? **PTI** Choose item. **Individual 401 Water Quality Certification** Choose item.

Isolated Wetland Choose item. **USACE Nationwide Permit** Choose item. **Individual NPDES** Choose item.

Proposed Project Start Date: Click here to enter a date. **Estimated Completion Date:** Click here to enter a date.

Total Land Disturbance (Acres): **MS4 Drainage Area (Sq. Miles):** 2.9

IV. Payment Information

Check #: 56028

Check Amount: $200.00

Date of Check: 2/9/2015

For Ohio EPA Use Only

Check ID (OFA): _____ **ORG #:** _____

Rev ID: _____ **DOC #:** _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Applicant Name: Mike Lippert **Title:** Assistant Public Works Dir./Water Works Dir.

Applicant Signature: Michael J. Lippert **Date:** 2/5/2015

OhioEPA

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

February 23, 2015

CITY OF WYOMING
MIKE LIPPERT
800 OAK AVE
WYOMING OH 45215

RE: Approval for coverage under Ohio EPA NPDES General Permit **OHQ000003**
STORM WATER ASSOCIATED WITH **SMALL MS4 NOI**

odnr number: if applicable

Dear Applicant:
The Ohio Environmental Protection Agency has received a Notice of Intent for coverage under the above referenced general permit for :

CITY OF WYOMING — County: Hamilton
800 OAK AVE — City: WYOMING

Ohio EPA Facility Permit Number: 1GQ00070*BG — Estimated Disturbed Acreage

This site/facility is approved for coverage under the above referenced Ohio EPA general permit. Please use your Ohio EPA facility permit number in all future correspondences.

Please familiarize yourself with your general permit. The permit contains requirements and prohibitions with which you must comply. Coverage remains in effect until a renewal general permit is issued and Ohio EPA has contacted you in writing about submitting a new NOI for continuing coverage.

For Coal Suface Mining Pemittees enclosed are Monthly Operating Report (MOR) forms for your use.

Program contacts:

Construction :	Mike Joseph	(614) 752-0782	michael.joseph@epa.state.oh.us
MS4 / Marina / Alt.Const :	Jason Fyffe	(614) 728-1793	jason.fyffe@epa.state.oh.us
MS4 / Industrial :	Anthony Robinson	(614) 728-3392	anthony.robinson@epa.state.oh.us

You may obtain a copy of copy of OHR000005, information and forms from our web site at:
http://www.epa.ohio.gov/dsw/storm/stormform.asp

Ohio EPA has developed a customer service survey to get feedback from regulated entities that have contacted Ohio EPA for regulatory assistance, or worked with the Agency to obtain a permit, license or other authorization. Ohio EPA's goal is to provide our customers with the best possible customer service, and your feedback is important to us in meeting this goal. Please take a few minutes to complete this survey and share your experience with us at **http://www.surveymonkey.com/s/ohioepacustomersurvey**

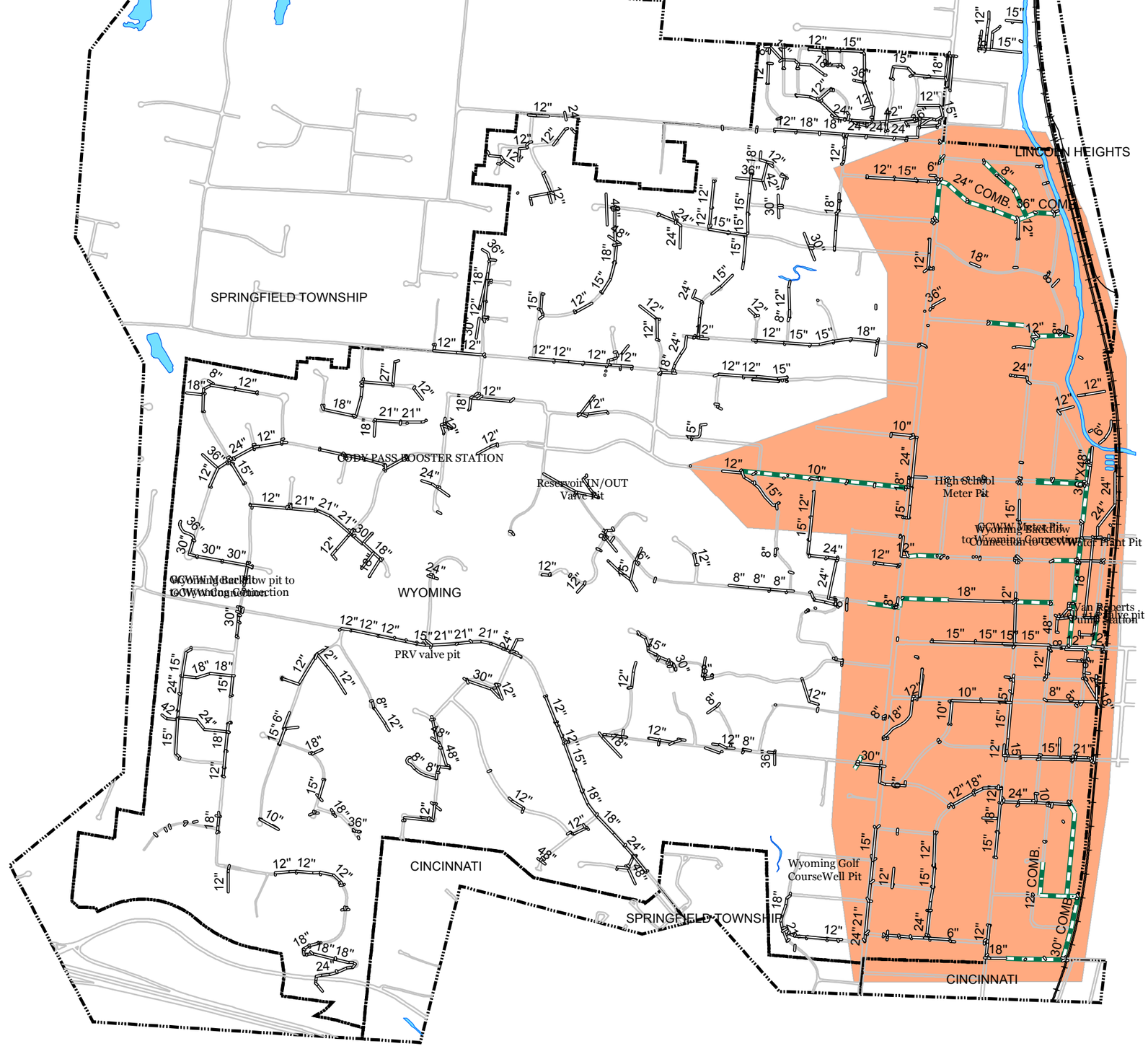
Thank you for your cooperation in this matter.

Sincerely,

Craig W. Butler
Director

Appendix D

City of Wyoming Combined Sewer Map


SPRINGFIELD TOWNSHIP
LINCOLN HEIGHTS
CODY PASS BOOSTER STATION
Reservoir IN/OUT Valve Pit
High School Meter Pit
GCWW Meter Pit to Wyoming Connection
Wyoming Backflow Connection to GCWW Water Plant Pit
WYOMING
PRV valve pit
Van Roberts Well Drive pit Pump Station
CINCINNATI
Wyoming Golf CourseWell Pit
SPRINGFIELD TOWNSHIP
CINCINNATI

Appendix E

Hamilton County Storm Water District, Article II, Illicit Discharge Regulations

RULES AND REGULATIONS
OF THE
HAMILTON COUNTY STORM WATER DISTRICT
ISSUED BY THE
BOARD OF COUNTY COMMISSIONERS
HAMILTON COUNTY, OHIO

ARTICLE II

ILLICIT DISCHARGE REGULATIONS

TABLE OF CONTENTS

201 PURPOSE, SCOPE, AND APPLICABILITY

A. The purpose of these Illicit Discharge Regulations is to promote and maintain the health, safety, and welfare of the citizens of Hamilton County by establishing standards for storm water best management practices (BMPs) that minimize the degradation of the water resources of Hamilton County by

1. Reducing the discharge of pollutants from the municipal separate storm sewer systems (MS4s) owned or operated by Hamilton County and member Local Jurisdictions of the Hamilton County Storm Water District ("HCSWD") to the maximum extent practicable,

2. Protecting water quality, and

3. Satisfying the appropriate water quality requirements of the Clean Water Act, Ohio Law, and the Ohio Revised Code (ORC), including Section 6111.

B. The intent of these Illicit Discharge Regulations is:

1. To regulate the discharge of any Pollutant to a MS4;

2. To prohibit and eliminate Illicit Connections and Discharges to the MS4; and

3. To establish legal authority to perform all inspection, surveillance, testing, monitoring and enforcement necessary to ensure compliance with these Illicit Discharge Regulations.

C. These Illicit Discharge Regulations are adopted under authority of Ohio Law and the Ohio Revised Code, including Chapters 307 and 6117 thereof, and implement the requirements of the latest discharge permit issued by Ohio EPA to Hamilton County and the member Local Jurisdictions of the HCSWD under the Phase II Program.

D. The Board of County Commissioners of Hamilton County, Ohio ("Board") shall designate the ***Enforcing Official*** within the unincorporated areas and townships of Hamilton County for purposes of enforcing these Illicit Discharge Regulations, except to the extent that a home rule township has the authority to designate another entity as its Enforcing Official and exercises such authority. The ***Enforcing Official*** for each of the participating member municipalities and authorized home rule townships of the Hamilton County Storm Water District (HCSWD) shall be the chief administrative officer of the Local Jurisdiction unless the legislative body of the Local Jurisdiction legally authorizes another qualified party to fulfill all required responsibilities of the ***Enforcing Official*** under these Illicit Discharge Regulations..

E. Where authorized by law, the responsibilities of a participating Local Jurisdiction under these Illicit Discharge Regulations may be delegated by the Local Jurisdiction to persons or entities acting in the beneficial interest of, or in the employment of the participating jurisdiction, including but not limited to, the HCSWD or the HCSWD's designated representative, provided there is a lawfully enacted Resolution or Ordinance authorizing delegation of said responsibilities.

F. These Illicit Discharge Regulations apply to the MS4 within the boundary of the HCSWD and within the boundary of a municipal corporation which is a member of the HCSWD and has authorized these Illicit Discharge Regulations to apply within its corporate boundary.

202 DEFINITIONS

The words and phrases as defined in Article I - Definitions of the Rules and Regulations of the HCSWD shall have the same meaning herein unless otherwise provided.

203 COMPLIANCE WITH OTHER LAWS AND DISCLAIMER OF LIABILITY

A. Compliance with these Illicit Discharge Regulations does not relieve any Person from the duty to comply with any other applicable federal, state, and local laws, regulations or ordinances or from responsibility otherwise imposed by law for damage to any person or property.

B. Neither the compliance or lack of compliance with these Illicit Discharge Regulations; nor any action or lack of action by the ***Enforcing Official*** shall relieve a Person from responsibility for injury or damage to any person or property otherwise imposed by law, nor create or impose any liability upon Hamilton County or any participating Local Jurisdiction in the HCSWD or their respective officers, agents, or employees for injury or damage to any person or property.

C. Failure of the ***Enforcing Official*** to observe or recognize hazardous or unsightly conditions or to recommend corrective measures shall not relieve the Owner from the responsibility for the resulting condition or damage or injury, and shall not result in the Local Jurisdiction, the ***Enforcing Official***, Hamilton County, their officers, employees, or agents being responsible for any resulting condition or damage or injury.

D. These Illicit Discharge Regulations do not create a duty upon the ***Enforcing Official***, the Board, the HCSWD, or participating member Local Jurisdictions of the HCSWD to any person impacted by any storm water or storm water BMPs required by these Illicit Discharge Regulations.

204 CONFLICTS AND SEVERABILITY

A. Where these Illicit Discharge Regulations may conflict with other applicable provisions of law or ordinance, it is the Board's intent that the more restrictive applicable provisions, shall prevail where permitted by law.

B. Should any article, section, subsection, clause, or provision of these Illicit Discharge Regulations be declared by a court of applicable jurisdiction to be unconstitutional or invalid, such decision shall not affect the validity of the remainder of these Illicit Discharge Regulations, in whole or in part.

205 PROHIBITION OF ILLICIT DISCHARGES REQUIRED

A. No Person shall discharge, cause or threaten to discharge, or allow another Person under its control to discharge, cause or threaten to discharge to the MS4 any Pollutant or water containing any Pollutant other than Storm Water.

206 EXEMPTIONS

A. The following Non-Storm Water sources are exempt from the prohibitions in Section 205(A):

1. Water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR §35.2005(20)), uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, non-commercial car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, street wash water, and discharges or flows from fire fighting activities.

2. Water associated with dye testing, provided the dye has been approved by the ***Enforcing Official*** and prior written notification has been provided to the ***Enforcing Official*** of the day and time of the testing.

3. Non-Storm Water discharges to the MS4 permitted under a valid NPDES permit, waiver, or waste Discharge order issued to the discharger and administered under the authority of the United States or Ohio Environmental Protection Agency, provided that the discharger is in compliance with all requirements of the permit or order and written approval has been granted by the appropriate jurisdiction for any such discharge or connection to the MS4.

4. Discharges from an Off-Lot Home Sewage Treatment System (HSTS) installed and in operation prior to or on the effective date of these Illicit Discharge Regulations, provided the Off-Lot HSTS is properly functioning and is not a public heath nuisance as determined by a Board of Health with applicable jurisdiction.

B. Application and enforcement of the exemptions under Section 206 EXEMPTIONS of these Illicit Discharge Regulations shall be conducted by the ***Enforcing Official***.

207 INSPECTION AND MONITORING OF DISCHARGES AND CONNECTIONS

A. The ***Enforcing Official*** bearing proper credentials and identification shall be permitted at all reasonable times to enter upon all properties to inspect, survey, test, photograph or videotape a MS4 connection or discharge to determine compliance with these Illicit Discharge Regulations or whether a MS4 connection or discharge exists. The ***Enforcing Official*** shall be granted access without unreasonable delay. Any obstruction preventing safe and easy access to the MS4 connection or discharge (or suspected MS4 connection or discharge) shall be promptly removed or cleared upon

request of the ***Enforcing Official***, and in the case of a confirmed MS4 connection or discharge, shall not be replaced or allowed to reoccur. The cost of removing or clearing obstructions shall be the responsibility of the property owner or operator. The ***Enforcing Official*** shall be entitled to examine and copy any records required to be prepared and maintained under these Illicit Discharge Regulations or applicable permit.

208 NOTIFICATION OF ILLICIT DISCHARGE FROM UNLAWFUL DUMPING OR SPILLING

A. As soon as the person responsible for a facility or premises, or the emergency response coordinator for a facility or premises has knowledge of an Illicit Discharge resulting from unlawful dumping or spilling that contains a Hazardous Substance, the person or emergency coordinator shall immediately notify the ***Enforcing Official*** by telephone, and the appropriate emergency response center and other governmental agencies in accordance with applicable release reporting laws of such Illicit Discharge. The Owner or operator of the facility or premises shall take all reasonable steps to ensure the expedient containment and cleanup of such Illicit Discharge, protect the heath and safety of the public and mitigate damage to the environment and MS4. A follow up written report describing in detail the incident, impacts and actions taken shall be submitted to the ***Enforcing Official*** within seven (7) working days of the telephone notification to the ***Enforcing Official*** (a copy of the written report submitted to the National Response Center or other governmental agency may satisfy this requirement).

B. As soon as the person responsible for a facility or premises, or the emergency response coordinator for a facility or premises has knowledge of an Illicit Discharge resulting from unlawful dumping or spilling that does not contain a Hazardous Substance, the responsible person or emergency coordinator shall provide notice to the ***Enforcing Official*** by telephone or facsimile as expeditiously as possible, but no later than the next business day. A follow up written report describing in detail the incident, cause, impacts and actions taken shall be submitted to the ***Enforcing Official*** within seven (7) working days of the notification to the ***Enforcing Official***.

C. If an Illicit Discharge resulting from unlawful dumping or spilling is from a commercial or industrial establishment, the Owner or operator of such establishment shall retain on-site for three (3) years from the date of such Illicit Discharge a written record of such Illicit Discharge and the actions taken to mitigate the effects and prevent a recurrence.

209 SWIMMING POOL DISCHARGES

A. No Person shall discharge backwash water from the cleaning of private residential swimming pool filtration medium and/or filter elements to the MS4.

B. The discharge of non-backwash water from private residential swimming pools to the MS4 is allowed, provided the swimming pool water is dechlorinated by resting the water for at least 48 hours following the addition of chlorine or the chlorine level is below 0.1 milligrams per liter (mg/L). Chlorine may be tested using a standard

swimming pool water chlorine test kit. In addition, the pH (a measurement of acidity) of any non-backwash swimming pool water discharged to the MS4 shall not be less than 6.5 or greater than 8.5 at the time of the discharge to the MS4. The pH may be measured with a standard swimming pool water pH test kit.

210 HOME SEWAGE TREATMENT SYSTEM (HSTS) DISCHARGES

A. The discharge from an Off-Lot Home Sewage Treatment System (HSTS) to the MS4 is prohibited except where permitted by the Hamilton County General Health District or other governmental authority with applicable jurisdiction (e.g., a local Board of Health). The discharge from an improperly functioning Off-Lot HSTS or On-Lot HSTS is prohibited under any circumstances.

211 ILLICIT CONNECTION PROHIBITIONS

A. No Person shall connect or cause to be connected any pipe, ditch, drain, conveyance, device, outlet or accessory directly or indirectly to the MS4 that will discharge any Pollutant or water containing any Pollutant other than Storm Water into the MS4.

B. No Person shall construct, use, operate, maintain or otherwise continue in existence an Illicit Connection.

212 REPORTING TO THE HCSWD

A. Copies of all reports required of property Owners under these Illicit Discharge Regulations shall be submitted to the HCSWD within two weeks of the receipt by the ***Enforcing Official***.

B. The ***Enforcing Official*** shall provide the HCSWD with periodic reports of their activities to enforce this Regulation in a format provided by the HCSWD and of sufficient content to support the jurisdiction's compliance with the pertinent terms of the District's permit with Ohio EPA.

C. The HCSWD will use the reports provided by each Local Jurisdiction to prepare the HCSWD's annual permit compliance report to the Ohio EPA.

D. Compliance with the permit enforcement and reporting requirements under this Section are the responsibility of the member Local Jurisdiction.

213 RIGHTS UNAFFECTED

A. These Illicit Discharge Regulations shall not limit or abridge any rights of action or remedies either at law or in equity, nor do these Illicit Discharge Regulations, or any act done pursuant to these Illicit Discharge Regulations preclude any governmental entity or person from exercising rights which they may otherwise possess under applicable law.

214 ENFORCEMENT AND PENALTIES

A. It shall be unlawful for any Person to fail to comply with any of the requirements of these Illicit Discharge Regulations or any lawful order issued by the ***Enforcing Official*** pursuant thereto, including the failure to pay any authorized civil penalty lawfully issued hereunder.

B. The ***Enforcing Official*** shall have all such rights and powers in interpreting and enforcing these Illicit Discharge Regulations as may be accorded to such officials by law, rule, or regulation.

C. When the ***Enforcing Official*** determines that a Person has or may have violated any requirement of these Illicit Discharge Regulations, the ***Enforcing Official*** may notify the responsible Person and/or Owner by mailing or delivering a written notice of violation (NOV) to the responsible Person and/or Owner. The NOV shall state and describe the violation and, when appropriate, shall establish a deadline for compliance with these Illicit Discharge Regulations. The NOV may also include or be accompanied by orders that require:

1. The performance of monitoring, testing, sampling, analyses, and reporting,
2. The elimination of an Illicit Connection or Illicit Discharge,
3. That a violating discharge, practice, or operation cease and desist,
4. The abatement or remediation of contamination hazards and the restoration of any affected property, including the MS4, and
5. The implementation of control measures determined by the ***Enforcing Official*** to be necessary to ensure compliance with these Illicit Discharge Regulations.

D. A requirement to implement control measures may be in addition to any prosecution or enforcement for fines, costs or other remedies as may be available to the ***Enforcing Official*** under applicable law.

E. The NOV may include a civil penalty to be paid within a time prescribed by the ***Enforcing Official*** where authorized by applicable law.

F. If the responsible Person violates any provision of these Illicit Discharge Regulations, fails to correct a violation, or fails to comply with any order or established deadline, or fails to pay an authorized civil penalty within the time prescribed, the ***Enforcing Official*** may seek enforcement and recovery of penalties and costs in a court of competent jurisdiction, in addition to pursuing any available civil and/or criminal penalties or damages as may be recoverable under applicable laws, rules or regulations.

215 INJUNCTIVE RELIEF

A. In addition to seeking civil and/or criminal penalties and/or damages for any violation, the ***Enforcing Official*** may petition a court of competent jurisdiction for injunctive relief, which may include, but is not limited to, enforcement of these Illicit Discharge Regulations or any NOV, order or penalty issued by the ***Enforcing Official***, restraining any continuing or threatened future violations of these Illicit Discharge Regulations, ordering the abatement of any violation or threatened violation, compelling remediation of contamination hazards and restoration of any affected property, including the MS4, or any other relief, penalty or costs that justice may require.

216 VIOLATIONS CONSIDERED A PUBLIC NUISANCE

A. A violation of these Illicit Discharge Regulations which threatens the public health, safety, or welfare may constitute a public nuisance under applicable law, subject to abatement by the ***Enforcing Official*** or other appropriate authority, or by civil action to abate or enjoin, as may be available under applicable law, rule or regulation.

217 REMEDIES NOT EXCLUSIVE

A. The remedies provided in these Illicit Discharge Regulations shall not be exclusive of any other remedies available under any applicable federal, state or local law, and it is within the discretion of the ***Enforcing Official*** to seek cumulative remedies.

218 APPEALS

A. Any person wishing to appeal an adverse determination of the ***Enforcing Official*** shall be entitled to such appeals as may be accorded under applicable provisions of Ohio Law and the Ohio Revised Code.

Appendix F

Illicit Discharge Detection and Elimination Plan

CITY OF WYOMING, OHIO
ILLICIT DISCHARGE DETECTION AND ELIMINATION PLAN

December, 2015

Table of Contents

SECTION 1.0 Introduction

The purpose of this document is to supplement the regulations established by the City of Wyoming, Ohio to provide for the health, safety, and general welfare of the citizens of the City through the regulation of illicit discharges to the Municipal Separate Storm Sewer System (MS4). The regulations establish methods for controlling the introduction of pollutants into the MS4 in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) permit process as required by the Ohio Environmental Protection Agency (Ohio EPA).

This document outlines the processes that the City is taking to address concerns and water quality issues related to illicit discharges within their jurisdiction and as defined in their current NPDES permit issued through Ohio EPA.

Substantial investments in time, money, and energy have contributed to the progress made to date with defining and documenting the issues surrounding illicit discharges. These efforts have involved identifying the locations of HSTS throughout City, field verification and dry weather screening (DWS) of MS4 outfalls, defining and evaluating the MS4, establishing ordinances and regulations, conducting community education and outreach, and educating city staff in best management practices regarding storm water.

The NPDES Small MS4 Stormwater General Permit (OHQ000003) defines the area of responsibility of the permittee to the locations that meet two requirements; the area of responsibility that includes the MS4s, which the permittee owns and/or operates.

SECTION 2.0 General Permit Information

This document was produced in accordance with the most current NPDES Small MS4 Stormwater General Permit issued to the City by Ohio EPA. This document is subject to periodic updates as progress is made with the various requirements of the permit and as OEPA clarifies or modifies the language of the permit.

In accordance with Part III of the General Permit, a Stormwater Management Program (SWMP) was developed to outline the methodology and rational to be used to satisfy the appropriate water quality requirements of Ohio Revised Code (ORC) Chapter 6111 on water pollution control and the Federal Clean Water Act. This SWMP includes management practices, control techniques, system designs, and engineering methods and addresses the following six Minimum Control Measures (MCM):

1) Public education and outreach
2) Public participation / involvement,
3) Illicit discharge detection and elimination (IDDE)
4) Construction site runoff control
5) Post-construction runoff control
6) Pollution prevention / good housekeeping for municipal operations.

This document is required as specified in Part III, Section 3.e of the General Permit.

SECTION 2.1 Supporting Documents and Legal Authority

This document does not stand in isolation. It is part of a larger storm water management effort and as such, should be considered in coordination with the following documents and programs:

- Federal Clean Water Act
- NPDES Small MS4 Stormwater General Permit (OHQ000003)
- City of Wyoming, Ohio Storm Water District Rules and Regulations (Codified Ordinances of Wyoming, Ohio Section 933.04)

SECTION 2.2. Coordinating Agencies and Departments

This document reflects the cooperative effort by several departments and agencies dedicated to addressing public health issues and protecting and managing water resources. The following partner agencies are involved with this effort:

- Hamilton County Soil & Water Conservation District
- Hamilton County General Health District

SECTION 3.0 Decision Process and Rationale

This IDDE Plan was produced in accordance with requirements set forth in the current NPDES Small MS4 Stormwater General Permit. The intent of the actions taken and planned are to provide for the health, safety, and general welfare of the citizens of the City of Wyoming through the regulation of illicit discharges to the MS4. The objectives of these efforts are: to prohibit illicit discharges and illegal connections to the MS4; and, to utilize legal authority to carry out inspections, monitoring procedures, and enforcement actions necessary to ensure compliance with applicable regulations. These regulations apply to all residential, commercial, industrial, or institutional facilities responsible for discharges to the MS4 except for those discharges exempted from regulation. These regulations do not apply to areas served by combined sewers in the City of Wyoming as shown in the included map.

The Stormwater Management Code found in Section 933.04 defines the prohibitions, exclusions, responsibilities, monitoring of illicit discharges and illegal connections, and enforcement processes associated with illicit discharges for the City. The Stormwater Management Code outlines communication activities and target audiences associated with requirements of the NPDES Permit and outlines topics associated with IDDE efforts being undertaken by the City. Regarding discharges from HSTS, the City maintains an active relationship with Hamilton County General Health District for inspecting systems and enforcement measures consistent with their legal authorities.

SECTION 3.1 Illicit Discharge: Definition

Stormwater regulations define an "illicit discharge" as any discharge to a MS4 that is not composed entirely of stormwater. Common sources of non-stormwater, dry weather discharges in urban areas include, but are not limited to, apartments and homes, car washes, restaurants, airports, landfills, and gas stations. These so-called "generating sites" discharge sanitary wastewater, septic system effluent, vehicle wash water, washdown from grease traps, motor oil, antifreeze, gasoline and fuel spills, among other substances.

Although these illicit discharges can enter the storm drain system in various ways, they generally result from either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or indirect connections (e.g., infiltration into the storm drain system, spills, or "midnight dumping"). Illicit discharges can be further divided into those discharging continuously and those discharging intermittently.

SECTION 3.2 MS4 Definition

The Stormwater Management Code defines MS4s as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

A. Owned or operated by the City;
B. Designed or used for collecting or conveying stormwater;
C. Which is not a combined sewer; and,
D. Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 C.F.R. 122.2.

SECTION 3.3 Illicit Discharge Exemptions

Illicit Discharge is defined as any discharge to an MS4 that is not composed entirely of storm water, except for those discharges to an MS4 pursuant to a NPDES permit or noted in the Stormwater Management Code.

The following discharges are exempt until such time as they are determined by the City to be significant contributors of pollutants to the MS4.

- Water line flushing
- Landscape Irrigation
- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water infiltration
- Uncontaminated pumped ground water
- Discharges from potable water sources
- Foundation drains
- Air conditioning condensation
- Irrigation water
- Springs
- Water from crawl space pumps
- Footing drains
- Lawn watering
- uncontaminated discharge of flow from foundation drain, crawl space or footing drains
- discharges from potable water sources
- air conditioning condensate
- non-commercial car washing
- flows from riparian habitats and wetlands
- non-commercial car washing
- dechlorinated swimming pool discharges
- street wash water
- fire fighting discharges or flows

In addition, the following are not to be deemed as illicit discharges:

- Discharges specified in by the City as being necessary to protect public health and safety.
- Discharges from off-lot household sewage treatment systems permitted by the Hamilton

County General Health District for the purpose of discharging treated sewage effluent.

SECTION 4.0 IDDE Strategy

The City has developed a strategy to reduce the water quality impacts of IDDE that includes identification, investigation, quantification, prioritization, and mitigation.

SECTION 4.1 MS4 Mapping

The City has developed comprehensive storm system mapping as required by the permit. The City maintains a city-wide GIS that includes MS4 components and surface water features. In addition, the City has worked with Hamilton County in mapping of outfalls and has conducted dry Weather Screening (DWS) of these features.

These mapping and screening efforts have led to a comprehensive dataset of MS4 components and surface water features for the City.

SECTION 4.2 Dry Weather Screening

To identify illicit discharges, a process known as Dry Weather Screening (DWS) is utilized. This process requires field inspection of drainage features (components of the MS4) during periods of dry weather. Dry weather for this screening is defined as having a maximum of 0.1" of rain during the previous 72 hours. This 'dry weather' protocol helps to minimize flows due to rain or snow melt events and highlights illicit discharges.

The features screened during this process are:

- **Flowing Pipes**: outfalls with flow at the time of screening
  Note: outfalls with flow within catch basins are included in this group
- **Non-Flowing Pipes**: outfalls with no flow at the time of screening
  Note: outfalls without flow within catch basins are included in this group

If flowing pipes are found, the discharged flow is analyzed in accordance with criteria noted in Section 4.3. If necessary, samples are analyzed for pH, chlorine and fluoride levels. Further tests may also be conducted on a case-by-case basis as noted in Section 4.4. The source of any polluted flow found will be investigated using the GIS storm system maps upstream of the discharge.

SECTION 4.3 Identifying Potential Illicit Discharges

Features are categorized by their potential to be a source of illicit discharge and whether or not they are an obvious (severe) source of an illicit discharge. The criteria used to identify potentially illicit discharges are considered stand-alone indicators. These are odor, color, floatables, poor pool quality, benthic growth, and deposits and stains. The presence of at least one of these criteria can designate the outfall as potentially illicit.

It is important to identify obvious (severe) sources of illicit discharge during dry weather screening, because the presence of obvious indicators (e.g. raw sewage) allows that feature to be prioritized for future follow-up investigation and resolution. For a location to be determined as an obvious (severe) source of an illicit discharge, it must have at least one of several specific, pre-

defined stand-alone indicators.

SECTION 4.4 Effluent Sampling

To better understand what was being observed during dry weather screening and to verify the accuracy of the dry weather screening effort, follow-up effluent sampling of potential illicit discharges may be done as well. These water samples will be processed at an OEPA certified lab to determine the amounts of pollutants such as Ammonia, Ammonia Nitrogen, E.Coli, Fecal Coliform, and Methylene Blue Active Substances (MBAS).

The following is a brief description of the substances that can be sampled:

- **E. coli** - Escherichia coli, is a species of fecal coliform bacteria that is specific to fecal material from humans and other warm-blooded animals. Results reported in colony forming units per 100 milliliters (cfu/100 mL).
- **MBAS** - Methylene Blue Active Substances (surfactant): detergent indicator. Results reported in milligrams per liter (mg/L).
- **NH3** - Ammonia: pollutant and an indicator of sewage. Results reported in milligrams per liter (mg/L).

SECTION 4.5 Dry Weather Screening and Mapping Schedule

An initial DWS of MS4 outfalls and system outlets have been completed. Future dry weather screening will be concentrated in areas where HSTS still exist and at locations where illicit discharges were previously found.

SECTION 4.6 Mapping HSTS Connected to the MS4

The Hamilton County General Health District maintains records regarding HSTS in the City of Wyoming. In addition, the City of Wyoming maintains locations of HSTS upstream of the City in Springfield Township. All are mapped on the City's GIS system.

SECTION 4.7 Prioritized Areas

The City maintains mapping of the unsewered areas throughout its municipality. These areas were targeted during the dry weather screening efforts as they were more likely than the sewered areas to produce illicit discharges. The City continues their working relationship with the Hamilton County General Health District in working with residents in the unsewered areas.

SECTION 4.8 Mitigation

The City will continue to regularly monitor areas around HSTS to ensure that they are operating properly. In addition, the City has sent flyers to HSTS owners regarding operating and maintenance BMP's. The City will continue education and outreach efforts to these howmeowners to provide guidance and assistance as necessary.

Despite these efforts, which often only solve problems temporarily, the most thorough and permanent solutions to abate HSTSs causing public health nuisances are to connect households on HSTS to sewers that already exist and to extend public sewers into areas that are not currently served. The city will encourage the Metropolitan Sewer District and HSTS homeowners to extend

public sewers where practical.

Locations in and around HSTS will be inspected annually by city staff and investigate any complaints received.

SECTION 5.0 Communication and Outreach

Success of the IDDE Program depends, in part, on communicating it to the stakeholders and the public affected, and on providing the opportunity for community participation and input from various venues. The goal of this communication and outreach is for the community to understand the IDDE program, why it is required and its purpose, who is responsible for its implementation, how it will be implemented, and how they can become part of the solution to stormwater issues.

Public Education and Public Communication and Outreach efforts are detailed within the City's Stormwater Management Program in sections outlining activities for MCM 1 and MCM2. Examples of activities are not limited to, articles in newsletters, educational material in water consumer confidence report, Word on Wyoming, and email blasts as well as workshops and volunteer programs.

SECTION 5.1 Reporting Illicit Discharges

The IDDE Program benefits from citizen reports regarding spills, illegal dumping, sewage and other observed pollution and various avenues are available to the community depending on the material or liquid being discharged. The City receives discharge and spill complaints from residents, law enforcement, and fire officials which are subsequently investigated by City staff. The following are contact numbers for reporting illicit discharges:

- City of Wyoming, Ohio – 513-821-7600
  - Web reporting – http://wyomingohio.gov
- Ohio EPA spill response – 800-282-9378
- Hamilton County General Health District – 513-946-7800
- Hamilton County Soil and Water Conservation District – 513-772-7645

Appendix G

Hamilton County Storm Water District, Article III, Earthwork Regulations

RULES AND REGULATIONS
OF THE
HAMILTON COUNTY SOIL AND WATER CONSERVATION DISTRICT
AND THE HAMILTON COUNTY STORM WATER DISTRICT
ISSUED BY THE
BOARD OF COUNTY COMMISSIONERS
HAMILTON COUNTY, OHIO

ARTICLE III

EARTHWORK REGULATIONS

TABLE OF CONTENTS

301 PURPOSE, SCOPE AND APPLICABILITY

A. The purpose of these Earthwork Regulations is to promote and maintain the health, safety, and welfare of the citizens of Hamilton County by establishing standards for storm water best management practices (BMPs) that minimize the degradation of the water resources of Hamilton County by

1. Reducing the discharge of pollutants from the municipal separate storm sewer systems (MS4s) owned or operated by Hamilton County and member Local Jurisdictions of the Hamilton County Storm Water District ("HCSWD") to the maximum extent practicable,

2. Protecting water quality, and

3. Satisfying the appropriate water quality requirements of the Clean Water Act, Ohio Law, and the Ohio Revised Code (ORC), including Section 6111.

B. These Earthwork Regulations are adopted under authority of Ohio Law and the Ohio Revised Code, including Chapters 307 and 6117, and implement the requirements of the latest discharge permit issued by Ohio EPA to Hamilton County and the member Local Jurisdictions of the Hamilton County Storm Water District ("HCSWD") under the Phase II Program.

C. The Board of County Commissioners of Hamilton County, Ohio ("Board") shall designate the ***Enforcing Official*** within the unincorporated areas and townships of Hamilton County for the enforcement of these Earthwork Regulations, except to the extent that a home rule township has the authority to designate another entity as its ***Enforcing Official*** and exercises such authority. The ***Enforcing Official*** for each of the participating member municipalities and authorized home rule townships of the HCSWD shall be the chief administrative officer of the Local Jurisdiction unless the legislative body of the Local Jurisdiction legally authorizes another qualified party to fulfill all required responsibilities of the ***Enforcing Official*** under these Earthwork Regulations.

D. Where authorized by law, the responsibilities of a participating Local Jurisdiction under these Earthwork Regulations may be delegated by the Local Jurisdiction to persons or entities acting in the beneficial interest of, or in the employment of, the participating Local Jurisdiction, including but not limited to, the HCSWD or the HCSWD's designated representative, provided there is a lawfully enacted Resolution or Ordinance authorizing delegation of said responsibilities.

E. These Earthwork Regulations apply as follows:

1. The Geotechnical Requirements of these Earthwork Regulations apply to all construction projects within the unincorporated townships of Hamilton County and within the jurisdiction of the municipal corporations which are participating members of the HCSWD and have adopted the Geotechnical Requirements of these Earthwork Regulations.

2. In unincorporated portions of Hamilton County, the Erosion Prevention & Sediment Control (EP&SC) Requirements and Non-Sediment Pollution Control Requirements of these Earthwork Regulations apply to all Earthwork. Earthwork disturbing less than one (1) acre of land and not part of a larger common plan of

development that will disturb more than one (1) acre of land are not subject to the requirements of Section 308 EARTHWORK SUBMITTAL PROCEDURES and Section 309 EARTHWORK REQUIREMENTS FOR IMPROVEMENT PLANS, but are required to comply with all other requirements of these Earthwork Regulations, and are subject to enforcement actions. Individual lots that are part of a larger common plan of development shall comply with Section 309(G) Continuation of Controls for Individual Lot Development.

3. In incorporated member municipal corporations and authorized home rule townships within the HCSWD which have adopted these Earthwork Regulations, the EP&SC Requirements and Non-Sediment Pollution Control Requirements of these Earthwork Regulations apply to Earthwork disturbing one (1) acre of land or larger, or to Earthwork disturbing less than one (1) acre but part of a larger common plan of development that will disturb more than one (1) acre of land. The legislative body of incorporated member municipalities and authorized home rule townships may establish a smaller applicable area and specific requirements for these smaller areas.

F. It is the standard sediment control policy of the Local Jurisdiction which has adopted these Earthwork Regulations that the Erosion Prevention, & Sediment Control BMP Performance Standards, and Non-Sediment Pollution BMP Performance Standards of these Earthwork Regulations shall apply to all Earthwork Activities performed by the Local Jurisdiction.

302 DEFINITIONS

The words and phrases defined in Article I – Definitions of the Rules and Regulations of the HCSWD shall have the same meaning herein unless otherwise provided.

303 COMPLIANCE WITH OTHER LAWS AND DISCLAIMER OF LIABILITY

A. Compliance with these Earthwork Regulations does not relieve the Owner from the duty to comply with any other applicable federal, state or local laws, regulations or ordinances or from responsibility otherwise imposed by law for damage to any person or property.

B. Neither the submission, approval, or disapproval of an Improvement Plan under these Earthwork Regulations; nor the Issuance or denial of a Permit; nor the compliance or lack of compliance with these Earthwork Regulations; nor any action or lack of action by the ***Enforcing Official*** shall relieve the Owner from responsibility for injury or damage to any person or property otherwise imposed by law, nor create or impose any liability upon Hamilton County, the HCSWCD or any participating Local Jurisdiction in the HCSWD or their respective officers, agents, or employees for injury or damage to any person or property.

C. Storm water control practices authorized under these Earthwork Regulations and maintained according to a Construction-Phase Inspection and Maintenance Plan approved under these Earthwork Regulations shall not be considered to be a nuisance under these Earthwork Regulations. The ***Enforcing Official*** will address conditions that may contribute to the creation of a nuisance according to pertinent local regulations when reviewing Improvement Plans and conducting facility inspections.

D. Failure of the ***Enforcing Official*** to observe or recognize hazardous or unsightly conditions or to recommend appropriate corrective measures shall not relieve the Owner from the responsibility for any resulting condition or damage or injury, or result in any liability on the part of the Local Jurisdiction, the ***Enforcing Official***, Hamilton County, or their officers, employees, or agents for any resulting condition or damage or injury.

E. These Earthwork Regulations do not create a duty upon the ***Enforcing Official***, the Board, the HCSWD, the HCSWCD, or participating member Local Jurisdictions of the HCSWD to persons impacted by soil sediment pollution, erosion, or landslides.

304 CONFLICTS AND SEVERABILITY

A. In the event that any of these Earthwork Regulations may conflict with other applicable provisions of law or ordinance, the more restrictive applicable provisions, as determined by the ***Enforcing Official***, shall prevail where permitted by law.

B. Should any article, section, subsection, clause, or provision of these Earthwork Regulations be declared by a court of applicable jurisdiction to be unconstitutional or invalid, such decision shall not affect the validity of the remainder of these Earthwork Regulations, in whole or in part.

305 EARTHWORKS PERMIT AND IMPROVEMENT PLANS REQUIRED

A. An Owner performing Earthwork subject to these Earthwork Regulations shall submit Improvement Plans, where applicable, and obtain an Earthwork Permit prior to commencing any Earthwork, unless exempted under these Earthwork Regulations.

B. A Building Permit approved by the authorized Local Jurisdiction shall serve as authorization for Earthwork to proceed for projects that disturb less than one (1) acre in unincorporated areas and do not present geotechnical stability issues as set forth in these Earthwork Regulations, as determined by the ***Enforcing Official.***

306 EXEMPTIONS

A. The following Earthwork is exempt from these Earthwork Regulations:

1. Subject to the provisions of Section 301(F) of these Earthwork Regulations, a public highway, transportation or drainage improvement or maintenance project undertaken by a government agency or political subdivision in accordance with a statement of standard sediment control policies that is approved by the Chief of the Ohio Department of Natural Resources Division of Soil and Water Conservation.

2. Surface mining operations regulated by ORC, Section 1514.01.

3. Strip mining operations regulated under ORC, Section 1513.01.

4. Grading of land for purposes of farm activity as regulated under ORC.

5. Temporary excavations for underground utility lines, wells, tunnels, tanks, and vaults or sign foundations, provided all such excavations shall be promptly and properly backfilled and restored to the existing terrain and stabilized immediately.

6. Exploratory excavations under the direction of a Professional Engineer, provided all such excavations shall be promptly and properly backfilled and restored to the existing terrain and stabilized immediately.

7. Normal cemetery operations involving opening and closing graves as permitted in ORC, Sections 517 & 759

8. Operations involving refuse disposal, mining, quarrying, processing and stockpiling of soils or rock materials where controlled by other regulations, provided such operations do not cause instability of any adjacent property or the discharge of sediment.

B. Application and enforcement of the exemptions under Section 306 "Exemptions" of these Earthwork Regulations shall be conducted by the ***Enforcing Official***.

307 COORDINATION WITH LOCAL, STATE, AND FEDERAL REGULATIONS AND PERMITS

A. Approvals issued in accordance with these Earthwork Regulations do not relieve the Owner of responsibility for obtaining all other necessary permits and/or approvals from federal, state, and/or local governments and compliance with other legal requirements. If requirements vary, the most restrictive shall prevail. Other permits and requirements may include, but are not limited to, those listed below.

1. Ohio EPA NPDES Permit authorizing storm water discharges associated with construction activity;

2. Section 401 and 404 of the Clean Water Act;

3. Ohio EPA Section 401 Water Quality Certification General Isolated Wetland Permit;

4. Ohio Dam Safety Law Section 1501.21 OAC.

5. Applicable Flood Plain Regulations

6. Applicable ground water protection laws.

7. Hamilton County General Health District (HCGHD) Clean Hard Fill Regulations

B. Earthworks Permits and Building Permits shall be processed in the following manner:

1. No Building Permit shall be issued within the work area until the Owner has complied with all provisions of these Earthwork Regulations. All EP&SC BMPs must be in compliance with the EP&SC BMP Performance Standards of these Earthwork Regulations and the approved plans, including but not limited to, proper installation and maintenance of sediment basins and traps, sediment fence and inlet protection, and that all idle areas have temporary and permanent stabilization as required under these Earthwork Regulations.

2. In unincorporated areas, Building Permits will be issued only after the ***Enforcing Official*** sends notice to the Hamilton County Building Official of compliance with

the Hamilton County Building Code. The ***Enforcing Official*** may request the Hamilton County Building Official to withhold the issuance of additional Building Permits, issue a Stop Work Order on active Building Permits, withhold inspections, or withhold the issuance of a Certificate of Occupancy on active Building Permits for non-compliance with the Earthwork Regulations, in addition to any other remedies that may be available to the ***Enforcing Official*** under these Earthwork Regulations and other law.

3. Incorporated member municipalities within the HCSWD shall not issue Building Permits until the ***Enforcing Official*** provides notice to the incorporated member municipality of compliance with the Earthwork Permit. The ***Enforcing Official*** may request the appropriate building official to withhold the issuance of additional Building Permits, issue a Stop Work Order on active Building Permits, withhold inspections, or withhold the issuance of a Certificate of Occupancy on active Building Permits for non-compliance with these Earthwork Regulations, in addition to any other remedies that may be available to the ***Enforcing Official*** under these Earthwork Regulations and other law.

C. Earthwork Permits will not be issued by the ***Enforcing Official*** having jurisdiction absent a showing by the Owner that compliance with all applicable regulations and permit requirements has been demonstrated.

D. The issuance of an Earthwork Permit and activities conducted by the Owner pursuant to the Earthwork Permit process shall be coordinated with local utility providers to allow any necessary adjustment, relocation, addition or other modification to an existing utility, including overburden loading.

308 EARTHWORK SUBMITTAL PROCEDURES

A. An Owner wishing to undertake Earthwork covered by these Earthwork Regulations shall submit an Earthwork Permit Application and Improvement Plan to the ***Enforcing Official*** of the appropriate Local Jurisdiction prior to undertaking any such Earthwork. No Earthwork shall be undertaken until such Permit Application and Improvement Plan has been reviewed and approved through the established submittal and review process of the Local Jurisdiction.

B. Pre-Submittal Meeting: a Pre-Submittal Meeting with the ***Enforcing Official*** may be requested to discuss the proposed project, review requirements, identify unique aspects of the project that must be addressed during the review process, and establish a preliminary review and approval schedule.

C. Concept Plan: The Owner of a project requiring a preliminary Record Plat or equivalent submittal shall submit Improvement Plans that include the proposed Earthwork in concept (Concept Plan), and the applicable fees to the ***Enforcing Official***. Concept Plans shall show approximate preliminary locations of the proposed parcel boundaries, setbacks, dedicated open space, public roads, water resources, existing topography, on-site and off-site areas vulnerable to erosion and sediment damage, drainage facilities, Post-Construction BMPs, and easements to allow the ***Enforcing Official*** to determine if the site is laid out in a manner that meets the intent of these Earthwork Regulations and if the proposed EP&SC BMPs and Post-Construction BMPs are capable of controlling runoff from the site in compliance with these Earthwork Regulations and the Post-Construction Regulations (Article V of the Rules and

Regulations of the HCSWD). The ***Enforcing Official*** shall review the Concept Plans and provide comments and recommendations for revisions if any.

A Concept Plan is required:

1. For all subdivisions

2. For all non-residential development and Clean Hard Fill Sites that will involve disturbing five (5) acres of land or more

For other construction projects, Concept Plans are encouraged to be submitted for review by the ***Enforcing Official*** in advance of submitting an application for an Earthwork Permit in order to avoid subsequent delays caused by the submittal of Improvement Plans which do not comply with these Earthwork Regulations.

D. Improvement Plans: The Improvement Plan submission shall consist of construction drawings and specifications together with the applicable permit forms and such fees as may be required. The Improvement Plans shall meet the requirements of these Earthwork Regulations and must be approved by the ***Enforcing Official*** prior to approval of the Earthwork Permit and/or before issuance of a building permit by the Building Department. Any revised Improvement Plans shall be submitted to the ***Enforcing Official*** for approval prior to implementing the proposed modification.

E. Consent to Enter Private Property: Submittal of an Earthwork Permit application, Concept Plan, and/or Improvement Plans shall be deemed to provide consent to the ***Enforcing Official*** to enter property subject to these Earthwork Regulations for the purpose of gathering information necessary for review of and comment to such Permit application, Concept Plan and/or Improvement Plans.

F. Review and Comment: The ***Enforcing Official*** shall review and comment on any Concept and/or Improvement Plans submitted within a reasonable period of time after proper submission. The final Improvement Plans submitted may be either approved or disapproved. If the Improvement Plans are disapproved, they shall be returned with comments stating the reasons for disapproval and requirements for revisions, if any.

G. Approval Required: Earthwork shall not begin and building permits shall not be issued without approved Improvement Plans for Earthwork covered by these Earthwork Regulations

H. Individual Lot Construction Will Not Proceed: Improvement Plans for individual lots in a subdivision will not be approved and building permits will not be issued unless the larger common plan of development or sale containing the lot is in compliance with these Earthwork Regulations.

I. Approval Valid for Two (2) Years / Modification of Plans: If Earthwork has not commenced within two (2) years of approval, Improvement Plans must be re-submitted for review and approval in accordance with rules in effect at the time of re-submittal. Modifications to the project require submittal and approval of a revised Improvement Plan before work may proceed.

J. Stopped or Abandoned Earthwork: Earthwork that is in compliance with these Regulations and is stopped or abandoned for a period of two (2) consecutive years from

the date of discontinuation of Earthwork shall cause the approval of the Improvement Plans to expire and become invalid. For site work to continue either the previously approved plans must be submitted if the scope of the Earthwork has not changed, ***or*** an updated set of plans must be submitted for approval by the ***Enforcing Official.***

K. Preconstruction Meeting Required. On all Earthwork activities one (1) acre or larger and all clean hard fill sites, an onsite EP&SC pre-construction meeting shall be held with the ***Enforcing Official***, the Owner, and the contractors before any Earthwork begins.

L. Earthwork Permit Issuance Procedure. An Earthwork Permit or Approval will not be issued until all Improvement Plans for the project are approved by the ***Enforcing Official*** and all pertinent Local, State and Federal permits for the project are obtained, including the following:

1. An Earthwork Permit or Approval will not be issued until approval has been obtained under local planning, zoning, subdivision, storm drainage, special flood hazard approval and/or building requirements. For subdivisions of more than six lots (major subdivisions) in unincorporated areas, an Earthwork Permit or Approval will not be issued until Improvement Plan approval has been obtained from the Hamilton County Regional Planning Commission. For all other types of developments in unincorporated areas, zoning approval must be obtained from the appropriate zoning jurisdiction.

2. All Earthwork greater than one acre shall comply with all planning, zoning, and/or development requirements of the Local Jurisdiction before an Earthwork Permit or approval will be granted. A copy of these approvals shall be provided to the ***Enforcing Official***.

3. In unincorporated Hamilton County, only clean hard fill shall be accepted as defined in these Earthwork Regulations. All sites receiving clean hard fill other than soil shall submit a Notice of Intent with the HCGHD for unincorporated Hamilton County. A copy of this approval from the HCGHD shall be provided to the ***Enforcing Official***.

4. Earthwork Permits for building applications and residential subdivision and commercial developments are valid for the duration of the project unless Earthwork is stopped or abandoned as defined under Paragraph 308(J) of these Earthwork Regulations.

5. Earthwork Permits for Clean Hard Fill Project Sites are valid for one (1) year. A renewal shall be obtained prior to expiration of the Earthwork Permit.

M. If ownership of any portion of an approved project changes, the new Owner shall submit to the ***Enforcing Official*** in writing the new Owner's name, address, telephone number; and the name, address and telephone number of the new Owner's Professional Engineer if different from the original Professional Engineer. The new Owner shall contact the ***Enforcing Official*** to schedule an onsite meeting prior to continuing with the project.

N. The Owner shall notify the ***Enforcing Official***:

1. Of commencement of Earthwork covered by these Earthwork Regulations or the

Earthwork Permit at least 48 hours in advance

2. Of locations of any borrow or disposal sites that will be utilized prior to commencement of Earthwork,

3. When Earthwork is completed or temporarily or permanently suspended;

4. Of any proposed deviations from the originally approved plans.

O. Clean Hard Fill Sites. An Earthwork in unincorporated Hamilton County accepting fill that is not covered under Improvement Plans or a Building Permit is a Clean Hard Fill Site. An Earthwork Permit for a Clean Hard Fill Site shall be valid for one (1) year from the date of approval. If Earthwork at the Clean Hard Fill Site is expected to continue beyond the expiration date, a renewal permit shall be obtained prior to expiration. A renewal permit requires a status report from the Owner, and a signed statement from the Owner that the project will precede in accordance with the previously approved plans and Earthwork Permit. A yearly renewal is mandatory for all Clean Hard Fill Sites. A modification of the Earthwork Permit for a Clean Hard Fill Site requires the submittal and approval of a revised grading plan defining recommended EP&SC BMPs before the work as modified may proceed. The project shall be in compliance with all provisions of these Earthwork Regulations before a renewal will be granted.

309 EARTHWORK REQUIREMENTS FOR IMPROVEMENT PLANS

A. Earthwork Requirements: The Improvement Plans submitted with the application for Earthwork Permit shall describe in detail how the EP&SC Requirements, Geotechnical Requirements, and Non-Sediment Pollution Control Requirements of these Earthwork Regulations shall be fulfilled. The Improvement Plans shall also describe in detail how the quantity and quality of storm water will be managed after construction is complete for discharge from the site and/or into a water resource. The Improvement Plans will illustrate the type, location, and dimensions of structural and non-structural EP&SC BMPs, Post-Construction BMPs, and Non-Sediment Pollution BMPs incorporated into the site design to address the requirements of these Earthwork Regulations, and provide the rationale for their selection. The rationale must identify how EP&SC BMPs and Post-Construction BMPs will address flooding within the site as well as flooding that may be caused by the development upstream and downstream of the site, as required under the storm water quantity control regulations of the Local Jurisdiction. The rationale must demonstrate that these EP&SC BMPs, Non-Sediment Pollution BMPs, and Post-Construction BMPs minimize degradation to the water resource and its floodplain.

B. Preparation by Professional Engineer: The Improvement Plans shall be prepared and sealed by a Professional Engineer and include supporting calculations, plan sheets, and design details. To the extent necessary, as determined by the ***Enforcing Official,*** a site survey shall be performed by a Professional Surveyor to establish boundary lines, measurements, or land surfaces. The ***Enforcing Official*** may accept submittals for non-structural, clean hard fill sites from the Owner in instances where the ***Enforcing Official*** determines that the intent and purpose of these Earthwork Regulations can be met and the interests of the public reasonably protected. These submittals shall be handled on a case by case basis. Acceptance and approval shall be at the discretion of the ***Enforcing Official***.

C. EP&SC Manual: The most recent edition of the Ohio Department of Natural Resources Rainwater & Land Development Manual shall be the basis for standards and specifications for erosion prevention and sediment control. The HCSWD and/or the ***Enforcing Official*** may prepare and maintain design criteria manuals or procedures that provide guidance for designing the site Earthwork, including a description of acceptable EP&SC BMPs that meet the criteria of these Earthwork Regulations. The design manual or procedures may be updated from time to time based on improvements in engineering, science, monitoring, and local maintenance experience.

D. Contents of Improvement Plans: The Improvement Plans shall include the following:

1. Site Location Map: USGS 1:24,000 or equivalent map showing the Project Name, the boundary of the project site, the name and location of major existing roadways, and the name and location of the immediate receiving water resource(s) within 500 feet of the boundary of the project site and the first subsequent named water resource(s).

2. Site Description and Information: The following information shall be included in the general notes, project specifications and/or an attached narrative report:

   a. The Project Name and the location of the project, including the complete site address or Parcel Identification Number, and individual lot addresses if known and applicable.

   b. Contact information: Provide the Company name and contact information and the contact names, addresses, phone numbers, facsimile numbers, and e-mail address for the following:

      i. The Professional Engineer responsible for the preparation of the Improvement Plans.

      ii. The site Owner, and if applicable the agent or designee.

      iii. The Earthwork Contractor and all applicable subcontractors, when identified.

   c. A description of the nature and type of the construction activity (e.g. residential, shopping mall, clean hard fill site, etc.).

   d. Total area of the site and the area of the site that is expected to be disturbed (i.e. grubbing, clearing, excavation, filling or grading, including off-site borrow areas, excavated material disposal areas, and off-site project construction support activities).

   e. A calculation of the area-weighted runoff coefficients for each catchment tributary to an EP&SC BMP, Post-Construction BMP, storm water conveyance facility, and storm water detention facility under both pre-construction and post-construction site conditions.

   f. An estimate of the impervious area and percent imperviousness of the site and areas draining to the site at the beginning and at the conclusion of the project.

g. Existing data describing the soils throughout the site, including the soil series, soil association, and hydrologic soil group. Additional geotechnical data to support the design of each proposed EP&SC BMPs and Post-Construction BMP (e.g., infiltration, extended conveyance, media filtration, or other BMP) whose effectiveness depends upon site-specific data about the porosity, infiltration characteristics, depth to groundwater, depth to bedrock, and any impermeable layers.

h. Existing data, if available, describing the quality of any discharge from the site.

i. A description of prior land uses at the site.

j. An implementation schedule which describes the sequence of major construction operations (i.e., grubbing, excavating, grading, utilities and infrastructure installation) and the implementation of erosion, sediment and storm water management practices or facilities to be employed during each operation of the sequence.

k. The name and/or location of the immediate receiving water resource(s) and the first subsequent named water resource(s) and the aerial extent and description of wetlands or other special aquatic sites at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project.

l. Location and description of any storm water discharges associated with asphalt and concrete plants on or contiguous with the project site and dedicated to the project, and the best management practices to address pollutants in these storm water discharges.

3. Project Site Map(s): One or more site maps of the Project shall be created. The map or series of maps shall be drawn at a scale of at least 1-inch equals 50-feet. The site is to be referenced using the State Plane coordinates and shall indicate the datum used. It is preferred that the entire site be shown on a single 24"x36" (architectural D-size drawing) plan sheet to allow a complete view of the site during plan review. Each map shall identify the phase of the project, if applicable, in relation to the overall development plan and include a north arrow, elevation datum and date of preparation. The map or series of maps shall extend 200 feet beyond the project boundary and shall indicate for that area, at a minimum the following:

a. Limits of Earthwork on the site for each phase of the project.

b. Soils types for the entire site, including the location and extent of visibly evident existing excavations or fills, slope instability, erosion and water seepage or wet conditions, unstable or highly erodible soils, or other areas with potentially serious existing or future erosion problems.

c. Existing and proposed two-foot (2') contours, unless site conditions require more detailed topography to depict site drainage conditions.

d. Drainage patterns, EP&SC BMPs, and Post-Construction BMPs within,

entering, and exiting the site during each phase of the project, including any existing and/or constructed combined and separate storm water drainage conveyance and drainage inlet facilities within the site, beyond the site, and/or within the larger common plan of development if utilized by the project. These maps shall include a delineation of drainage watersheds at the site expected before, during, and after major grading activities as well as the total off-site and on-site size of each drainage watershed in acres, and the pre-construction and post-construction runoff coefficient for each area.

e. Location of existing and proposed utilities including appurtenances, structures and outfalls. The approximate depths of all utilities shall be indicated.

f. Water resource locations including known springs, wetlands, streams, lakes, water wells, and associated Stream Corridor Protection Zone as defined under the Stream Corridor Regulations (Article IV of the Rules and Regulations of the HCSWD) and/or other setbacks on or within 200 feet of the site, including the boundaries of wetlands or streams and any first subsequent named receiving water resource(s) intending to be filled or relocated under an approval from the Army Corps of Engineers and/or Ohio EPA.

g. Existing and proposed locations of buildings, roads, and parking facilities.

h. The location of any in-stream activities including stream crossings.

i. Existing and proposed property boundaries and individual lot numbers.

j. The location of any existing or proposed easements or other restrictions placed on the use of the property and the responsible party(ies) under such easement or restriction.

k. On-site and off-site areas vulnerable to erosion and sediment damage.

4. Information Regarding EP&SC BMPs: A complete description of the measures proposed to satisfy the performance standards of these Earthwork Regulations shall be provided in the Improvement Plan for each phase of the Project in a professionally prepared document which, at a minimum, includes the following appropriate Earthwork principles, techniques, methods, operations and work sequences :

a. One or more site maps for each phase of construction showing the location and extent of each EP&SC BMP that will be installed.

b. A drawing of each structural EP&SC BMPs providing sufficient dimensions, construction details, and design calculations.

c. Standards and specifications for the installation and maintenance of all EP&SC BMPs.

d. Temporary and permanent stabilization requirements and timelines for

specific areas of the site. Standards and specifications shall be provided for all vegetative practices including seeding, mulching, and fertilizing rates. Standards and specifications shall be included for any turf reinforcement matting or other stabilization practices as required under these Earthwork Regulations or by the ***Enforcing Official***.

e. Areas of the site that do not drain to primary EP&SC BMPs such as sediment basins and traps shall be indicated. Notes shall be included on the plans indicating the appropriate EP&SC BMPs, standards and specifications for all EP&SC BMPs, including those EP&SC BMPs that will be provided for use by successor owners of individual lots, and those that shall be implemented by successor owners within their individual lots.

f. An indication of areas where soil stockpiles are to be located and a narrative procedure for the stabilization of these areas immediately after the soil stockpile is completed. If the specific locations cannot be addressed in the design stage, direction shall be provided regarding the location of the soil stockpiles by indicating areas of concern and outlining the stabilization requirements.

g. Estimated schedule indicating the anticipated sequence of Earthwork and other construction activities, along with the EP&SC BMPs and non-sediment pollution control BMPs to be employed during each sequence, including the time of exposure of each area prior to the completion of approved EP&SC BMPs.

h. A written narrative that describes the overall EP&SC plan and highlights specific areas of concern. The narrative shall indicate stabilization requirements, inspection and maintenance guidelines, and direct the developer to contact the ***Enforcing Official*** for a pre-construction meeting prior to commencing with any Earthwork.

i. For subdivided developments where a centralized EP&SC BMP capable of controlling multiple individual lots is not provided, a detail drawing of a typical individual lot showing standard individual lot EP&SC BMPs.

5. Information Regarding Post-Construction BMPs: For each non-structural and structural Post-Construction BMP to be employed on the site, the Improvement Plan shall include the following:

a. Location and size, including maps showing the location of Post-Construction BMPs and other storm water facilities, detailed drawings with dimensions and elevations, and design calculations. Details of Post-Construction BMPs shall be drawn to scale and shall show volumes and sizes of contributing drainage areas.

b. Soil and subsurface conditions, including tests of infiltration rates for native and amended soils underlying Post-Construction BMP, and borings or equivalent data indicating seasonal high groundwater levels, top of bedrock elevations, and perched groundwater elevations.

c. Specifications for materials used to construct each Post-Construction

BMP, including vegetation, amended soil composition, and structural materials.

d. Post-Construction BMP operations and maintenance requirements during and after construction.

e. Any supplemental information requested by the ***Enforcing Official***.

6. Other Approvals and Permits included in Improvement Plan:

a. Ohio EPA NPDES Permit Number and other applicable state and federal permit numbers or approvals shall be provided if available; or the status of permit applications shall be provided if final approvals have not been received.

b. The parcel number, address, contact information, and Earthwork Approval shall be provided for any off-site borrow areas and excavated material disposal areas.

7. Construction-Phase Inspection and Maintenance Plan: The Improvement Plans shall include a Construction-Phase Inspection and Maintenance Plan for the EP&SC BMPs and Non-Sediment Pollution BMPs employed on the property. This Plan shall address the inspection and maintenance frequency and requirements listed in Section 314 INSPECTION AND MAINTENANCE OF EROSION PREVENTION AND SEDIMENT CONTROL (EP&SC) Bmps and Section 316 INSPECTION AND MAINTENANCE OF NON-SEDIMENT POLLUTION BMPs of these Earthwork Regulations.

8. Calculations: Calculations shall be provided as part of the Improvement Plans for proposed storm water runoff flows, volumes, and timing into and through all Earthwork and Post-Construction BMPs. Calculations shall include the underlying assumptions and hydrologic and hydraulic methods and parameters, under pre- and post-construction land use conditions, for flood control, water resource protection, and water quality, as required in Section 310 EROSION PREVENTION AND SEDIMENT CONTROL (EP&SC) BMP PERFORMANCE STANDARDS, Section 311 Geotechnical Performance Standards, and Section 312 Non-Sediment Pollution Bmp Performance Standards of these Earthwork Regulations. Calculations shall demonstrate compliance with local storm water quantity management requirements and demonstrate that the runoff from upper watershed areas have been considered in the calculations and indicate that no adverse impacts are conveyed downstream of the proposed project An investigation of immediate downstream conditions as defined by the ***Enforcing Official*** is required to support development of a rationale for EP&SC BMP and Post-Construction BMP selection addressing anticipated impacts on the water resource and floodplain morphology, hydrology, and water quality. If the downstream property owner(s) refuse to allow access a letter must be submitted by the downstream property owner(s) stating the refusal.

9. The Improvement Plans may be required to contain additional information when requested by the ***Enforcing Official***, including but not limited to:

a. A report from a Professional Engineer qualified in geotechnical

engineering showing the results of surface and subsurface exploration, conditions of the land, procedures for performing the grading operations, maximum slope to satisfy stability, and other geotechnical design requirements;

b. Drainage systems are required to be of such design as to adequately accommodate the surface runoff. Calculations shall be submitted where requested together with a map showing the drainage areas of all land tributary to the site, and estimated runoff (cubic feet per second) of the area draining into any water resource computed according to current acceptable standards as required under the storm sewer system design regulations of the Local Jurisdiction;

c. A description of the borrow material, its source, the construction methods to be used and the specified minimum degree of compaction;

d. The preparation of existing ground surface to receive fill; and

e. Subsurface drainage where necessary for stability.

E. Substantial change in site conditions: The ***Enforcing Official*** shall be notified whenever unforeseen site conditions emerge (e.g., unforeseen water resources such as unknown springs) during the course of construction that affects the Earthwork.

F. A notation shall be placed on the plans that the Owner is responsible for notifying the Ohio Utilities Protection Service (OUPS) of the location of the excavation or fill site, per Section 3781.25 to 3781.32 of the ORC.

G. Continuation of Controls for Individual Lot Development: Improvement Plans for single family homes and/or individual structures that will disturb less than one (1) acre but are part of a larger common plan of development shall describe planned EP&SC BMPs for the individual lot, including the location of any EP&SC BMPs, and the appropriate standards and specifications for their installation, maintenance, and final stabilization, as well as a timeline for completion. Where seasonal conditions prevent permanent stabilization, alternative temporary stabilization practices shall be specified in the Improvement Plans. Detailed specifications for EP&SC BMPs shall be included for lots that do not drain to a sediment basin or trap, or for areas needing special attention, such as steep slopes and areas within 50' of water resources. The Owner of the individual lot shall inform the future owner of the lot of any EP&SC Requirements that will carry over to the new lot (home) owner, and notify the ***Enforcing Official*** within seven (7) days of the date of transfer of the lot(s).

H. Improvement Plan Updates Required. The approved Improvement Plan shall be modified whenever there is a change in design, construction, operation or maintenance which has or is likely to have a significant effect on the potential for the discharge of pollutants, or if the recommended BMPs prove to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with construction activity. Revised Improvement Plans shall be provided to the ***Enforcing Official*** for review and approval prior to implementing any proposed changes.

310 EROSION PREVENTION AND SEDIMENT CONTROL (EP&SC) BMP PERFORMANCE STANDARDS

A. The Improvement Plan shall be a professionally prepared document which includes appropriate Earthwork principles, techniques, methods, operations and work sequences. The Earthwork BMP Performance Standards contained in this Section shall be followed unless a variance is approved by the ***Enforcing Official*** consistent with these Earthwork Regulations according to criteria in paragraph 310(O). EP&SC BMPs must be maintained in good operational condition until permanent Post-Construction BMPs compliant with the Post-Construction Regulations (Article V of the Rules and Regulations of the HCSWD) are installed and operational.

B. Duty to Inform Contractors and Subcontractors: The Owner shall inform all contractors and subcontractors who will be involved in the implementation of the Earthwork BMPs about the terms and conditions of the Earthwork Permit. The Owner shall maintain a written document containing the signatures of all contractors and subcontractors involved in the implementation of the Earthwork BMPs, acknowledging that they have reviewed, understand and will follow the conditions and responsibilities of the Earthwork Permit and the Improvement Plans. Improvement Plans shall be created and signatures shall be obtained prior to commencement of any Earthwork. A copy shall be provided to the ***Enforcing Official*** prior to commencing with the project.

C. Post-Construction BMPs and EP&SC BMPs: Preliminary engineering documents shall show temporary and permanent methods, features and facilities to control runoff as required under these Earthwork Regulations and under the Post-Construction Regulations (Article V of the Rules and Regulations of the HCSWD).

D. Non-Structural Preservation Methods: The Improvement Plans must clearly delineate on the document and indicate methods of preventing disturbance of any water resources, riparian areas, unstable or highly erodible soils, steep slopes, or other areas that are protected under local, State, or Federal law. Improvement Plans shall also identify any riparian setbacks, green space preservation, conservation buffers, and other stream protection measures required under the Stream Corridor Regulations (Article IV of the Rules and Regulations of the HCSWD) and/or required by conditions of development set by the County and/or Local Jurisdiction related to stream protection. The Project shall also incorporate practices that preserve the natural condition in all other areas that are not integral to the proposed development activity. Such practices may include: preserving riparian areas adjacent to surface water resources, preserving existing vegetation and vegetative buffer strips, phasing of construction operations in order to minimize the amount of disturbed land at any one time and designation of tree preservation areas or other protective clearing or grubbing practices.

E. Phased Installation: The installation of the EP&SC BMPs shall be done progressively as the project is constructed. Sediment basins, storm water basins, and/or sediment traps shall be constructed and the slow release riser pipe and emergency overflow shall be functioning before clearing activity begins in the contributing watershed draining to said BMPs. All other measures to trap sediment shall be constructed and completed before upslope clearing and grading activities are permitted to take place. Earthen structures such as dams, dikes and diversions shall be stabilized within seven (7) days after installation is complete. Where slow growing or dormant seasons occur, alternate or temporary solutions as required under these Earthwork Regulations shall be utilized. The EP&SC BMP sequencing, installation, and seasonal alternatives shall be a part of

the Site Description portion of the Improvement Plans. As construction progresses and the topography is altered, appropriate EP&SC BMPs must be constructed or existing controls altered to address the changing drainage patterns.

F. Sediment Control BMPs: The Improvement Plans shall include a description of Sediment Control BMPs that store runoff, allow sediments to settle and/or divert flow away from exposed soils or otherwise limits runoff from exposed areas. Structural EP&SC BMPs shall be used to control erosion and trap sediment from a site remaining disturbed for more than 14 days. Such practices shall include,: sediment basins and traps, stabilized construction entrance, dust control, sediment fences, earth diversion dikes or ditches which direct runoff to a sediment settling pond and storm drain inlet protection, all of which are further specified below:

1. Sediment Basins and Traps: Concentrated storm water runoff and runoff from drainage areas that exceed the design capacity of sediment fence or inlet protection shall pass through a sediment basin or trap designed according to the following criteria:

   a. For common drainage locations that serve an area with 10 or more acres disturbed at one time, a temporary (or permanent) sediment basin or trap shall be provided until final permanent stabilization of the site. Alternative controls may be approved if it can be demonstrated that the alternative controls are equivalent in effectiveness to a sediment basin or trap. For drainage locations serving less than ten (10) acres, smaller sediment basins and/or traps should be used.

   b. The sediment basins/traps shall be sized to provide at least 67 cubic yards of storage per acre of total contributing drainage area. Sediment basins/traps with a total contributing drainage area greater than five (5) acres shall be designed with a minimum 48 hour draw down time. When determining the total contributing drainage area, off-site areas and areas which remain undisturbed by construction activity must be included unless runoff from these areas is diverted away from the sediment basin or trap and is not co-mingled with sediment-laden runoff. These calculations shall be provided in the Improvement Plans. The depth of the sediment basin must be less than or equal to five (5) feet. The configuration between the inlet and the outlet of the basin shall provide at least two (2) units of length for each unit of width (>2:1 length: width ration). Sediment shall be removed from the sediment basin or trap when the design capacity has been reduced by 40% (this is typically reached when sediment occupies one-half of the basin or trap depth). The elevation corresponding to a reduction of 40% of the basin's or trap's required design capacity shall be provided on the plans. These elevations shall be staked around the perimeter of the basin(s) or trap(s) on-site (a minimum of 6 stakes shall be used). When the sediment reaches this elevation, the sediment shall be removed. This requirement shall be provided in Improvement Plans when detailing maintenance standards and specifications and shall be consistent with Section **314** INSPECTION AND MAINTENANCE OF EROSION PREVENTION AND SEDIMENT CONTROL (EP&SC) Bmps.

   c. When designing sediment basins/traps, public safety shall be considered

as a design factor, especially as it relates to children, and alternative sediment control BMPs must be used where site limitations preclude a safe design. The use of a combination of EP&SC BMPs in order to achieve maximum pollutant removal is required. No temporary sediment basins or traps shall be placed within a permanent storm water quantity or quality control basin or Post-Construction BMP unless it is large enough to contain the entire sediment settling volume, water quality volume, and storm water quantity control volume, subject to the approval of the ***Enforcing Official*** and the Local Jurisdiction. In addition, no temporary sediment basins or traps shall be placed directly adjacent to a water resource unless prior written approval has been provided by the ***Enforcing Official.***

d. In unincorporated townships, alternatives such as separate sediment basins or traps must be considered as opposed to retrofitting storm water basins. Prior approval must be obtained from the Hamilton County Department of Public Works (HCDPW) Storm Water Division before the HCSWCD will approve retrofitting a storm water basin. Retrofitted storm water basins shall comply with the design criteria specified in this Section of these Earthwork Regulations.

e. Specific information shall be provided for the sediment basins/traps, including the size and type of slow release outlet. Calculations shall demonstrate that the slow release outlet has been designed to achieve the 48-hour drawdown time. If a slow-release riser pipe is specified, the size of the pipe, the size and spacing of the orifices on the upper two-thirds ($2/3^{rds}$) of the riser, and the bottom and top elevations for the riser pipe shall be calculated, Specifications shall be provided for the geo-textile fabric and riprap for the emergency overflows for each sediment basin/trap. The riser shall be wrapped first with a welded wire fencing and then with filter fabric. For approved retrofits of storm water quantity basins, the upper orifice shall be temporarily protected to minimize sediment from entering the Post-Construction BMP.

2. Off-Site Traffic: Off-site vehicle tracking of sediments and dust generation shall be minimized. All roads, storm drainage systems and sidewalks shall be kept free of sediment so as not to create a hazard. All access points shall have a stabilized construction entrance. Periodic street sweeping and topdressing of the construction entrance shall be performed to ensure compliance with these Earthwork Regulations. Washing sediment into storm drainage systems is not an acceptable practice unless the system drains to a sediment basin or trap. Washing of sediment directly into water resources or storm drainage systems that drain directly to water resources without passing through a properly sized and located EP&SC BMPs is prohibited.

3. Dust Control: Dust from Earthwork shall be controlled using effective dust control practices for site and climatic conditions during each phase of construction.

4. Sediment Fence: Sheet flow runoff from Earthwork shall be intercepted by sediment fences or diversions as necessary to meet EP&SC objectives of these Earthwork Regulations. Where intended to provide sediment control, sediment fence shall be placed on a level contour. These Earthwork Regulations do not

preclude the use of other sediment barriers designed to control sheet flow runoff. The relationship between the maximum drainage area to sediment fence for a particular slope range is shown in ***Table 310-A.*** Sediment fences shall not be used for sediment control associated with concentrated flows.

Table 310-A Sediment Fence Drainage Area Limits

Maximum Drainage Area to 100 Linear Feet of Sediment Fence	Range of Slope for a Particular Drainage Area
0.5 acres	< 2%
0.25 acres	≥ 2% but < 20%
0.125 acres	≥ 20% but < 50%

5. Diversions. Storm water diversion practices shall be used to keep runoff away from Earthwork, control storm water run-on quantities and protect steep slopes where practicable. Such devices, which include ditches, dikes or berms, may receive storm water runoff from areas up to ten (10) acres. Earth diversion dikes or ditches alone are not considered a sediment control BMP unless those are used to direct storm water to a properly-designed sediment-basin or trap.

6. Inlet Protection: EP&SC BMPs shall also be used to minimize sediment-laden water from entering active storm drain systems, even if the storm drain system drains to sediment basins/traps. Inlet protection or other EP&SC BMPs are required to improve the overall effectiveness of the sediment basins/traps and minimize their maintenance. Hazards resulting from storm drain inlet protection as it relates to diverting storm water runoff and causing erosion or creating flooding problems to adjacent roads or structures shall be taken into consideration, and inlet protection shall only be implemented where ponding can occur without creating hazardous situations; alternative practices shall be specified if ponding cannot occur around the inlet and the inlet does not drain to a sediment basin or trap.

G. Dewatering Activities: Dewatering activities involve the disposal of waters accumulating in trenches, sediment basins, sediment traps, or other locations where ground or surface waters may collect on the site. There shall be no turbid discharges to surface water resources resulting from dewatering activities. If trench, ground water, or any other dewatering activities containing sediment shall pass through a sediment settling pond or other equally effective sediment control BMP prior to being discharged from the site. Alternatively, sediment may be removed by settling in place or by dewatering into a sump pit, filter bag or comparable practice. Dewatering which does not contain sediment or other pollutants is not required to be treated prior to discharge. Care shall be taken when discharging groundwater or during any dewatering work to ensure that runoff does not become pollutant-laden by traversing over disturbed soils or other pollutant source and/or cause erosion in stabilized areas. The Professional Engineer shall provide specifications for de-watering activities for the project. The Professional Engineer shall provide specifications for cleaning and disposal of spoils for in-line retention systems to prevent the discharge of sediment or other pollutants, if applicable.

H. Stream Protection: If Earthwork disturbs areas adjacent to streams, EP&SC BMPs shall be designed and implemented on-site to protect all adjacent streams from the impacts of sediment laden runoff. No EP&SC BMPs (e.g., the installation of silt fence or a sediment

basin or trap in a stream) shall be used in a stream. Earthwork shall be performed in compliance with all applicable stream corridor protection zone or setback requirements. Specific stream corridor protection zone requirements are found in the Stream Corridor Regulations (Article IV of the Rules and Regulations of the HCSWD).) The placement of fill within FEMA regulated flood plains shall not be permitted to cause downstream erosion or other negative impacts.

I. Groundwater Protection:

1. No Earthwork Project shall be permitted to cause the pollution or degradation of groundwater. The Professional Engineer shall design the project to control the discharge of pollution into groundwater resources.

2. Unless otherwise authorized by Ohio EPA, only uncontaminated soil may be used as a fill material for any Earthwork in unincorporated Hamilton County constructed in an area of groundwater pollution potential with a Pollution Potential Index of 140 and greater, as defined using the methodology described in USEPA Publication EPA/600-2-87/035. Maps of this designation prepared by Ohio Department of Natural Resources Division of Water and titled "Ground-Water Pollution Potential of Hamilton County" are available from the HCSWCD or can be downloaded from the Ohio Department of Natural Resources website.

3. Clean Hard Fill Sites in unincorporated Hamilton County must monitor the fill material to ensure compliance with these Earthwork Regulations.

4. All Earthwork Projects in Ground Water Protection Zones in unincorporated Hamilton County must ensure proper storage and disposal of chemicals and fuels. All spills shall be cleaned up immediately and reported as required under State, Federal and local laws and regulations, including the State Emergency Response Commission (SERC) set of eight (8) release reporting rules (3750-25-01, 3750-25-05; 3750-25-10; 3750-25-12, 3750-25-13; 3750-25-15; 3750-25-20; 3750-25-25) effective June 30, 1993. For more information contact Ohio EPA.

J. Erosion Prevention Practices: The Project shall make use of erosion prevention practices that are capable of providing cover over disturbed soils unless a waiver is approved in accordance with Section 310(O) of these Earthwork Regulations. A description of erosion prevention practices designed to re-stabilize the site after Earthwork is complete shall be included in the Improvement Plans. The Improvement Plans must provide specifications for stabilization of all disturbed areas of the site and provide guidance as to which method of stabilization will be employed for the various times of the year. Such practices may include: seeding, mulching, matting, sod stabilization, vegetative buffer strips, phasing of construction operations, and use of construction entrances and the use of alternative ground cover. Erosion prevention practices shall also comply with Section 510 (C) (4) of the Post-Construction Regulations (Article V of the Rules and Regulations of the HCSWD).

Table 310-B: Permanent Stabilization

Areas Requiring Permanent Stabilization	Time Frame to Apply Erosion Prevention Practices
Any areas that will lie dormant for one (1) year or more	Within seven (7) days of the most recent disturbance
Any areas within 50 feet of a stream and at final grade	Within two (2) days of reaching final grade
Any other areas at final grade	Within seven (7) days of reaching final grade within that area

Table 310-C: Temporary Stabilization

Areas Requiring Temporary Stabilization	Time Frame To Apply Erosion Prevention Practices
Any disturbed areas within fifty (50) feet of a stream and not at final grade	Within two (2) days of the most recent disturbance if the areas will remain idle for more than twenty-one (21) days
For all construction activities, any disturbed areas that will be dormant for more than twenty-one (21) days but less than one (1) year, and not within fifty (50) feet of a stream	Within seven (7) days of the most recent disturbance within the area For residential subdivisions, disturbed areas must be stabilized at least seven (7) days prior to transfer of permit coverage for the individual lot(s)
Disturbed areas that will be idle over winter	Prior to the onset of winter weather – follow the guidelines outlined in the Rainwater & Land Development Manual for dormant seeding specifications

K. Stabilization: At a minimum, disturbed areas must be stabilized as specified in ***Tables 310-B*** and ***310-C***. Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques shall be employed. Approval shall be obtained from the ***Enforcing Official*** before implementing alternative stabilization techniques per Section 310(N) of these Earthwork Regulations.

1. Permanent Stabilization of Ditches: Special measures shall be undertaken to stabilize ditches and prevent erosive flows. Measures may include seeding, dormant seeding (as defined in the latest edition of the Rainwater and Land Development Manual), mulching, erosion control matting, sodding, riprap, natural design with bioengineering techniques or rock check dams. The standards and specification shall be included in the permanent stabilization requirements.

2. Runoff Control Practices: The Project shall incorporate measures which control the flow of runoff from disturbed areas so as to prevent erosion from occurring. Such practices may include rock check dams, pipe slope drains, diversions to direct flow away from exposed soils and protective grading practices. These practices shall divert runoff away from disturbed areas and steep slopes where practicable.

L. Control of Sediment-Laden Runoff from Post-Construction BMPs: No storm water shall be directed through any Post-Construction BMP required under the Post-Construction Regulations (Article V of the Rules and Regulations of the HCSWD), or portions thereof, until the entire area tributary to the Post-Construction BMP has reached final stabilization. Final stabilization occurs after the completion of the final grade at the site, after all of the utilities are installed, and the site is stabilized with vegetation or other appropriate methods. Documentation acceptable to the ***Enforcing Official*** shall be submitted to demonstrate that the site has reached final stabilization. Upon a satisfactory demonstration, the Post-Construction BMPs may be completed and placed into service. Upon completion of the installation of the Post-Construction BMPs, all disturbed areas and/or exposed soils caused by such installation must be stabilized within two (2) days of the completion of the installation unless actually precluded by weather conditions, and in such event, as soon thereafter as weather conditions permit stabilization.

M. Removal of EP&SC BMPs: The Owner is responsible for the removal of EP&SC BMPs upon stabilization of all disturbed areas or upon completion of the project, whichever occurs first. No required EP&SC BMPs shall be removed during the permit period until the upslope areas draining to said BMP are permanently stabilized unless the removal is approved in writing by the ***Enforcing Official***.

N. Alternative Methods: Methods of erosion prevention, sediment and storm water runoff control, other than those specified by these Earthwork Regulations may be considered by the ***Enforcing Official*** on a case by case basis as provided below, and must be submitted for approval prior to use, installation or implementation.

1. The proposed alternative method shall otherwise comply with these Earthwork Regulations. Any required recalculation or redesign of any portion of the project is the sole responsibility of the Owner and shall not be provided by the reviewer.

2. The decision of the ***Enforcing Official*** as to whether to permit the proposed alternative method will be based largely on the sufficiency and completeness of the information submitted with the application.

3. The proposed alternative method will accomplish the purpose, intent and results of these Earthwork Regulations and will not otherwise cause a hazard.

4. The alternative method must be enforceable by the ***Enforcing Official***.

O. Variances: The ***Enforcing Official*** may vary a requirement set forth in Section 310 EROSION PREVENTION AND SEDIMENT CONTROL (EP&SC) BMP PERFORMANCE STANDARDS of these Earthwork Regulations if site specific conditions prevent the implementation of required EP&SC BMPs as written, the implementation of the controls will result in no environmental benefit, or the project is in an isolated, self-contained area where there will be no adverse affect on adjacent public or private properties or watercourses. Under no circumstances may a variance be granted if a Hazard will be created. A request for a variance shall be submitted to the ***Enforcing Official*** with complete detailed supporting materials and information justifying such variance and demonstrating that no Hazard will be created if the variance should be granted.

P. Access to EP&SC BMPs: Access shall be provided to the ***Enforcing*** Official and other authorized personnel to maintain proper operation and function of EP&SC BMPs during

the project. The access must include temporary or construction easements and heavy equipment access ways. These access ways must be clear of obstructions in order to facilitate maintenance of the BMPs.

311 GEOTECHNICAL PERFORMANCE STANDARDS

A. Geotechnical performance standards apply to unincorporated portions of Hamilton County and member municipalities which have adopted the requirements of this section.

B. Tops and toes of all slopes related to any Earthwork shall be designed and placed so as to maintain a condition of stability and not cause any adverse impact on adjacent property and/or to applicable stream corridor protection zones under the Stream Protection Regulations (Article IV of the Rules and Regulations of the HCSWD).

C. The tops and toes of all Earthwork shall be designed to be completely contained within the property being developed unless included in an easement or binding written agreement with an adjacent property owner. A Professional Engineer shall certify that the tops and toes of all slopes are set back from property boundaries or structures as necessary for:

1. Stability of adjacent property;

2. Adequacy of foundation support;

3. Protection of adjacent property against damage from storm water runoff.

D. The tops and toes of any Earthwork shall be designed and constructed in a manner that will not adversely impact existing or proposed buildings or adjacent property.

E. A complete system for proper storm water runoff management and drainage of the site involving tops and toes of Earthwork shall be provided. Such a drainage system shall be completely contained within the property being developed unless containment is not feasible, in which case runoff flows may be diverted off-site in accordance with applicable runoff standards and requirements approvable by the ***Enforcing Official***.

F. The ***Enforcing Official*** may require additional geotechnical or other engineering data and site specific designs where the tops or toes of slopes and/or the drainage system creates or may create a Hazard.

G. The ***Enforcing Official*** may waive or modify requirements under this section of these Earthwork Regulations relating to cut and fill operations if the application for the Earthwork permit includes a written opinion from a Professional Engineer employed by the Owner stating that the proposed cut and fill operations will not cause a Hazard or is in an isolated, self-contained area where there will be no adverse affect on adjacent public or private property.

H. A request for a waiver shall be submitted to the ***Enforcing Official*** with detailed evidence justifying such waiver and demonstrating that no hazard will be created if the waiver should be granted.

I. Denial of a waiver may be appealed to the Hamilton County Earthwork Board of Appeals for projects in unincorporated Hamilton County, or to the body designated by the municipal jurisdiction to address appeals.

312 NON-SEDIMENT POLLUTION BMP PERFORMANCE STANDARDS

A. Non–Sediment Pollution BMPs: No hazardous substances, solid or liquid waste, including building materials and concrete wash water, shall be discharged from the site. All necessary and appropriate Non-Sediment Pollution BMPs shall be implemented to prevent the discharge of these pollutants to the drainage system of the site or other surface water resources. Under no circumstances shall concrete truck wash out be directly or indirectly discharged into a ditch, storm sewer or water resource. Waste materials shall not be exposed to storm water.

B. Access To Non-Sediment Pollution BMPs: Access is required to maintain proper operation and function of Non-Sediment Pollution BMPs during the project. The access should include temporary or construction easements and heavy equipment access ways where necessary. These access ways should be clear of obstructions and can be easily maintained.

313 FINAL INSPECTION APPROVAL AND RELEASE OF RECORD PLAT

A. To receive final inspection and acceptance of any project, the following must be completed and provided to the ***Enforcing Official***:

1. Final stabilization must be achieved and all Post-Construction BMPs must be installed and made functional per the approved Improvement Plan, as determined by the ***Enforcing Official***.

2. To initiate termination of an Earthwork Permit for a project or a portion thereof and final inspection, the Owner shall submit a letter to the ***Enforcing Official*** certifying compliance with the permit requirements, stating the reason for termination, and indicating the portions of the site where termination is being requested.

B. Final inspection approvals and releases of Record Plats. in unincorporated Hamilton County are subject to the following requirements:

1. Residential & Industrial Subdivisions: All requests for Release of Record Plat and Final Inspection Approval shall be initialized through the Hamilton County Engineers Office. The ***Enforcing Official*** shall send written notice of the approval or denial of the request within seven (7) working days of receiving the request from the County Engineers Office. For release of the Record Plat the site shall be in compliance with all provisions of these Earthwork Regulations.

   a. All areas for which the Record Plat release is being requested shall be temporarily or permanently stabilized according to Section 310 (K) of these Earthwork Regulations.

   b. All sediment control BMPs shall be installed and maintained according to Section 310 (F) of these Earthwork Regulations.

c. The Hamilton County Engineer shall not release the Record Plat for recording until receipt of a Notice of Compliance from the Enforcing Official that the site is in compliance with all provisions of these Earthwork Regulations, and has received a geotechnical certification.

2. Commercial and Industrial Developments: The Owner shall submit a letter to the ***Enforcing Official*** requesting a Final Inspection a minimum of 14 days before requesting a Temporary Certificate of Occupancy (TCO) or Certificate of Occupancy (CO) from the Building Department. The Building Department shall not issue a TCO or CO until the ***Enforcing*** Official determines that the site is in compliance with all provisions of these Earthwork Regulations. Final stabilization must be achieved; temporary EP&SC BMPs removed and all Post-Construction BMPs must be installed and made functional per the approved Improvement Plan, as determined by the ***Enforcing Official***.

3. Clean Hard Fill Sites: To obtain release from an Earthwork Permit on Clean Hard Fill Sites the Owner shall send a written request to the ***Enforcing Official*** requesting final inspection. The entire site shall be permanently stabilized and all temporary EP&SC BMPs removed. The Performance Bond will not be released until the site is in compliance with all provisions of these Earthwork Regulations.

C. Municipal member jurisdictions shall not release the Record Plat, issue a certificate of occupancy, or otherwise allow a transfer of ownership to any property that is not in full compliance with these Earthwork Regulations.

D. The Hamilton County Engineer in unincorporated townships or the local municipality in incorporated areas shall not approve and release the Record Plat for recording until receipt of a Notice of Compliance from the ***Enforcing Official*** that the site is in compliance with all provisions of these Earthwork Regulations, has received a geotechnical certification, if applicable, and has properly transferred or removed all approved EP&SC and Non-Sediment Pollution Control BMPs, including but not limited to proper installation, closure, and/or maintenance of sediment basins and traps, sediment fence and inlet protection. All idle areas must have temporary and permanent stabilization as appropriate.

314 INSPECTION AND MAINTENANCE OF EROSION PREVENTION AND SEDIMENT CONTROL (EP&SC) BMPs

A. The Construction-Phase Inspection and Maintenance Plan included in the Improvement Plans shall address all requirements of this Section.

B. All EP&SC BMPs shall be inspected and maintained to ensure continued performance of their intended function. All EP&SC BMPs designed for sediment control shall be maintained in a functional condition until all up slope areas they control are permanently stabilized and Post-Construction BMPs are operational. The EP&SC BMPs shall be designed to minimize maintenance requirements. The Improvement Plans shall provide a description of maintenance procedures needed for each measure and practice to ensure their continued performance.

C. If the inspection reveals that an EP&SC BMP is in need of repair or maintenance, with the exception of a sediment settling pond, it must be repaired or maintained within three (3) days of the inspection that indicates the maintenance or repair is needed. Sediment

settling ponds must be repaired or maintained within ten (10) days of the inspection that indicates the maintenance or repair is needed.

D. At a minimum, all EP&SC BMPs on the site shall be inspected by the Owner's Qualified Inspection Personnel at least once every seven (7) calendar days and within 24 hours after any storm event greater than one-half (1/2) inch of rain per 24 hour period and a record be made of the inspection. The Owner shall assign Qualified Inspection Personnel to conduct these inspections to ensure that the EP&SC BMPs are functional, to evaluate whether the EP&SC BMPs are adequate and properly implemented or constructed in accordance with the approved Improvement Plan, and to determine whether other EP&SC BMPs are required. The Qualified Inspection Personnel shall record and report issues and deficiencies associated with the EP&SC BMPs. A Professional Engineer must determine necessary changes to the location and position each EP&SC BMPs.

E. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of or the potential for pollutants entering the drainage system.

F. EP&SC BMPs identified in the plan shall be observed to ensure that they are operating correctly.

G. Discharge locations shall be inspected to ascertain whether EP&SC BMPs are effective in minimizing degradation of the receiving water resources.

H. Documentation of proper installation as per design or manufacturer's specification needs to be recorded as these EP&SC BMPs are constructed or installed.

I. To record the results of inspections, the ***Qualified Inspection Personnel*** may use the ***Enforcing Official's*** Self Inspection Form and Log, Ohio EPA's form and log, or develop their own. A copy of the inspection form and log that will be implemented shall be provided to the ***Enforcing Official*** with the Improvement Plans. The inspection reports shall be made available to the ***Enforcing Official*** and shall be kept on site. Each inspection report shall be signed and certified by the Owner.

J. If the inspection reveals that an EP&SC BMP fails to perform its intended function and that another, more appropriate EP&SC BMP is needed to be effective, the Professional Engineer shall amend the Improvement Plans. The new EP&SC BMPs shall be installed or implemented within ten (10) days of the inspection.

K. If the inspection reveals that an EP&SC BMP has not been installed or implemented in accordance with the schedule contained in the approved plan, the EP&SC BMP must be implemented within ten (10) days from the date of the inspection. If the inspection reveals that the planned EP&SC BMP is not needed, the inspection record must contain a statement of explanation as to why the EP&SC BMP is not needed.

L. The Owner shall maintain the inspection records and logs for three years following the completion of the project. The inspection records shall include the names(s) and qualifications of personnel making the inspection, date(s) of the inspection, statement whether the facility is in compliance with the Improvement Plans at the time of the inspection, any incidents of non-compliance and any observations that significantly impact the implementation of the Improvement Plans.

315 GEOTECHNICAL MONITORING AND MAINTENANCE OF CERTAIN EARTHWORK

A. Earthwork covered under Section 311 Geotechnical Performance Standards of these Earthwork Regulations may be required by the ***Enforcing Official*** to obtain a permit and or be monitored by or under the direction of a Professional Engineer qualified in geotechnical engineering. In such case, the Professional Engineer shall certify to the ***Enforcing Official*** that the requirements under the approved plans and permit have been completed. The ***Enforcing Official*** may also require that Geotechnical and EP&SC Declaration Contracts be signed and submitted before commencing with the any Earthwork.

B. A geotechnical Earthwork permit may be required where a succession of small excavations or fills constitutes a continuing operation and the accumulation of such excavations or fills will exceed one or both of the following conditions within the area of Earthwork:

1. Five (5) feet in vertical depth; or

2. 350 cubic yards per each 5,000 square feet.

C. A geotechnical Earthwork permit shall be required in all cases where grading is proposed on existing terrain with a known history of, or showing visible evidence of, active or dormant landslides.

D. A geotechnical Earthwork permit may be required where the site is situated partially or wholly over terrain with a "high" landslide potential.

E. Any excavating or filling performed pursuant to the exemptions in Section 306 Exemptions of these Earthwork Regulations which creates a hazard and / or contributes to water quality degradation shall be subject to the provisions of these Earthwork Regulations as they relate to the specific hazard.

F. Work that meets the following provisions may be exempted from the requirement for Geotechnical Monitoring or geotechnical Earthwork permit.

1. Any excavation for a basement of a building, or other structure, either privately or publicly owned, authorized by a valid Building Permit, provided:

   a. The excavation does not exceed the following:

      i. Twelve (12) feet in vertical depth at its deepest point; or

      ii. One (1) cubic yard per each eleven (11) square feet of work area;

   b. The excavation is made within an area described as the upper 25% of the vertical distance between the top of slope and toe of slope with a slope not greater than four (4) feet horizontal to one (1) foot vertical (4:1), or in the lower 75% of the vertical distance between the top of slope and toe of slope with a slope not greater than five (5) feet horizontal to one (1) foot vertical (5:1).

2. The subsequent use of excavated material as fill on the same site, provided the

fill, excluding building backfill material, does not exceed:

a. Five (5) feet in vertical depth at its deepest point; or one (1) cubic yard per each eleven (11) square feet of work area;

b. The fill is placed on site area with a slope not greater than five (5) feet horizontal to one (1) foot vertical (5:1) and

c. The fill does not result in a finished slope steeper than three (3) feet horizontal to one (1) foot vertical (3:1).

3. Any other excavation or fill:

a. That does not exceed: five (5) feet in maximum vertical depth; or one (1) cubic yard per each fourteen (14) square feet of work area; and

b. Is made within an area with a slope not steeper than five (5) feet horizontal to one (1) foot vertical (5:1); and

c. Does not result in a finished slope steeper than four (4) feet horizontal to one (1) foot vertical (4:1); and

d. Does not necessitate any adjustment, relocation, addition or other modification to any existing storm sewer system.

G. Excavating and filling operations subject to geotechnical monitoring shall be conducted under the direction of and monitored by the Owner and a Professional Engineer qualified in geotechnical engineering employed by the Owner. The Professional Engineer shall certify to the ***Enforcing Official***, the completion of the requirements of the geotechnical report/plan and Permit. The Professional Engineer shall certify the existing, proposed, and long term stability of all cuts and fills subject to geotechnical monitoring to the ***Enforcing Official***. Waivers or modifications shall be made pursuant to Section 311 (H) of these Earthwork Regulations

316 INSPECTION AND MAINTENANCE OF NON-SEDIMENT POLLUTION BMPs

A. The Construction-Phase Inspection and Maintenance Plan included in the Improvement Plans shall address all requirements of this Section.

B. All Non-Sediment Pollution BMPs shall be inspected and maintained to ensure continued performance of their intended function. All Non-Sediment Pollution BMPs shall be maintained in a functional condition until all construction activities served by these BMPs are complete and Post-Construction BMPs are operational. The Non-Sediment Pollution BMPs shall be designed to minimize maintenance requirements. The Improvement Plans shall provide a description of maintenance procedures needed for each measure and practice to ensure their continued performance.

C. If the inspection reveals that a BMP is in need of repair or maintenance, it must be repaired or maintained within three (3) days of the inspection that indicates the maintenance or repair is needed.

D. At a minimum, all Non-Sediment Pollution BMPs on the site shall be inspected by the Owner's ***Qualified Inspection Personnel*** at least once every seven calendar days and within 24 hours after any storm event greater than one-half inch of rain per 24 hour period and a record be made of the inspection. The Owner shall assign ***Qualified Inspection Personnel*** to conduct these inspections to ensure that the Non-Sediment Pollution BMPs are functional, to evaluate whether the Non-Sediment Pollution BMPs are adequate and properly implemented or constructed in accordance with the approved Improvement Plan, and to determine whether other measures or practices are required. The ***Qualified Inspection Personnel*** shall record and report issues and deficiencies associated with the BMPs. A Professional Engineer must determine necessary changes to the location and position each Non-Sediment Pollution BMP.

E. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be included in the inspections required under this Section for evidence of or the potential for pollutants entering the drainage system.

F. Discharge locations shall be inspected to ascertain whether Non-Sediment Pollution BMPs are effective in minimizing degradation of the receiving water resources.

G. Documentation of proper installation as per design or manufacture's specification needs to be recorded as Non-Sediment Pollution BMPs are constructed or installed.

H. To record the results of inspections, the ***Qualified Inspection Personnel*** may use the ***Enforcing Official's*** Self Inspection Form and Log, Ohio EPA's form and log or develop their own. A copy of the inspection form and log that will be implemented shall be provided to the ***Enforcing Official*** with the Improvement Plans. The inspection reports shall be made available to the ***Enforcing Official*** and shall be kept on site. Each inspection report shall be signed and certified by the Owner.

I. If the inspection reveals that a Non-Sediment Pollution BMP fails to perform its intended function and that another, more appropriate Non-Sediment Pollution BMPs is needed to be effective; the Professional Engineer shall amend the Improvement Plans to include the appropriate new Non-Sediment Pollution BMP. The new Non-Sediment Pollution BMPs shall be installed or implemented within ten (10) days of the inspection.

J. If the inspection reveals that a Non-Sediment Pollution BMP has not been installed or implemented in accordance with the schedule contained in the approved plan, the Non-Sediment Pollution BMPs must be implemented within ten (10) days from the date of the inspection. If the inspection reveals that the planned Non-Sediment Pollution BMP is not needed, the inspection record must contain a statement of explanation as to why the Non-Sediment Pollution BMP is not needed.

K. The Owner shall maintain the inspection records and logs for three (3) years following the completion of the project. The inspection records shall include the names(s) and qualifications of personnel making the inspection, date(s) of the inspection, statement whether the facility is in compliance with the Improvement Plans at the time of the inspection, any incidents of non-compliance and any observations that significantly impact the implementation of the Improvement Plans.

317 FEES

A. All fees required to enforce these Earthwork Regulations shall be established by legislative action of the Board of County Commissioners for unincorporated portions of Hamilton County, or by the legislative body of the appropriate municipal jurisdiction. Fees may be charged for processing Earthwork permit applications; reviewing Concept Plans and Improvement Plans; inspecting sites before, during, or after construction; taking enforcement action; or responding to other requests pertinent to the project.

318 PERFORMANCE BOND

A. An EP&SC Performance Bond ("Performance Bond") shall be posted to an agency of the controlling jurisdiction designated by the ***Enforcing Official*** for Earthwork that disturbs one (1) acre or more. The Performance Bond shall be obtained by the Owner prior to the recording of the Record Plat.

B. The Performance Bond shall be posted for the benefit of the County and/or Local Jurisdiction, for the purpose of assuring that the work shall be undertaken and completed in accordance with the approved plans and specifications of the Earthwork Permit.

C. The Performance Bond amount, as calculated by the ***Enforcing Official***, shall be based on the cost associated with the performance of maintenance of sediment basins and traps. The Bond amount for maintenance of sediment basins and traps shall be calculated at a rate of thirty-five dollars ($35) per cubic yard based on the designed volume of each sediment basin or trap. The Enforcing Official may increase the Bond amount for sediment basin and trap maintenance when access to said practices will require additional work to perform the maintenance due to the location of said control.

D. The ***Enforcing Official*** shall release the Performance Bond for sediment basin and trap maintenance upon acceptance of the Record Plat.

E. In the event the Owner is also subject to a Building Permit, all requirements of the site plans and Earthworks permit shall be certified as complete by the Owner's Professional Engineer prior to the issuance of a permanent Certificate of Occupancy. The bonding of uncompleted work in this situation will not be permitted.

F. Where Earthwork is left abandoned and/or a hazard is created, and no bond is in effect, the ***Enforcing Official*** may seek to mitigate the situation as provided in Section 319 ENFORCEMENT.

319 ENFORCEMENT

A. It shall be unlawful for any Owner to fail to comply with any of the requirements of these Earthwork Regulations or any lawful order issued by the ***Enforcing Official*** pursuant thereto, including the failure to pay any authorized civil penalty lawfully issued hereunder.

B. The ***Enforcing Official*** shall have all such rights and powers in interpreting and enforcing these Earthwork Regulations as may be accorded to such officials by law, rule, or regulation.

C. The ***Enforcing Official*** bearing proper credentials and identification shall be permitted at all reasonable times to enter upon all properties to inspect, survey, test, photograph or videotape an Earthwork to determine compliance with these Earthwork Regulations. The ***Enforcing Official*** shall be granted access without unreasonable delay. Any obstruction preventing safe and easy access to the Earthwork shall be promptly removed or cleared upon request of the ***Enforcing Official***. The cost of removing or clearing obstructions shall be the responsibility of the Owner. The ***Enforcing Official*** shall be entitled to examine and copy any records required to be prepared and maintained under these Earthwork Regulations or applicable permit.

D. Whenever the ***Enforcing Official*** determines that any Earthwork has become a hazard and/or causes or contributes to a violation of any provision of these Earthwork Regulations, the ***Enforcing Official*** may issue a Notice Of Violation (NOV) directing the Owner to correct or alleviate the hazard and/or water quality degradation within thirty (30) days and/or issue a Notice of Intent to Revoke Performance Bond.

E. If after a period of thirty (30) days after the original NOV, the violation continues the ***Enforcing Official*** shall issue a second Notice of Violation (NOV) directing the owner to correct or alleviate the hazard and/or water quality degradation within fifteen (15) days.

F. If after a period of fifteen (15) days after the second NOV, the violation continues the ***Enforcing Official*** shall proceed with enforcement as provided under these Earthwork Regulations, including (1) issuing a stop work order under Paragraph E below and (2) proceeding to revoke the Performance Bond according to Section 319(H) of these Earthwork Regulations. Earthwork stopped, abandoned by the Owner, or otherwise left un-stabilized for a period of fifteen (15) consecutive days after issuance of the second NOV for a particular infraction shall cause the Earthwork Permit to expire and become invalid. The Owner shall complete all necessary precautions, as determined by the ***Enforcing Official,*** which in his sole judgment are required to ensure that the stopped, abandoned or unstable Earthwork does not become a hazard or nuisance to human health or the environment.

G. In addition to any other enforcement authorized herein, the ***Enforcing Official*** may issue a Stop Work Order whenever:

1. Earthwork requiring an Earthwork Permit, local permit, state permits, or federal Permit necessary for EP&SC, earth movement, clearing, or cut and fill activity is being done without the required permit;

2. Any Earthwork is being performed or has been performed that is not in compliance with applicable Flood Plain Regulations. The ***Enforcing Official*** may order that all fill placed within the regulated flood plain without approval be removed from the flood plain until all applicable Approvals for the fill have been obtained.

3. Permitted Earthwork is being done contrary to the terms and conditions of the permit and the ***Enforcing Official*** has issued two NOVs (30 and 15 days respectively) and the ***Enforcing Official*** has obtained written approval from the Hamilton County Prosecuting Attorney or prosecuting attorney for the local member Local Jurisdiction whichever is applicable if, in the opinion of the prosecuting attorney, the violation is egregious;

4. Earthwork is causing or threatens to cause a hazardous condition or imminent and substantial degradation of a water resource and the ***Enforcing Official*** has issued two Notice of Violations (30 and 15 days respectively) and has obtained written approval from the Hamilton County Prosecuting Attorney or prosecuting attorney for the member Local Jurisdiction whichever is applicable if, in the opinion of the prosecuting attorney, the violation is egregious;

H. A Stop Work Order shall remain in effect until (1) all required local, state, and or federal permits are issued; (2) the hazardous condition and/or water quality degradation is remedied to the satisfaction of the ***Enforcing Official***; or (3) the violative work is remedied and performed in full accordance with the Permit and these Earthwork Regulations.

I. Notwithstanding these Earthwork Regulations, if the ***Enforcing Official*** finds that any Earthwork poses an imminent and substantial endangerment to any property, or an imminent and substantial degradation of a water resource, the ***Enforcing Official*** may seek to secure such relief as may be necessary and appropriate to abate such danger or threat, to ensure compliance with these Earthwork Regulations and that public health and the environment is protected.

J. If a proceeding to revoke a Performance Bond is initiated under Section 319(F) of these Earthwork Regulations, the ***Enforcing Official*** shall give the Owner five (5) business days following issuance of a stop work order to resolve the violation and the ***Enforcing Official*** shall inform the Owner that the Performance Bond shall thereafter be revoked in the event of continuing noncompliance.. The ***Enforcing Official*** shall meet with the Owner at the conclusion of the five (5) day period, and if the violations still exist at that time, the ***Enforcing Official*** shall proceed with the liquidation of the Performance Bond and undertake with the proceeds to complete the work to resolve the violation.

320 APPEALS

A. Any Owner aggrieved by a decision of the ***Enforcing Official*** in the denial of an Earthwork Permit, a condition of an issued Earthwork Permit, a NOV, or other action of the ***Enforcing Official*** shall have fifteen (15) calendar days from the date of receipt of such written decision to file a written appeal. Appeals for projects within the unincorporated townships are required to be filed with the Hamilton County Board of Earthwork Appeals in accordance with Section 307.56 of the ORC and the rules of the Board of Earthwork Appeals. Appeals for projects in local member municipal jurisdictions shall be filed in accordance with the local municipality's appeal procedures and rules adopted by the municipality. The municipality appeals procedures shall afford the same basic protections as provided in the standards and rules of the Hamilton County Board of Earthwork Appeals.

B. Any aggrieved Owner shall set forth in a written notice of appeal the interpretation, ruling or order appealed from, and the provisions of these Earthwork Regulations and related laws and ordinances involved and shall state wherein the interpretation, ruling or order is unlawful or erroneous.

321 PENALTY

A. Any person, whether Owner, agent of the Owner, or person having control of any property, who violates any of the Earthwork provisions of these Earthwork Regulations,

or fails to conform to any of the provisions thereof, or fails to obey any order covered by this Permit and issued by the ***Enforcing Official***, shall be subject to a such civil or criminal penalties as may be provided under applicable law, including a civil fine of not less than one hundred dollars ($100) nor more than five hundred dollars ($500) in accordance Section 307.79 of the ORC. Each day of violation of these Earthwork Regulations or an order issued under the Earthwork Regulations shall be considered a separate violation subject to a civil fine.

322 REPORTING TO THE HCSWD

A. The ***Enforcing Official*** shall provide the HCSWD with periodic reports of their activities to enforce these Earthwork Regulations in a format provided by the HCSWD and of sufficient content to support the Local Jurisdiction's compliance with the pertinent terms of the HCSWD's permit with Ohio EPA.

B. Compliance with the permit enforcement and reporting requirements under this Section are the responsibility of the member Local Jurisdiction.

Appendix H

Erosion and Sediment Control Inspection Form

City of Wyoming Stormwater Pollution Inspection Sheet

STORMWATER INSPECTION CHECKLIST FOR SITES LARGER THAN 1 ACRE

Project Address_____

Construction Site Inspection Time/Date:_____

Inspector Name:_____

Weather Information at the time of the inspection:_____

Temperature:_____

Weather:_____

CONSTRUCTION ENTRANCES (Note areas where repairs or maintenance is needed or where this practice needs to be applied)

_____

_____

SILT FENCE (Note areas where repairs or maintenance is needed or where this practice needs to be applied)

_____

_____

INLET PROTECTION (Note areas where repairs or maintenance is needed or where this practice needs to be applied)

_____

_____

TEMPORARY STABILIZATION (Note areas where the practice needs to be applied or reworked)

_____

_____

PERMANENT STABILIZATION (Note areas where seed/mulch, sod, riprap need to be applied or reworked)

_____

_____

OTHER POLLUTION CONTROL (Note areas where non-sediment pollution needs to be controlled; i.e. concrete truck wash-out, dumpster waste, street cleaning, stockpiles, fuel supplies)

_____

_____

MISCELLANEOUS (Note any other stormwater pollution issues or provide additional information concerning the above items – Attach photos as necessary)

_____

_____

_____

_____

Appendix I

Hamilton County Storm Water District, Article IV, Stream Corridor Regulations and Article V, Post-Construction Storm Water Quality Regulations

April 1, 2009 Version

RULES AND REGULATIONS OF THE HAMILTON COUNTY STORM WATER DISTRICT ISSUED BY THE BOARD OF COUNTY COMMISSIONERS HAMILTON COUNTY, OHIO

ARTICLE V

POST-CONSTRUCTION STORM WATER QUALITY REGULATIONS

TABLE OF CONTENTS

501 PURPOSE, SCOPE AND APPLICABILITY

A. The purpose of these Post-Construction Storm Water Quality Regulations ("Post-Construction Regulations") is to promote and maintain the health, safety, and welfare of the citizens of Hamilton County by establishing standards for storm water best management practices (BMPs) that minimize the degradation of the water resources of Hamilton County by

a. Reducing the discharge of pollutants from the municipal separate storm sewer systems (MS4s) owned or operated by Hamilton County and member Local Jurisdictions of the Hamilton County Storm Water District ("HCSWD") to the maximum extent practicable,

b. Protecting water quality, and

c. Satisfying the appropriate water quality requirements of the Clean Water Act, Ohio Law, and the Ohio Revised Code (ORC), including Section 6111.

B. These Post-Construction Regulations require implementation of the following measures during development or redevelopment of property within the Hamilton County Storm Water District (HCSWD):

1. Control storm water runoff from property and ensure that all Post-Construction BMPs are properly designed, permitted, constructed, and maintained.

2. Reduce water quality impacts to receiving water resources that may be caused by new development or redevelopment activities.

3. Control the quality of storm water runoff, consistent with controls in these Post-Construction Regulations as well as applicable water quantity control regulations, originating from their property so that surface water and ground water are protected and erosion potential is not increased.

4. Preserve and enhance where practicable natural infiltration and ground water recharge, and maintain subsurface flow that replenishes water resources, except in slippage prone soils.

5. Incorporate storm water controls into conceptual site layout, site planning and design at the earliest possible stage/step in the development process.

6. Incorporate the use of Post-Construction BMPs that serve multiple purposes including, but not limited to, quantity/flood control, erosion control, and water quality protection.

7. Design sites to minimize the number of stream crossings and the work area associated with the disturbance.

C. These Post-Construction Regulations are adopted under authority of Ohio Law and the Ohio Revised Code, including Chapters 307 and 6117 and implement the requirements of the latest discharge permit issued by Ohio EPA to Hamilton County and the member Local Jurisdictions of the HCSWD under the Phase II Program.

D. The Board of County Commissioners of Hamilton County ("Board") shall designate the ***Enforcing Official*** within the unincorporated areas and townships of Hamilton County for the enforcement of these Post-Construction Regulations, except to the extent that a home rule township has the authority to designate another entity as its ***Enforcing Official*** and exercises such authority. The ***Enforcing Official*** for each of the participating member municipalities and authorized home rule townships of the HCSWD shall be the chief administrative officer of the Local Jurisdiction unless the legislative body of the Local Jurisdiction legally authorizes another qualified party to fulfill all required responsibilities of the ***Enforcing Official*** under these Post-Construction Regulations.

E. Where authorized by law, the responsibilities of the Local Jurisdiction under these Post-Construction Regulations may be delegated by the Local Jurisdiction to any persons or entities acting in the beneficial interest of, or in the employment of the participating member Local Jurisdiction, including but not limited to, the HCSWD or the HCSWD's designated representative provided there is a lawfully enacted Resolution or Ordinance authorizing delegation of said responsibilities.

F. These Post-Construction Regulations apply as follows::

1. In unincorporated portions of Hamilton County, these Post-Construction Regulations apply to any property where Earthwork disturbing one (1) acre of land or larger, or to any property where Earthwork disturbing less than one (1) acre but part of a larger common plan of development that will disturb more than one (1) acre of land has been conducted since the time of passage of these Post-Construction Regulations.

2. In incorporated member municipalities within the HCSWD, these Post-Construction Regulations apply to any property where Earthwork disturbing one (1) acre of land or larger, or to any property where Earthwork disturbing less than one (1) acre but part of a larger common plan of development that will disturb more than one (1) acre of land has been conducted since the time of passage of these Post-Construction Regulations, unless the legislative body of the member municipality or authorized home rule township establishes a smaller applicable area and specific requirements for these areas.

502 DEFINITIONS

The words and phrases defined in Article I of the Rules and Regulations of the HCSWD shall have the same meaning herein unless otherwise provided.

503 COMPLIANCE WITH OTHER LAWS AND DISCLAIMER OF LIABILITY

A. Compliance with these Post-Construction Regulations does not relieve the Owner from the duty to comply with any other federal, state or local laws, regulations or ordinances or from responsibility otherwise imposed by law for damage to any person or property

B. Neither the submission, approval, or disapproval of an Improvement Plan under these Post-Construction Regulations; nor the Issuance or denial of a Permit, nor compliance or lack of compliance with these Post-Construction Regulations; nor any action or lack of action by the ***Enforcing Offical*** shall relieve the Owner from responsibility for injury or damage to any person or property otherwise imposed by law, nor create or impose any liability upon Hamilton County, any participating jurisdiction in the Hamilton County Storm Water District, or their respective officers, agents, or employees for injury or damage to any person or property.

C. Storm water control practices authorized under these Post-Construction Regulations and maintained according to an approved Maintenance Agreement shall not be considered to be a nuisance under these Post-Construction Regulations. The ***Enforcing Official*** will address conditions that may contribute to the creation of a nuisance according to pertinent local regulations when reviewing Improvement Plans and conducting facility inspections.

D. Failure of the ***Enforcing Official*** to observe or recognize hazardous or unsightly conditions or to recommend appropriate corrective measures shall not relieve the Owner from the responsibility for any resulting condition or damage or injury, or result in any liability on the part of the Local Jurisdiction, the ***Enforcing Official***, Hamilton County, or their officers, employees, or agents for any resulting condition or damage or injury.

E. These Post-Construction Regulations do not create a duty upon the ***Enforcing Official***, the Board, the HCSWD, or participating member Local Jurisdictions of the HCSWD to persons adversely impacted by any Post-Construction BMPs required by these Post-Construction Regulations.

504 CONFLICTS AND SEVERABILITY

A. In the event that any of these Post-Construction Regulations may conflict with other applicable provisions of law or ordinance, the most restrictive provisions, as determined by the ***Enforcing Official***, shall prevail where permitted by law.

B. Should any article, section, subsection, clause, or provision of these Post-Construction Regulations be declared by a court of applicable jurisdiction to be unconstitutional or invalid, such decision shall not affect the validity of the remainder of these Post-Construction Regulations, in whole or in part.

505 MANAGEMENT OF STORM WATER AND IMPROVEMENT PLANS REQUIRED

A. Storm water shall be managed in accordance with these Post-Construction Regulations.

B. In each case where these Post-Construction Regulations apply, the Owner shall submit an Improvement Plan addressing the requirements of these Post-Construction Regulations prior to initiating any Earthwork.

C. The Improvement Plans shall describe how storm water will be managed and shall be prepared in accordance with sound engineering and/or conservation practices by a professional experienced in the design and implementation of standard erosion and sediment controls and storm water management practices addressing all phases of construction. The Improvement Plans shall not be implemented until all required approvals are obtained.

D. The Improvement Plans shall also comply with all drainage, flood control, floodplain management, and related storm water quantity control requirements of the Local Jurisdiction.

E. The ***Enforcing Official*** shall have the authority to administer these Post-Construction Regulations and issue such notices and orders as may be necessary. The ***Enforcing Official*** may consult with the Hamilton County Storm Water District, the Hamilton County Engineer, the Metropolitan Sewer District of Greater Cincinnati, the Hamilton County Soil and Water Conservation District (HCSWD), private engineers, or other technical experts in administering these Post-Construction Regulations.

506 EXEMPTIONS

A. These Post-Construction Regulations do not apply to activities regulated by the Ohio Department of Natural Resources Animal Waste and Agricultural Pollution Abatement Rules, Ohio Administrative Code Chapter 1501:15-5.

B. These Post-Construction Regulations do not apply to linear construction projects, such as pipeline or utility line installation, that do not result in the installation of additional impervious surfaces as determined by the ***Enforcing Official***. Such projects must be designed to minimize the number of stream crossings and the width of disturbance. Linear construction projects must comply with the requirements of the Earthwork Regulations (Article III of the Rules and Regulations of the HCSWD).

C. Application and enforcement of the exemptions under Section 506 Exemptions of these Post-Construction Regulations shall be conducted by the ***Enforcing Official***

507 COORDINATION WITH LOCAL, STATE, AND FEDERAL REGULATIONS AND PERMITS

A. Approvals issued in accordance with these Post-Construction Regulations do not relieve the Owner of responsibility for obtaining all other necessary permits and/or approvals from federal, state, and/or local governments and compliance with other legal requirements. If requirements vary, the most restrictive shall prevail. Other permits and requirements may include, but are not limited to, those listed below.

1. Ohio EPA NPDES Permit authorizing storm water discharges associated with construction activity;

2. Section 401 and 404 of the Clean Water Act;

3. Ohio EPA Section 401 Water Quality Certification General Isolated Wetland Permit;

4. Ohio Dam Safety Law Section 1501.21 OAC; and

5. Applicable Flood Plain Regulations.

B. Compliance with other applicable regulations and permits shall be demonstrated (e.g., copies of permits, authorizations, letters of exemption, or submitted applications) before the Local Jurisdiction will approve an Improvement Plan.

C. The Improvement Plan shall be coordinated with local utility providers to allow any necessary adjustment, relocation, addition or other modification to an existing utility, including overburden loading.

508 SUBMITTAL PROCEDURES

A. An Owner wishing shall submit an Improvement Plan to the ***Enforcing Official*** of the appropriate Local Jurisdiction prior to undertaking Earthwork covered by these Post-Construction Regulations and the Earthwork Regulations (Article III of the Rules and Regulations of the HCSWD). This Improvement Plan shall describe how storm water will be managed pursuant to these Post-Construction Regulations. No Earthwork shall be undertaken until such Improvement Plan has been reviewed, and approved through the established submittal and review process of the Local Jurisdiction.

B. Pre-Submittal Meeting: A Pre-Submittal Meeting with the ***Enforcing Official*** may be requested to discuss the proposed project, review requirements, identify unique aspects of the project that must be addressed during the review process, and establish a preliminary review and approval schedule.

C. Concept Plan: The Owner of a project requiring a preliminary Record Plat or equivalent submittal shall submit Improvement Plans that illustrate the proposed storm water management approach concept (Concept Plan), and the applicable fees to the

Enforcing Official. Concept Plans shall show approximate preliminary locations of the proposed parcel boundaries, setbacks, dedicated open space, public roads, water resources, existing topography, on-site and off-site areas vulnerable to erosion and sediment damage, drainage facilities, Post-Construction BMPs, and easements to allow the ***Enforcing Official*** to determine if the site is laid out in a manner that meets the intent of these Post-Construction Regulations and if the proposed Post-Construction BMPs are capable of controlling runoff from the site in compliance with these Post-Construction Regulations. The ***Enforcing Official*** shall review the Concept Plans and provide comments and recommendations for revisions if any.

A Concept Plan is required:

1. For all subdivisions

2. For all non-residential development that will disturb five (5) acres of land or more

For other construction projects, Concept Plans are encouraged to be submitted for review by the ***Enforcing Official*** in advance of submitting an Improvement Plan in order to avoid subsequent delays caused by the submittal of Improvement Plans which do not comply with these Post-Construction Regulations.

D. Improvement Plans: The Improvement Plan submission shall consist of construction drawings and specifications along with such fees as may be required. The Improvement Plans shall meet the requirements of these Post-Construction Regulations and must be approved by the ***Enforcing Official*** prior to approval of an Earthwork Permit and/or before issuance of a building permit by the Building Department. Any revised Improvement Plans shall be submitted to the ***Enforcing Official*** for approval prior to implementing the proposed modification.

E. Consent to Enter Private Property: Submittal of a Concept Plan and/or Improvement Plan shall be deemed to provide consent to the ***Enforcing Official*** to enter a property subject to these Post-Construction Regulations for the purpose of gathering information necessary for review of and comment to a Concept Plan or Improvement Plans.

F. Review and Comment: The ***Enforcing Official*** shall review and comment on any Concept and/or Improvement Plans submitted within a reasonable period of time. The final Improvement Plans submitted may be either approved or disapproved. If the Improvement Plans are disapproved, they shall be returned with comments stating the reasons for disapproval and requirements for revisions if any.

G. Approval Required: Earthwork shall not begin and building permits shall not be issued without approved Improvement Plans consistent with these Post-Construction Regulations.

H. Individual Lot Construction Will Not Proceed: Improvement Plans for individual lots in a subdivision will not be approved and building permits will not be issued unless the larger

common plan of development or sale containing the individual lot is in compliance with these Post-Construction Regulations.

I. Approval Valid for Two (2) Years / Modification of Plans: If Earthwork has not commenced within two years of approval, Improvement Plans must be re-submitted for review and approval in accordance with rules in effect at the time of re-submittal. Modifications to the project require submittal and approval of a revised Improvement Plan before work may proceed.

J. Stopped or Abandoned Earthwork: Earthwork stopped or abandoned for a period of two (2) consecutive years from the date of discontinuation of Earthwork shall cause the approval of the Improvement Plans to expire and become invalid. For site work to continue either the previously approved plans must be submitted if the scope of the Earthwork has not changed, ***or*** an updated set of plans will need to be submitted for approval by the ***Enforcing Official.***

509 STORM WATER MANAGEMENT REQUIREMENTS FOR IMPROVEMENT PLANS

A. Storm Water Management: The Improvement Plans shall describe in detail how the quantity and quality of storm water will be managed after construction is complete for discharge from the site and/or into a water resource. The Improvement Plans will illustrate the type, location, and dimensions of structural and non-structural storm water management practices incorporated into the site design to address the requirements of these Post-Construction Regulations, and provide the rationale for their selection. The rationale must identify how these Post-Construction BMPs will be integrated with appropriate drainage and flood control facilities proposed for the site and will not cause flooding of development upstream and downstream of the site, as required under the storm water quantity control regulations of the Local Jurisdiction. The rationale must demonstrate that these Post-Construction BMPs minimize degradation to the water resource and its floodplain. The Improvement Plans shall also include a maintenance agreement and long-term plan for the storm water management facilities serving the site. Electronic and hard copies of improvement plans shall be submitted in a format acceptable to the ***Enforcing Official***.

B. Preparation by Professional Engineer: The Improvement Plans shall be prepared and sealed by a Professional Engineer and include supporting calculations, plan sheets, and design details. To the extent necessary, as determined by the ***Enforcing Official,*** a site survey shall be performed by a Professional Surveyor to establish boundary lines, measurements, or land surfaces.

C. Storm Water Design Manual: The HCSWD and/or the ***Enforcing Official*** may prepare and maintain design criteria manuals or procedures that provide guidance for designing the storm water management system for the site, including a description of acceptable Post-Construction BMPs that meet the criteria of these Post-Construction Regulations. The design manual or procedures may be updated from time to time based on improvements in engineering, science, monitoring, and local maintenance experience.

D. Contents of Improvement Plans: The Improvement Plans shall include the following:

1. Site Location Map: USGS 1:24,000 or equivalent map showing the Project Name, the boundary of the project site, the name and location of major existing roadways, and the name and location of the immediate receiving water resource(s) within 500 feet of the boundary of the project site and the first subsequent named receiving water resource(s).

2. Site description and Information: The following information shall be included in the general notes, project specifications and/or an attached narrative report:

   a. The Project Name and the location of the project, including complete site address or Parcel Identification Number, and individual lot addresses if known and applicable.

   b. Contact information: Provide the Company name and contact information and the contact names, addresses, phone numbers, facsimile numbers, and e-mail address for the following:

      i. The Professional Engineer responsible for the preparation of the Improvement Plans.

      ii. The site Owner, and if applicable the agent or designee.

      iii. The Earthwork Contractor and all applicable subcontractors, when identified.

   c. A description of the nature and type of the construction activity (e.g. residential, shopping mall, etc.).

   d. Total area of the site and the area of the site that is expected to be disturbed (i.e. grubbing, clearing, excavation, filling or grading, including off-site borrow areas, excavated material disposal areas and off-site project construction support activities).

   e. A calculation of the area-weighted runoff coefficients for each catchment tributary to an Erosion Prevention & Sediment Control (EP&SC) BMP, Post-Construction BMP, storm water conveyance facility, and storm water detention facility under both pre-construction and post construction site conditions.

   f. An estimate of the impervious area and percent imperviousness of the site and areas draining to the site at the beginning and at the conclusion of the project.

   g. Existing data describing the soils throughout the site, including the soil series, soil association, and hydrologic soil group. Additional geotechnical

data to support the design of the proposed Earthwork and Post-Construction BMPs (e.g. infiltration, extended conveyance, media filtration, or other BMP) whose effectiveness depends upon site-specific data about the porosity, infiltration characteristics, depth to groundwater, depth to bedrock, and any impermeable layers.

h. Existing data, if available, describing the quality of any discharge from the site.

i. A description of prior land uses at the site.

j. An implementation schedule which describes the sequence of major construction operations (i.e., grubbing, excavating, grading, utilities and infrastructure installation) and the implementation of erosion, sediment and storm water management practices or facilities to be employed during each operation of the sequence.

k. The name and/or location of the immediate receiving water resource(s) and the first subsequent named receiving water resource(s) and the aerial extent and description of wetlands or other special aquatic sites at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project.

l. Location and description of any storm water discharges associated with asphalt and concrete plants on or contiguous with the project site and dedicated to the project, and the best management practices to address pollutants in these storm water discharges.

3. Project Site Map(s): One or more site maps of the project shall be created. The map or series of maps shall be drawn at a scale of at least 1-inch equals 50-feet. The site is to be referenced using the State Plane coordinates and shall indicate the datum used. It is preferred that the entire site be shown on a single 24"x36" (architectural D-size drawing) plan sheet to allow a complete view of the site during plan review. Each map shall identify the phase of the project, if applicable, in relation to the overall development plan and include a north arrow, elevation datum and date of preparation. The map or series of maps shall extend 200 feet beyond the project boundary and shall indicate for that area, at a minimum the following:

a. Limits of Earthwork on the site for each phase of the project.

b. Soils types for the entire site, including the location and extent of visibly evident existing excavations or fills, slope instability, erosion and water seepage or wet conditions, unstable or highly erodible soils, or other areas with potentially serious existing or future erosion problems.

c. Existing and proposed two-foot (2') contours, unless site conditions

require more detailed topography to depict site drainage conditions.

d. Drainage patterns and Post-Construction BMPs within, entering, and exiting the site during each phase of the project, including any existing and/or constructed combined and separate storm water drainage conveyance and drainage inlet facilities within the site, beyond the site, and/or within the larger common plan of development if utilized by the project. These maps shall include a delineation of drainage watersheds at the site expected before, during, and after major grading activities as well as the total off-site and on-site size of each drainage watershed in acres, and the pre-construction and post-construction runoff coefficient for each area.

e. Location of existing and proposed utilities including appurtenances, structures and outfalls. The approximate depths of all utilities shall be indicated.

f. Water resource locations including known springs, wetlands, streams, lakes, water wells, and associated Stream Corridor Protection Zones as defined under the Stream Corridor Regulations (Article IV of the Rules and Regulations of the HCSWD) and/or other setbacks on or within 200 feet of the site, including the boundaries of wetlands or streams and any first subsequent named receiving water resource(s) intending to be filled or relocated under an approval from the Army Corps of Engineers and/or Ohio EPA.

g. Existing and proposed locations of buildings, roads, parking facilities

h. The location of any in-stream activities including stream crossings.

i. Existing and proposed property boundaries, and individual lot numbers.

j. The location of any existing or proposed easements or other restrictions placed on the use of the property and the responsible party(ies) under such easement or restriction.

k. On-site and off-site areas vulnerable to erosion and sediment damage.

4. Information Regarding Post-Construction BMPs: For each non-structural and structural Post-Construction BMP to be employed on the site, the Improvement Plan shall include the following:

a. Location and size, including maps showing the location of Post-Construction BMPs and other storm water facilities, detailed drawings with dimensions and elevations, and design calculations. Details of Post-Construction BMPs shall be drawn to scale and shall show volumes and sizes of contributing drainage areas.

b. Soil and subsurface conditions, including tests of infiltration rates for native and amended soils underlying each Post-Construction BMP, and borings or equivalent data indicating seasonal high groundwater levels, top of bedrock elevations, and perched groundwater elevations.

c. Specifications for materials used to construct each Post-Construction BMP, including vegetation, amended soil composition, and structural materials.

d. Post-construction BMP operations and maintenance requirements during and after construction.

e. Any supplemental information requested by the ***Enforcing Official***.

5. Other Approvals and Permits:

a. Ohio EPA NPDES Permit Number and other applicable state and federal permit numbers or approvals shall be provided if available, or the status of permit applications shall be provided if final approvals have not been received.

b. The parcel number, address, contact information, and Earthwork Approval shall be provided for any off-site borrow areas and excavated material disposal areas.

6. Inspection and Maintenance Plan: An Inspection and Maintenance Plan (I&M Plan) shall be prepared for the system of Post-Construction BMPs designed and constructed on the property. Such I&M Plans shall include all Post-Construction BMPs and shall address the inspection and maintenance frequency and requirements listed in Section 516 Maintenance And Inspections of these Post-Construction Regulations.

7. Calculations: Calculations shall be provided as part of the Improvement Plans for projected storm water runoff flows, volumes, and timing into and through all Post-Construction BMPs, and the underlying assumptions and hydrologic and hydraulic methods and parameters, under pre- and post-construction land use conditions, for flood control, water resource protection, and water quality, as required in Section 510 Performance Standards of these Post-Construction Regulations. Calculations shall demonstrate compliance with local storm water quantity management requirements, demonstrate that the runoff from upper watershed areas have been considered in the calculations and indicate that no adverse impacts are conveyed downstream of the proposed project An investigation of immediate downstream conditions as defined by the ***Enforcing Official*** is required to support development of a rationale for Post-Construction BMP selection addressing anticipated impacts on the water resource and floodplain morphology, hydrology, and water quality. If the downstream property

owner(s) refuse to allow access a letter must be submitted by the downstream property owner(s) stating the refusal.

E. Changes in Site Conditions: The ***Enforcing Official*** shall be notified whenever unforeseen site conditions are discovered (e.g., unforeseen water resources such as unknown springs) during the course of construction that affects storm water management.

F. Improvement Plan Updates Required. The approved Improvement Plans shall be modified whenever there is a change in design, construction, operation or maintenance which has a significant effect on the potential for the discharge of pollutants, or if the recommended controls prove to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with construction activity. Revised Improvement Plans shall be provided to the ***Enforcing Official*** for review and approval prior to implementing the suggested changes.

510 PERFORMANCE STANDARDS

A. General: All components of the storm water system, including Post-Construction BMPs for storage, treatment and control, and conveyance facilities, shall be designed in accordance with the performance standards of these Post-Construction Regulations as well as with the storm water quantity control and floodplain management regulations of the Local Jurisdiction. Earthwork BMPs compliant with the Earthwork Regulations (Article III of the Rules and Regulations of the HCSWD) must be maintained in good operational condition until Post-Construction BMPs are installed and operational. Improvement Plans shall clearly document through drawings, specifications, narrative, and calculations how the design addresses each applicable performance standard in this section.

1. Direct runoff to a Post-Construction BMP: Runoff from all areas disturbed during construction shall be directed to one or more Post-Construction BMPs designed in accordance with the performance standards in this section.

2. Integrated Practices that Minimize Degradation of Water Resources: The Post-Construction BMPs shall function as an integrated system that controls flooding within, upstream, and downstream of the site, and minimizes to the maximum extent practicable the degradation of the water resources receiving storm water discharges from the site. Integrated practices shall:

   a. Maintain pre-construction hydrology and groundwater recharge on as much of the site as practicable.

   b. Compact soil and install new impervious surfaces only where necessary to support the future land use.

   c. Compensate for increased water quality volumes caused by soil

compaction and new impervious surfaces by reducing storm water peak flows to less than pre-construction levels, as calculated under Section 510 (C)(2) of these Post-Construction Regulations.

3. Post-Construction BMPs designed for final use: Post-Construction BMPs shall be designed to achieve the storm water management objectives of these Post-Construction Regulations, to be compatible with the proposed post-construction use of the site, to protect the public health, safety, and welfare, and to function safely with minimal maintenance.

4. Storm water management for all lots: Areas developed as a subdivision, as defined by the Local Jurisdiction, shall provide storm water management for the development of all subdivided lots.

5. Post-Construction BMPs in Water Resources: Post-Construction BMPs shall not be constructed in water resources unless all appropriate permits allowing such construction are obtained from the Ohio EPA, the U.S. Army Corps of Engineers, and all other applicable federal, state, and local agencies. In addition, the Post-Construction BMP construction shall be in compliance with the HCSWD erosion and sediment control requirements under the Earthwork Regulations (Article III of the Rules and Regulations of the HCSWD) and the Stream Corridor Regulations (Article IV of the Rules and Regulations of the HCSWD).

6. Freeboard requirements for Post-Construction BMPs: Where applicable, Post-Construction BMPs must provide a minimum of one (1) foot freeboard above the projected peak stage within the Post-Construction BMP facility.

7. Preservation of Existing Natural Drainage and Vegetation: Practices that preserve and/or improve the existing natural drainage or vegetation shall be used to the maximum extent practicable. Such practices may include minimizing site grading and compaction; protecting and/or restoring water resources, riparian areas, and existing vegetation; and prevention of concentrated storm water runoff to and through these areas.

B. Exemption: A site where soil-disturbing activities are conducted may be exempt from the requirements of Section 510 Performance Standards if:

1. The site is part of a larger common plan of development and it is demonstrated to the satisfaction of the ***Enforcing Official*** that the storm water quality management requirements for the site are satisfied by an existing storm water management practice, or

2. If the storm water quality management requirements for the site are provided by practices in a regional or local storm water management plan approved by the ***Enforcing Official***.

C. Criteria Applying to all Post-Construction BMPs:

1. Written documentation shall be provided in the Improvement Plans describing the Post-Construction BMPs that will be installed during construction for the site and the rationale for the selection of each Post-Construction BMP. Practices chosen must be sized to treat the water quality volume (WQv) and to ensure compliance to the maximum extent practicable with Ohio EPA Water Quality Standards (Ohio Administrative Code Chapter 3745-1) and Ohio EPA Construction General Storm Water NPDES discharge permit requirements applicable to the property.

2. The WQv shall be equal to the volume of runoff from a 0.75 inch rainfall event and shall be determined according to one of the following methods:

   a. A site hydrologic study approved by the ***Enforcing Official*** that uses continuous hydrologic simulation; site-specific hydrologic parameters, including impervious area, soil infiltration characteristics, slope, and surface routing characteristics; proposed Post-Construction BMPs controlling the amount and/or timing of runoff from the site; and local long-term hourly records, or

   b. Use of the following equation:

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

where terms have the following meanings:

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

The runoff coefficients appropriate for storms less than one (1) inch are listed by land use category in **Table 510-A** of these Post-Construction Regulations. When the land use will be mixed, a weighted average runoff coefficient should be calculated. Alternatively, the ***Enforcing Official*** may allow use of the following equation to calculate the runoff coefficient if it can be documented that appropriate controls are in place to limit the proposed impervious area of the site to a value less than that listed in Table 510-A of these Post-Construction Regulations:

$$C= \quad 0.858i^3 - 0.78i^2 + 0.774i + 0.04.$$

where:

i = fraction of the drainage area that is impervious

Table 510-A: Runoff Coefficients Based on the Type of Land Use

County Zoning District (or Equivalent)		Imperviousness Fraction	Water Quality Runoff Coefficient (C)
Name	Characteristics		
----	Parks, cemeteries, golf courses, lawns, playgrounds or unimproved land	0.05	0.08
"AA"	Residence District > 43,561 sq. ft. lot	0.20	0.17
"A"	Residence District 17,501 to 43,560 sq. ft. lot	0.25	0.20
"A-2"	Residence District 12,001 to 17,500 sq. ft. lot	0.33	0.24
"B"	Residence District 9,001 to 12,000 sq. ft. lot	0.45	0.31
"B-2"	Residence District 6,001 to 9,000 sq. ft. lot	0.58	0.40
"C"	Residence District 5,001 to 6,000 sq. ft. lot	0.65	0.45
"D"	Residence District up to 5,000 sq. ft. lot	0.75	0.54
"DD"	Planned Multiple Residence District	0.80	0.60
"O"	Office District	0.85	0.66
"OO"	Planned Office District	0.85	0.66
"E"	Retail Business District	0.85	0.66
"EE"	Planned Business District	0.85	0.66
"EF"	Excavation and Landfill District	0.10	0.11
"F"	Light Industrial District	0.88	0.70
"FF"	Planned Light Industrial District	0.92	0.76
"FPM"	Flood Plain Management District	Established on Case-by-Case Basis	
"G"	Heavy Industrial District	0.95	0.81
"GG"	Planned Heavy Industrial District	0.95	0.81
"H"	Riverfront District	Established on Case-by-Case Basis	
"MHP"	Mobile Home Park District	0.85	0.66
-----	Parking lots (paved), roofs, driveways	1.00	0.89

Where land use will be mixed, the runoff coefficient should be calculated using a weighted average. For example, if 60% of the contributing drainage area to the storm water treatment structure is Residence District 10,500 sq. ft. lot, 30% is Planned Multiple Residence District, and 10% is unimproved land, the runoff coefficient is calculated as follows
(0.6)(0.31)+(0.3)(0.6)+(0.1)(0.08) = (0.37)

3. An additional volume equal to 20% of the WQv shall be incorporated into the storm water practice for sediment storage.

4. Post-Construction BMPs shall be designed such that the drain time is long enough to treat the storm water and release it at a rate that minimizes degradation of the water resources, but short enough to provide storage available for successive rainfall events and avoid the creation of nuisance conditions, as defined in **Table 510-B** of these Post-Construction Regulations. The outlet structure for the Post-Construction BMP must not discharge more than the first half of the WQv or extended detention volume (EDv) in less than one-third of the drain time. The EDv is the volume of storm water runoff that must be detained by a Post-Construction BMP. The EDv is equal to 75 percent of the WQv for wet extended detention basins, but is equal to the WQv of all other Post-Construction BMPs listed in Table 510-B of these Post-Construction Regulations.

5. Post-Construction BMPs shall not be located where infiltrating groundwater could adversely impact slope stability based upon a geotechnical evaluation satisfying the requirements of Section 311 of the Earthwork Regulations (Article III of the Rules and Regulations of the HCSWD) or equivalent regulations of the Local Jurisdiction.

6. An as-built landscaping plan based on field observation shall be prepared for each vegetated Post-Construction BMP to indicate how vegetation will be used to establish aquatic and/or terrestrial areas.

7. Each Post-Construction BMP shall be designed to facilitate sediment removal, vegetation management, debris control, and other maintenance activities defined in the I&M Plan for the site. The following criteria apply:

    a. The maximum slope for any vehicle access way shall be 10 (H) to 1 (V), unless the I&M Plan approved by the ***Enforcing Official*** demonstrates that a steeper slope is appropriate for the planned maintenance activities.

    b. The access way shall be designed for expected maintenance equipment and shall extend from a public roadway to each location within the Post-Construction BMP designed for sediment accumulation.

    c. Portions of Post-Construction BMPs that are underground shall include a monitoring port to allow inspection without entry. Any lids, covers, or access openings shall be of such size, weight, and other characteristics to allow them to be opened in the manner described in the I&M Plan.

Table 510-B: Structural Post-Construction BMPs & Associated Drain (Drawdown) Times

Best Management Practice	Drain Time of WQv
Infiltration ▪ Basins, Trenches, Pervious Pavement^	24 - 48 hours
Swales and Strips ▪ Detention Design ▪ Flow Through Design	24 hours *
Basins ▪ Extended Dry Detention Basins** ▪ Wet Detention Basins *** ▪ Constructed Wetlands (above permanent pool) + ▪ Pocket Wetland#	48 hours 24 hours 24 hours 24 hours
Filters ▪ Media Filtration, Bioretention, Vegetated Roof	40 hours

^ The WQv shall completely infiltrate within 48 hours so there is no standing or residual water in the BMP.
* Size to convey a volume equal to the WQv, a duration of two (2) hours, and peak rainfall intensity of one (1) inch/hour at a depth of no more than three (3) inches. The use of this criterion is limited to sites where the total area disturbed is five (5) acres or less.
** Dry basins shall split the sediment storage volume between forebays at basin inlets and in a lowered area around the outlet designed to prevent outlet clogging.
***Provide both a permanent pool and an extended detention volume above the permanent pool, each sized with at least $0.75*WQ_v$
+ Extended detention shall be provided for the full WQv above the permanent water pool.
# Pocket wetlands must have a wet pool equal to the WQv, with 25% of the WQv in a pool and 75% in marshes. The EDv above the permanent pool must be equal to the WQv

d. Post-Construction BMPs shall be provided with an emergency drain, where practicable, so that the basin may be emptied if the primary outlet becomes clogged and/or to drain the permanent pool to facilitate maintenance. A gravity drain shall be provided where site conditions allow. Post-Construction BMPs that are not provided with an emergency gravity drain must be able to be pumped in a manner described in the I&M Plan.

e. To the maximum extent practicable Post-Construction BMPs shall be designed to incorporate provisions for mosquito management.

f. The ***Enforcing Official*** may require that additional design features be incorporated into the Post-Construction BMP as necessary to assure that the facility is properly maintained and addresses public safety concerns.

8. Each Post-Construction BMP shall be designed to drain toward the outlet and/or permanent pool in order to minimize standing water and saturated soil conditions that impede maintenance of the facility.

D. Integration with Storm Water Quantity Conveyance Design Criteria: All Post-Construction BMPs shall be integrated into the storm water conveyance and detention system for the site. This system shall be designed according to the storm water quantity control regulations of the Local Jurisdiction. The Improvement Plans shall describe how the proposed Post-Construction BMPs are designed to meet the requirements of the Local Jurisdiction for storm water quantity control. The storm water quantity conveyance system shall be designed to address the following criteria for effective integration of the storm water conveyance facilities and Post-Construction BMPs:

1. Conveyance into a Post-Construction BMP: The surface and subsurface storm water quantity conveyance system for the site shall direct storm water less than or equal to the water quality volume into one (1) or more Post-Construction BMPs prior to discharge into any water resource or into off-site county, township or municipal owned/operated storm water conveyance systems.

2. Storm Water in Excess of the Water Quality Volume (WQv): Flows in excess of the WQv shall either be diverted around the Post-Construction BMPs or shall safely pass through the Post-Construction BMP without re-suspending the accumulated pollutants to a level that reduces the Post-Construction BMP's average annual pollutant removal capability.

3. Off-site storm water discharges: Off-site storm water runoff that discharges to or across the site shall either be routed around the Post-Construction BMP or, if this is not possible, the Post-Construction BMP shall be sized to treat all off-site incoming flow. Diversion of storm water runoff around a site or Post-Construction BMP shall not contribute to increases in flows, erosion, or water quality problems downstream.

4. Velocity dissipation: Devices shall be placed at discharge locations and along the length of any outfall ditch to provide non-erosive flow velocity from the structure to a water resource according to criteria contained in the Hamilton County Public Works Department Storm Drainage System Rules and Regulations or equivalent local municipal regulations.

5. Floatable Control: The storm water system shall be designed, to the maximum extent practicable, to prevent floating materials that enter storm water as a result of human activity, such as litter, debris, trash, and yard waste, from discharging into receiving waters.

E. Integration with Stream Corridor Protection Zones:

1. Storm water discharges from the site must flow into and through Post-Construction BMPs designed according to these Post-Construction Regulations prior to entering a Stream Corridor Protection Zone delineated according to criteria in the Stream Corridor Regulations (Article IV of the Rules and Regulations of the HCSWD).

2. The ***Enforcing Official*** may determine that the Stream Corridor Protection Zone is the only practical Post-Construction BMP for the portion of the site both upslope of and adjacent to the Stream Corridor Protection Zone. In this case, sites must be graded in a manner that maximizes sheet flow through the Stream Corridor Protection Zone. Storm water discharges through the Stream Corridor Protection Zone must also comply with the Earthwork Regulations (Article III of the Rules and Regulations of the HCSWD), and the storm water drainage rules and regulations of the Hamilton County Department of Public Works or equivalent local municipal regulations.

3. Pipes or ditches discharging storm water from a Post-Construction BMP may pass through the Stream Corridor Protection Zone if adequately stabilized from erosion. Sites must be graded in a manner that maximizes sheet flow through any Stream Corridor Protection Zone designated as the Post-Construction BMP for this portion of the site.

F. Additional Criteria for Basin Post-Construction BMPs:

1. The drainage area tributary to a basin shall be at least ten (10) acres, to avoid outlets with extremely small orifices prone to clogging. This requirement may be varied if documentation is provided to the satisfaction of the ***Enforcing Official*** that the outlet is designed to withstand clogging.

2. Either an adequate water source must exist to maintain any permanent pool or the facility must be designed as an extended dry detention basin.

3. The minimum length-to-width ratio for a basin shall be 2:1 to avoid short-circuiting and to increase travel time to the outlet. Where necessary, the length-to-width

ratio may be increased to achieve this criterion by relocating the basin inlet or outlet, or by installing berms or baffles within the basin to the full depth of the WQv.

4. Wet detention basins, constructed wetlands, and pocket wetlands shall only be allowed under the following conditions:

   a. Where existing soils are suitable as determined by a geotechnical engineer,

   b. Where gravelly sands or fractured bedrock are not present, or

   c. Where the permanent pool of water will be sustained year-round under normal climatic conditions.

   d. The facility may seasonally dry if it is also designed to meet the performance standards for an extended dry detention basin.

5. The following additional criteria shall apply to constructed wetlands:

   a. The permanent pool of any constructed wetland shall be at least two (2) times the volume of evapotranspiration during a thirty (30) day drought at summer evaporation rates or 0.75WQv, whichever is greater. In cases where subsurface infiltration into and exfiltration out of the wetland are negligible, the summer evapotranspiration rates may be estimated as 0.75 times a summer pan evaporation rate of 0.2 inches/day. More rigorous water balance calculations may be required by the ***Enforcing Official*** where these simplifying assumptions are not valid and/or in all cases where the drainage area to the wetland is less than twenty (20) acres.

   b. Approximately 50 percent of the permanent pool volume, plus a sediment storage volume equal to at least 20 percent of the WQv, shall be placed in deep water zones (areas with depths between 4- and 12-feet) to sustain fish communities and provide wave action to control mosquito populations. At a minimum, deep water zones shall be placed within the forebay and around the primary outlet to minimize disruption of wetland vegetation during sediment removal operations.

   c. The remainder of the constructed wetland shall consist of shallow water zones. Dry weather depths in shallow water zones (i.e., areas less than 18 inches deep) should vary depending on the vegetation selected. Permanent pool depths shall be six (6) inches or less within at least 35 percent of the shallow water zone.

   d. The bottom of the permanent pool between the deep and shallow water zones shall be sloped no steeper than 4 (H) to 1 (V).

e. The maximum depth of the extended detention zone above the permanent pool shall not exceed two (2) feet to reduce stress on herbaceous wetland plants.

f. Vegetated side slopes of the basin to minimize slope erosion.

6. Additional storage equal to at least twenty (20) percent of the WQv shall be provided within the basin to account for sediment deposition. This sediment storage volume shall be placed as follows:

a. For extended dry detention basins, the sediment storage volume shall be divided between the forebays and a lower stage surrounding the outlet control structure of the basin. These areas shall be designed to minimize aesthetic and other impacts associated with sediment and debris accumulation and saturated soils in these portions of the basin. Design features to address these concerns include a micropool or other treatments that obscure sediments and debris accumulation.

b. For wet detention basins, constructed wetlands, and pocket wetlands, the permanent pool volume shall be increased by 20 percent of the WQv to provide sediment storage.

7. The outlet shall be designed according to the following criteria to achieve the drawdown time requirements and minimize clogging, vandalism, and maintenance:

a. The outlet of an extended dry detention basin shall be designed to release 50 percent of the WQv in 18 to 24 hours, and 100 percent of the WQv in 48 hours.

b. If a single orifice outlet is used as the water quality outlet for extended dry detention basins without a micropool, the outlet shall have a diameter of at least four (4) inches, and an external trash rack and hood that protects against clogging shall be provided.

c. For wet detention basins, constructed wetlands, pocket wetlands, and extended dry detention basins with micropools, the outlet shall consist of a submerged reverse-slope pipe that extends downward from the riser to an inflow point one (1) foot below the normal pool elevation of the permanent pool.

d. If a perforated riser is used as the water quality outlet control facility for the basin, then the perforations shall be designed according to criteria in the Ohio Department of Transportation's (ODOT's) Location and Design (L&D) Manual.

e. The ***Enforcing Official*** will consider alternative outlet designs if

supporting calculations and documented implementation experience is provided to demonstrate that the proposed outlet will achieve the intent of these Post-Construction Regulations.

8. The basin design shall incorporate the following features to maximize multiple uses, aesthetics, safety, and maintainability:

   a. Basin side slopes above the permanent pool shall have a run to rise ratio of 3 (H):1 (V) or flatter.

   b. The permanent pool shall be no deeper than twelve (12) feet below the basin's normal water elevation unless equipped with practices (e.g. aeration) that prevent thermal stratification. The perimeter of all permanent pool areas deeper than four (4) feet shall be surrounded by an aquatic bench that extends at least eight (8) feet and no more than fifteen (15) feet inward from the normal water edge. Unless aeration is provided, the eight- (8-)foot wide portion of the aquatic bench closest to the shoreline shall have an average depth of six (6) inches below the permanent pool and planted with hearty plants comparable to wetland vegetation that are able to withstand prolonged inundation. The remainder of the aquatic bench shall be no more than fifteen (15) inches below the permanent pool to limit growth of dense vegetation in a manner that allows waves and mosquito predators to pass through the vegetation. The maximum slope of the aquatic bench shall be 10 (H) to 1 (V).

   c. A forebay designed to allow larger sediment particles to settle shall be placed at each basin inlet. The total forebay volume shall be equal to at least 10% of the water quality volume (WQv). Each forebay shall consist of a separate cell, formed by an acceptable barrier such as a rock and/or vegetated weir. A fixed vertical sediment depth marker shall be installed in each forebay to measure sediment deposition over time.

G. Additional Criteria Applying To Filter Post-Construction BMPs:

1. The following additional criteria shall apply to sand filters, bioretention filters, and other surface or subsurface media filters :

   a. Bioretention facilities shall not be allowed in areas where the seasonal high water table or bedrock is above the invert of the underdrain system.

   b. Runoff from the tributary area of the filtration facility shall be directed into a pretreatment unit sized to control the entire WQv. Acceptable pretreatment units include concrete or earthen chambers in advance of the filter bed, swales overlaying or surrounding the filter bed, a manufactured control device able to remove 50 percent of the average annual sediment load, or other surface or underground storage areas.

c. Runoff from the pretreatment unit shall be directed into a filter bed consisting of sand, soil, peat, and/or other media that filters particulate matter and/or absorbs the trapped pollutants. The media shall have a minimum permeability of at least 1 foot/day for soil and 3.5 feet/day for sand. The surface area of the filter bed shall be determined based on the following equation:

$$A = (WQ_v \cdot d) / [K \cdot T \cdot (h + d)]$$

where:

A = surface area of the filter media bed (acre)
WQ_v = water quality volume (acre-ft)
d = depth of the filter media bed (ft)
T = 1.67 days (drawdown time)
K = saturated hydraulic conductivity of the filter media (ft/day)
h = average depth of water above filter bed (ft)
= half the maximum depth of water

d. The depth of a sand filter media bed shall be 18 inches. The depth of the soil filter media bed within a bioretention facility shall be 30 inches or the depth of the root zone of the vegetation planted within the facility, whichever is greater.

e. The maximum depth of water over a sand filter bed shall be 18 inches. The maximum depth of water over a soil filter bed within a bioretention facility shall be between 6 inches and 12 inches, as defined in the Improvement Plans based on the type of vegetation used.

f. A perforated pipe underdrain shall be provided beneath the filter bed unless the WQv is completely infiltrated into the underlying soil within forty (40) hours. The underdrain shall have a minimum grade of 0.5 percent, with a diameter of four (4) or six (6) inches. A granular backfill of durable No. 57 aggregate shall be provided up to a minimum of four (4) inches above the outside diameter of the pipe.

g. An overflow designed to convey all storms larger than the WQv up to and including the 100-year event shall be provided. Use of a vertical stand pipe or catch basin is recommended.

2. The following additional criteria shall apply to vegetated roofs:

a. The vegetated roof shall be composed of drought and extreme weather tolerant vegetation and lightweight soil mixtures able to retain at least forty (40) percent of the average annual precipitation in Hamilton County (at least sixteen (16) inches per year), absorb, filter, and detain the remaining average annual precipitation, and safely drain runoff from the roof to an

appropriate storm water conveyance system.

b. The vegetated roof shall be underlain by a waterproof membrane, root barrier, and drainage layer, protected by protection boards or materials composed of soft fibrous materials.

c. Roof supports shall be designed to support the saturated weight of vegetated roof in addition to meeting all applicable design load requirements.

H. Additional Criteria Applying To Swale and Strip Post-Construction BMPs:

1. Facilities designed according to the detention design drain time criteria shall:

a. Not be located in areas where the depth to bedrock and/or seasonal high water table is less than 3 feet below the final grade elevation.

b. Only be allowed where the underlying soil consists of hydrologic soil group (HSG) A or B, unless the underlying soil is replaced by at least a 2.5 foot deep layer of soil amendment with a permeability equivalent to a HSG A or B soil and an underdrain system is provided.

2. Facilities designed according to the flow through design drain time shall:

a. Only be allowed on sites where the total tributary area to the swale is 5 acres or less.

b. Be designed to slow and filter runoff during the WQv event by flowing through the turf grasses with a maximum depth of flow no greater than 3 inches, a peak flow of no more than 1 cubic feet per second, and a peak velocity of 0.9 feet per second.

c. Be lined with fine turf-forming, flood tolerant grasses or other approved vegetation able to effectively remove pollutants as water flows through it.

3. Use a level spreader or similar device to convert concentrated runoff to sheet flow before entering the facility.

I. Additional Criteria Applying To Infiltrator Post-Construction BMPs:

1. Infiltrators shall only be allowed where soil borings and infiltration tests of the in-situ soils indicate that the entire WQv will infiltrate within 48 hours and where the seasonal high water table and any underlying bedrock are at least four (4) feet below the final grade elevation of the bottom of the infiltrator. If soil amendments are used to increase infiltration rates, then the facility shall be considered to be a bioretention filter and designed according to Section 510(G) of these Post-Construction Regulations.

2. All runoff directed into an infiltrator from unvegetated pervious areas must receive pretreatment (e.g., flow through a swale or strip) to remove coarser sediments that could cause a loss of infiltration capacity and increase maintenance frequencies.

3. During construction, all runoff from disturbed areas of the site shall be diverted away from the proposed infiltrator. No construction equipment shall be permitted within the infiltrator site to avoid increased soil compaction.

4. The Infiltrator will be clearly marked during construction to minimize unnecessary entrance.

5. Permeable pavements shall be composed of a load-bearing, durable surface together with an underlying layered structure that temporarily stores water prior to infiltration to the soil and/or a controlled outlet. The pavement shall be designed to rapidly pass storm water to the underlying subgrade and/or a rock-filled reservoir which provides storage until the storm water can infiltrate into the underlying soil. If soils are not suitable to infiltrate the entire design capture volume, then an underdrain system shall be provided within the rock reservoir to provide flow attenuation and protect the pavement. Runoff from unvegetated pervious areas surrounding permeable pavement systems must receive pretreatment prior to draining onto the pavement in order to minimize sediment loading.

J. Alternative Post-Construction BMPs: The ***Enforcing Official*** may approve the use of alternative Post-Construction BMPs if documentation is provided that demonstrates, to the satisfaction of the ***Enforcing Official*** and with prior written approval from Ohio EPA, that these Post-Construction BMPs are equivalent in pollutant removal and runoff flow/volume reduction effectiveness to those listed in Table 510-B of these Post-Construction Regulations. The WQv discharge rates from the alternative practice must be reduced to minimize degradation of the receiving water resource unless there will be negligible hydrological impact to the stream. WQv discharge rates are considered to have a negligible hydrological impact if one (1) of the following four (4) conditions can be demonstrated:

1. The alternative Post-Construction BMP is able to recharge the entire WQv to groundwater.

2. The larger common plan of development or sale will create less than one (1) acre of impervious surface.

3. The project is a redevelopment project within an existing ultra-urban setting (i.e., a downtown area or on a site where 100 percent of the project area is already impervious surface and the storm water discharges directly into a storm sewer system), or.

4. The storm sewer system discharges directly into a large river (fourth order or greater) or to a lake and where the site is less than five (5) percent of the watershed area that is upstream of the site, unless a TMDL identified water quality problems in the receiving surface waters of the State.

K. Storm Water Management on Redevelopment Sites:

1. Sites that have been previously developed where no Post-Construction BMPs were installed are required to provide the following level of control:

   a. A 20 percent net reduction of the site's current impervious area, achieved by either removing the impervious surface or through use of pervious pavement and/or green roofs.

   b. Treatment of at least 20 percent of the WQv.

   c. A combination of (a) and (b).

2. Where sites are a combination of redevelopment and new development, the total WQv must be treated as calculated through a weighted average based on area:

   a. New development – Must treat 100 percent of the WQv

   b. Redevelopment – Must treat 20 percent of the WQv.

3. .Local communities or sanitary sewer districts may establish a larger percentage of the WQv for redevelopment sites if necessary to meet combined sewer overflow objectives or other storm water management objectives of the community.

4. The ***Enforcing Official*** may approve one or more of the practical alternatives as detailed in Section 511 Off Site Alternatives And Alternative Actions of these Post-Construction Regulations where conditions prevent impervious area reduction or on-site storm water management for redevelopment projects.

511 OFF SITE ALTERNATIVES AND ALTERNATIVE ACTIONS

A. Off-site alternatives may be considered on a case-by-case basis where none of the Post-Construction BMPs listed in Table 510-B of these Post-Construction Regulations are determined to be feasible. The following criteria must be met to accept an off-site alternative Post-Construction BMP:

1. A maintenance agreement is established that satisfies the requirements of Section 516 Maintenance And Inspections.

2. The off-site Post-Construction BMP discharges to the same Hydrologic Unit Code (HUC)-14 watershed unit or a smaller subwatershed as defined by the ***Enforcing***

Official.

3. The size of the drainage area draining into the off-site Post-Construction BMP is at least 1.5 times the size of the uncontrolled on-site drainage.

4. The off-site Post-Construction BMP meets all applicable requirements of these Post-Construction Regulations.

B. All alternative actions are subject to the approval of the ***Enforcing Official.*** Alternative actions may include, but are not limited to the following:

1. Implementation of off-site Post-Construction BMPs and/or the retrofit of an existing practice to increase quality and quantity control.

2. Stream, floodplain, or wetland restoration.

3. Acquisition or conservation easements on protected open space contributing to storm water control such as wetland complexes.

C. The ***Enforcing Official*** may request that additional measures not required by these Post-Construction Regulations be taken to correct existing degradation of water resources or to minimize future degradation of water resources. The Property Owner and the ***Enforcing Official*** shall mutually determine equitable compensation for these additional measures.

512 ACCESS TO POST-CONSTRUCTION BMPs – LEGAL INSTRUMENT REQUIRED

A. Access to and entrance into Post-Construction BMPs as required by the ***Enforcing Official*** for inspections and maintenance shall be secured by a recordable real property Legal Instrument, such as an easement, a Deed of Easement, a Deed, or covenant recorded as part of the legal chain of title of the property. The following conditions shall apply to such instrument:

1. The proposed instrument in final form shall be included in the I&M Plan submitted with the proposed Improvement Plans and shall include the parcel identification number for the property and any parcel contributing storm water to and/or required to install the system of Post-Construction BMPs addressed by the Legal Instrument.

2. The instrument shall be approved by the ***Enforcing Official*** prior to approval of a Record Plat and/or Improvement Plan.

3. Unless otherwise allowed by the ***Enforcing Official***, access to Post-Construction BMPs as provided by the instrument shall be from a public right-of-way. The access shall be no less than 15 feet wide. The instrument shall also incorporate the entire Post-Construction BMP plus an additional 15-foot wide band around

the perimeter of the Post-Construction BMP.

4. The access to the Post-Construction BMP shall be graded and/or stabilized as necessary to allow maintenance equipment to access and manipulate around and within each facility, as defined in the I&M Plan for the site.

5. Instruments for structural Post-Construction BMPs and access thereto shall include restrictions against the planting of trees, shrubbery, or other woody growth; against the construction therein of buildings, fences, walls, and other structures that may obstruct the free flow of storm water and the passage of inspectors and maintenance equipment or any other activity or structure that is inconsistent with or interferes with the use, performance or function of the Post-Construction BMP and purpose of the Legal Instrument; and against the changing of final grade from that described by the final grading plan approved by the ***Enforcing Official***. Any re-grading may be performed or obstruction removed by the ***Enforcing Official*** consistent with the Legal Instrument and charged to the appropriate Legal Entity and/or property owners.

513 SITE STABILIZATION REQUIRED PRIOR TO OPERATION OF STORM WATER BMPS

A. No storm water shall be directed through any Post-Construction BMP, if required under Article V of these Regulations, or portions thereof, until the entire area tributary to the Post-Construction BMP has reached final stabilization. Final stabilization occurs after the completion of the final grade at the site, after all of the utilities are installed, and the site is stabilized with vegetation or other appropriate methods. Documentation acceptable to the ***Enforcing Official*** shall be submitted to demonstrate that the site has reached final stabilization. Upon a satisfactorily demonstration, the Post-Construction BMPs or structure(s) may be completed and placed into service. Upon completion of installation of the Post-Construction BMPs or structures, stabilization measures (e.g., seeding and mulching) must be installed on all disturbed areas and/or exposed soils caused by such installation within 7 days, weather permitting.

514 FINAL INSPECTION APPROVAL

A. To receive final inspection and acceptance of any project, or portion thereof, the following must be completed and provided to the ***Enforcing Official***:

1. Final stabilization must be achieved and all Post-Construction BMPs must be installed and made functional per the approved Improvement Plan, as determined by the ***Enforcing Official***.

2. An As-Built Certification, including a Survey where applicable, must be sealed, signed and dated by a Professional Engineer and a Professional Surveyor, respectively. The ***Enforcing Official*** may require the submission of a new set of Post-Construction BMP calculations if he/she determines that the design was altered significantly from the approved Improvement Plans. The As-Built Survey

must provide the location, dimensions, and bearing of such practices and include the entity responsible for long-term maintenance as detailed in the I&M Plan.

3. A copy of the complete and recorded I&M Plan as specified in Section 509 Storm Water Management Requirements For Improvement Plans must be provided to the ***Enforcing Official.***

515 OWNERSHIP OF POST-CONSTRUCTION BMPS

A. Unless otherwise required by the ***Enforcing Official***, Post-Construction BMPs shall be owned, controlled, and maintained by a Legal Entity, as follows:

1. If the Post-Construction BMP serves a single property, then the property owner shall be the Legal Entity.

2. If the Post-Construction BMP serves multiple lots in residential, commercial, industrial and/or condominium developments, then the Post-Construction BMP either shall be on a separate lot or located within an easement as specified in these Post-Construction Regulations. The Legal Entity shall be one of the following:

   a. A validly created owners association under Ohio law,

   b. A local unit of government, or

   c. A property owner with a valid contract with the property owners served by the Post-Construction BMP.

516 MAINTENANCE AND INSPECTIONS

A. All Post-Construction BMPs shall be maintained in accordance with the I&M Plan, which is included in the Legal Instrument approved by the ***Enforcing Official*** as provided in Section 512 ACCESS TO POST-CONSTRUCTION Bmps – LEGAL INSTRUMENT Required of these Post-Construction Regulations. The Legal Entity defined in Section 515 Ownership Of Post-Construction Bmps of these Post-Construction Regulations shall be responsible for maintenance of the Post-Construction BMP(s).

B. If the Post-Construction BMP serves multiple lots in residential, commercial, industrial, and/or condominium developments, then the Legal Entity shall be responsible for the maintenance of all Post-Construction BMPs within the subdivision and/or condominium development.

C. In the event the relationship between the Legal Entity and the property owners is dissolved, or if the Legal Entity fails to perform required maintenance, responsibility for such maintenance shall be proportionally distributed to each property owner contributing storm water to and/or required to install the system of Post-Construction BMPs.

D. The ***Enforcing Official*** shall not authorize any Earthwork covered by these Post-Construction Regulations prior to approving an I&M Plan meeting the requirements of this Section. The I&M Plan shall be submitted for review as part of the Improvement Plans as a Legal Instrument in recordable form, capable of being recorded in the legal chain of title for lands in the County Recorder's office.

E. A draft of this I&M Plan shall be provided as part of the Improvement Plan submittal. Once a draft is approved, a final copy of the Plan fully executed and in recordable form for the Hamilton County Recorder's Office, must be submitted to the ***Enforcing Official*** to receive final inspection approval of the site.

F. The owners of real property contributing storm water to and/or required to install a system of Post-Construction BMPs required by these Post-Construction Regulations and approved by the ***Enforcing Official*** shall be mutually responsible for the inspection and maintenance of these Post-Construction BMPs as specified in this section and further defined in the I&M Plan unless a public agency or other entity, as approved by the ***Enforcing Official***, assumes the inspection and maintenance responsibility.

G. The I&M Plan shall provide at least the following:

1. The name and contact information for the Legal Entity that owns each Post-Construction BMP and (if known) the Maintenance Provider representing the Legal Entity.

2. The parcel numbers of each property served by the Post-Construction BMP.

3. The parcel number and location of each Post-Construction BMP.

4. The method of funding long-term maintenance and inspections of the system of Post-Construction BMPs.

5. Features of the design that facilitate maintenance of the system of Post-Construction BMPs.

6. A description of the on-going procedures and additional standards, as required by the ***Enforcing Official*** which will ensure continual proper operation and performance of Post-Construction BMPs.

7. An inspection schedule and reporting requirements, including acceptable inspection checklists appropriate for each Post-Construction BMP and proof of inspection certification requirements.

8. A prohibition on alteration of the Post-Construction BMP without prior written approval from the ***Enforcing Official***.

9. The location of and management practices for all instruments established under Section 512 ACCESS TO POST-CONSTRUCTION Bmps – LEGAL

INSTRUMENT Required of these Post-Construction Regulations that provide for access to and work on the system of Post-Construction BMPs.

10. A approvable document indemnifying the ***Enforcing Official*** and related public officials and public entities (the "indemnified officials") from and against any and all losses, costs, claims or liabilities whatsoever, including legal fees and other defense costs, whether from personal injury, property damages, or other losses of any kind or character asserted or threatened against the indemnified parties, and which are in any way related to the existence, construction, operation, maintenance, or failure of the system of Post-Construction BMPs.

H. Alteration or termination of the I&M Plan is prohibited unless amended or replaced by an equivalent approved plan compliant with these Post-Construction Regulations. Any changes in the I&M Plan must be approved in advance by the ***Enforcing Official*** and recorded in the same manner as the Original I&M Plan prior to becoming effective.. The **Enforcing Official** shall be notified in writing immediately whenever a new Maintenance Provider is designated.

I. The Legal Entity shall either serve as or contract with a Maintenance Provider who shall be responsible for managing any easements established under Section 512 ACCESS TO POST-CONSTRUCTION BMPs – LEGAL INSTRUMENT REQUIRED of these Post-Construction Regulations and for maintaining the system of Post-Construction BMPs. The Maintenance Provider shall maintain the system of Post-Construction BMPs in good working condition acceptable to the ***Enforcing Official*** and in accordance with the schedule of long-term maintenance activities defined in the approved I&M Plan. Adequate maintenance is herein defined as good working condition so that the system of Post-Construction BMPs is performing its design functions.

J. The Maintenance Provider shall submit to the ***Enforcing Official*** an annual inspection report composed of completed inspection checklists and proof of annual inspection by ***Qualified Inspection Personnel***. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the entire system of Post-Construction BMPs, including berms, inlet structures, outlet structures, pond areas, access roads, etc. Deficiencies shall be noted in the inspection form.

K. Sediment accumulation resulting from the normal operation of the system of Post-Construction BMPs shall be removed and disposed of appropriately. Disposal of accumulated sediments may be onsite in a reserved area(s) for this purpose or off site. Sediment removal activities shall be conducted when 75 percent of the sediment storage volume becomes filled with sediment.

L. The ***Enforcing Official*** bearing proper credentials and identification shall be permitted at all reasonable times to enter upon any property or to gain access to any easements established under Section 512 ACCESS TO POST-CONSTRUCTION BMPs – LEGAL INSTRUMENT REQUIRED as necessary to inspect, observe, maintain, and repair, as required by the enforcement and penalty provisions of these Post-Construction

Regulations, the system of Post-Construction BMPs whenever the ***Enforcing Official*** deems necessary. When practical, the ***Enforcing Official*** shall provide written notice to the Legal Entity, property owners and Maintenance Provider prior to entry. The ***Enforcing Official*** shall be granted access without unreasonable delay. Any obstruction preventing safe and easy access to the system of Post-Construction BMPs shall be promptly removed or cleared upon request of the ***Enforcing Official*** and shall not be replaced or allowed to reoccur. The cost of removing or clearing obstructions shall be the responsibility of the Legal Entity. The ***Enforcing Official*** shall be entitled to examine and copy any records required to be prepared and maintained under these Post-Construction Regulations.

M. The ***Enforcing Official*** may inspect Post-Construction BMPs periodically and determine if maintenance is required according to criteria in the I&M Plan and/or Design Manual. If the ***Enforcing Official*** identifies a maintenance need, the ***Enforcing Official*** will provide written notification to the Legal Entity, as detailed in the I&M Plan. Upon notification, the Legal Entity shall have ***thirty (30) working days***, to make repairs or submit a plan for the approval of the ***Enforcing Official,*** with details regarding the necessary repairs, action items and established timelines.

N. If the Legal Entity and/or designated Maintenance Provider fails to maintain a Post-Construction BMP, the ***Enforcing Official*** may enter the property, perform the required maintenance or remediation, and bill the Legal Entity or Maintenance Provider, or, in the event there is no then currently viable Legal Entity or Maintenance Provider, the property owner(s) contributing storm water to the BMP (the "Responsible Owner(s)") for such costs, together with a 50% additional charge for administrative costs, charges and penalties, where allowed by law. In the event of nonpayment by the Legal Entity, Maintenance Provider, or Responsible Owners, the legislative body of the Local Jurisdiction or the Enforcing Official may cause the proportional cost of such required maintenance or remediation, together with any administrative costs and charges and allowable penalties to be collected from any and all responsible parties by any means allowable either at law or in equity, including, where authorized by law, the placement of a lien against the properties of the Responsible Owners or the collection of such costs, charges and penalties through the real estate tax duplicate to be paid with the real estate taxes of such benefitted properties.

O. In the event the Post-Construction BMPs as shown on the approved plans and specifications are not maintained in good working order in accordance with the standards of these Post-Construction Regulations and in accordance with the I&M Plan, the Local Jurisdiction, with due notice, may enter the property and take whatever steps it deems necessary to return the Post-Construction BMPs to good working order. This provision shall not be construed to allow the Local Jurisdiction to erect any permanent structure on the property. Neither the ***Enforcing Official*** nor any Local Jurisdictions shall be under any obligation to maintain or repair the system of Post-Construction BMPs and in no event shall these Post-Construction Regulations be construed to impose any such obligations upon those entities.

P. In the event the ***Enforcing Official*** or Local Jurisdiction performs any work or expends any funds to return any BMP facilities back to good working order, the Legal Entity and/or the Maintenance Provider shall reimburse the Local Jurisdiction within thirty (30) days receipt of an invoice from the ***Enforcing Official*** or Local Jurisdiction identifying the costs incurred in the repair or remediation plus an additional 50% for administrative costs and charges. If not paid within the prescribed time period, the ***Enforcing Official*** or Local Jurisdiction may cause the proportional cost of such required maintenance or remediation together with any administrative costs and charges and allowable penalties to be collected by any means allowable under the law or in equity, including, where authorized by law, the placement of a lien on the benefitted properties contributing storm water, or the collection of such costs, charges and penalties through the real estate tax duplicate of such benefitting Responsible Property owners contributing storm water to and/or required to install and maintain a system of BMPs. Where permitted by law, those charges shall become a lien against the benefitted Responsible Owners property or where authorized by law may be collected through the tax duplicate in the same manner as other taxes. The actions described in this section shall be in addition to and not in lieu of any legal remedies which may otherwise be available to the Local Jurisdiction or the ***Enforcing Official***.

Q. Except as to the ***Enforcing Official*** and the Indemnified Officials, nothing in these Post-Construction Regulations shall be construed to limit or affect any liability for damage which the Legal Entity, Maintenance Provider or Responsible Owners may have and which is alleged to have resulted from or been caused by storm water runoff where the system of Post-Construction BMPs fails to operate properly.

517 FEES

A. Where applicable, plan review, filing, and inspection fees are required to be submitted to the ***Enforcing Official***.

B. For projects in the unincorporated areas of Hamilton County the cost of concept plan review, revisions, site inspection and detailed construction drawing review performed by the ***Enforcing Official*** shall be at a rate established and published from time to time by the Board of County Commissioners (BOCC). Checks shall be made payable to the "Treasurer of Hamilton County" and mailed to the Department of Public Works, Room 800, County Administration Building, 138 East Court Street, Cincinnati, Ohio 45202. The check must make reference to the Project Title, Hamilton County Public Works Project Number and Invoice Numbers. A delinquent notice shall be issued in the event that any bill has not been paid in full within thirty (30) days. If payment is not made within thirty (30) days thereafter, inspection of construction and any further review on the project will be stopped and the claim will be forwarded to the Prosecuting Attorney for collection.

C. For projects within municipalities, fees shall be established according to the appropriate provisions of the municipality's code and levied according to pertinent administrative procedures of the ***Enforcing Official***.

518 PERFORMANCE SURETY

A. The ***Enforcing Official*** shall require the submittal of a performance bond or surety prior to approval of the Improvement Plan in order to insure that the Post-Construction BMPs are properly installed in accordance with the approved Improvement Plans and these Post-Construction Regulations. The amount of the installation performance surety shall be the total estimated construction cost of the approved Post-Construction BMPs, plus 25%. The performance surety shall conform to the following requirements:

1. For subdivision development in unincorporated Hamilton County, the performance surety shall follow requirements of Section 702 of the *Rules and Regulations of the Office of the Hamilton County Engineer Governing the Surface Physical Improvements for Private Developments within the Unincorporated Areas of Hamilton County*.

2. For all other development in unincorporated Hamilton County and for all development in municipal members of the Hamilton County Storm Water District, the following requirements shall apply:

   a. A performance contract and bond or surety shall be submitted to the ***Enforcing Official*** or designee. It shall be delivered on a form as outlined in the Design Manual.

   b. The surety shall remain in force until the Post-Construction BMPs or related physical improvements have been satisfactorily completed and accepted by the ***Enforcing Official*** or designee. When an "Irrevocable Letter of Credit" is used, it shall contain a clause guaranteeing automatic one year extensions beyond the expiration date thereof, until the work is completed and accepted. Provisions for a partial pro-rata release of the performance bond based on the completion of various construction stages can be done at the discretion of the ***Enforcing Official***. The installation performance bond shall be released in full within five (5) business days of an acceptable final inspection by the ***Enforcing Official***, approval of acceptable as-built plans, and a written certification by a registered Professional Engineer that the storm water practice has been installed in accordance with the approved plan and other applicable provisions of these Post-Construction Regulations.

519 ENFORCEMENT

A. No person shall violate or cause to be violated any of the provisions of these Post-Construction Regulations, or fail to comply with any lawful order, request or other requirements of any ***Enforcing Official*** or authorized public authority having jurisdiction which is made or issued pursuant to these Post-Construction Regulations, or knowingly use, or cause to be used, lands in violation of these Post-Construction Regulations, or in violation of any order approving or denying an activity or authorization granted under

these Post-Construction Regulations. The Enforcing Official shall have the authority to enforce these Post-Construction Regulations, including to the extent authorized by law the power to levy a fine and issue stop work orders (with or without a penalty) where authorized by law or in equity which is reasonably necessary and appropriate when the Enforcing Official determines that a violation of these Post-Construction Regulations has occurred or is occurring.

B. The ***Enforcing Official*** shall have all such rights and powers in interpreting and enforcing these Earthwork Regulations as may be accorded to such officials by law, rule, or regulation.

520 APPEALS

A. Any Owner who believes that there is an error in any order, requirement, decision or determination of the Enforcing Official in relation to these Post-Construction Regulations may file a written appeal with the Hamilton County Board of Storm Drainage Variances and Appeals not later than fifteen (15) days after the occurrence of the order, requirement, decision or determination concerning lands within the unincorporated area of the County, or to the appropriate designated local council, appellate board, commission or other authority of the municipal corporation concerning lands within a municipality. A copy of the appeal shall be served on the Enforcing Official. The appeal shall proceed and be reviewed in accordance with the rules of the relevant appellate body processing the appeal.

521 PENALTIES

A. Any Person who knowingly violates any provision of these Post-Construction Regulations shall be subject to such fines, penalties, or other civil or criminal penalties as may be allowable under applicable law. Each day of violation shall be deemed a separate offense during any continuing period of noncompliance.

B. The imposition of any penalties or the use of other enforcement mechanisms shall not preclude the ***Enforcing Official*** from instituting an action in a Court of proper jurisdiction to prevent an unlawful development, or to restrain, enjoin, correct, or abate a violation, or to require compliance with the provisions of these Post-Construction Regulations or other applicable laws, ordinances, rules, or regulations, or the orders of the ***Enforcing Official*** where authorized by applicable law..

C. A lawfully issued Stop Work Order issued under these Post-Construction Regulations shall remain in effect until (1) all required local, state, and or federal permits are issued, (2) the hazardous condition and/or water quality degradation is remedied to the satisfaction of the ***Enforcing Official***, or (3) the faulty work is remedied and executed in full accordance with the Permit and these Post-Construction Regulations, or for such other period as may be allowed by applicable law, rule or regulation.