

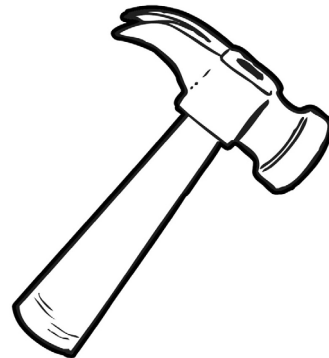
City of New Philadelphia

DEVELOPERS, CONTRACTORS AND HOMEBUILDERS GUIDE TO
STORMWATER COMPLIANCE

Goals



- Discuss why Storm Water Pollution Prevention Plan (SWPPP) and Comprehensive Stormwater Management Plan (CSMP) Approval is required
- Discuss the ins-and-outs of approval requirements and application process
- Answer any questions
- Build better relationships



SWPPP & CSMP approval is required because...

The State requires the City to enforce these rules under...

- Ohio EPA Municipal Separate Storm Sewer System Permit

So the City of New Philadelphia developed their Stormwater Management Plan and passed...

- Ordinance 948 Comprehensive Stormwater Management
- Ordinance 949 Erosion and Sediment Control

Both Ordinances were passed in 2017.

Who needs approval?

Disturbance < 0.1 acres – approval not required

Disturbance < 1 acre – abbreviated SWPPP must be submitted for:

- For new single family or multi-family residential construction
- Additions or accessory buildings for single family and or multi-family residential construction
- All residential and non-residential construction on parcels of less than 1 acre
- General clearing activities not related to construction

Disturbance ≥ 1 acre – full SWPPP & CSMP must be submitted for:

- All soil disturbing activities disturbing 1 or more acres of total land, or less than 1 acre if a larger common plan of development or sale disturbing 1 or more total acres of land.
- Anyone required to file for the OEPA Construction General Permit



Applying for approval...

Disturbance \geq 1 acre:

Step 1: Arrange a Pre-application Meeting

Step 2: Submit SWP3 and CSMP

Step 3: Correct/address deficiencies and resubmit

Step 4: Approval granted!

Disturbance $<$ 1 acre:

Step 1: Submit Abbreviated SWP3

Step 2: Correct/address deficiencies and resubmit

Step 3: Approval granted!

Required Documentation

Disturbance < 1 acre:

- Abbreviated SWP3 prepared in accordance with Ord. 949

Disturbance ≥ 1 acre:

- SWP3
 - Phase 1 and 2 (See Ord. 949 for all requirements)
- CSMP
 - Site description, map, contact info, phase, subplot numbers, OEPA NPDES Permit number, site plan, inspection and maintenance plan, inspection and maintenance agreement, required calculations listing of all contractors and subcontractors, drainage patterns and required information for each control. See Ord. 948 for all requirements.
- Proof of coverage/compliance or certification of non-applicability for:
 - OEPA Construction General Permit
 - Section 401 of the Clean Water Act
 - OEPA Isolated Wetland Permit
 - Section 404 of the Clean Water Act
 - Ohio Dam Safety Law

SWP3 and CSMP Submittal

The review fee is \$1,500 and covers one resubmittal. Each subsequent submittal is an additional \$500.

PLAN REVIEW WILL NOT COMMENCE UNTIL ALL DOCUMENTS AND THE REVIEW FEE HAVE BEEN RECEIVED!

Submit all documents in PDF format to: aadkins@div-eng.com

Fee checks may be made out to:

Diversified Engineering Inc.

175 Ray Ave NE,

New Philadelphia, OH 44663

(Please include project reference)

Initial Plan Review

- Plans will be reviewed on a rolling basis following receipt of all required documentation and the review fee
- The OEPA SWPPP, Ordinance 948 and Ordinance 949 checklists will be used to ensure all requirements are met



Construction General Permit OHC000005
Storm Water Pollution Prevention Plan Checklist
 State of Ohio Environmental Protection Agency
 Division of Surface Water

Facility Name:	Date Received:
SWP3 Reviewer:	Date Reviewed:

Part III.G.1 - Site Description				
Does the SWP3 describe, show or include:	Y	N	N/A	Comments
(a) the nature and type of construction activity (e.g., low density residential, shopping mall, highway, etc.)?				
(b) the area of the site to be disturbed				
(c) the impervious area and percent imperviousness created by the construction activity?				
(d) storm water calculations (pre and post-construction volumetric runoff coefficients and resulting water quality volume; design details for post-construction storm water facilities and pretreatment practices (e.g. drainage areas, capacities, elevations, outlet details and drain time-) and if applicable, explanation of the use of existing post-construction facilities?				
(e) any existing data describing the soil?				
(f) any information on the quality of the storm water discharge from the construction site?				
(f) any information about prior land uses at the site (e.g., was the property used to manage solid or hazardous waste)?				
(g) a description of the condition of on-site streams (e.g. prior channelization, bed instability or headcuts, channels on public maintenance, or natural channels)?				
(h) an implementation schedule which describes the sequence of major construction operations (i.e., grubbing, excavating, grading, utilities infrastructure installation and others) and the implementation of erosion, sediment and storm water management practices or facilities to be employed during each operation of the sequence?				
(i) the name(s) or location(s) of the initial and subsequent surface water bodies receiving the storm water discharge?				
the areal extent and description of the wetland or other special aquatic sites which will be disturbed and/or will receive the storm water discharges?				
(j) a detail drawing of a typical individual lot showing sediment and erosion controls or storm water control practices? (This does not remove responsibility to designate control practices in a SWP3 for critical areas such as steep slopes, stream banks, drainage ways & riparian zones.)				
(k) the location and description of storm water discharges associated with dedicated asphalt and/or concrete batch plants covered by the NPDES construction storm water general permit?				
(l) a cover page identifying the name and location of the site, the name and contact information for site operators and SWP3 authorization agents as well as preparation date, start date, and completion date?				
(m) a log documenting grading & stabilization activity as well as SWP3 amendments that occur after construction commencement?				

Tips for Developing the SWP3 & CSMP

- Ensure qualified-personnel are in charge of SWPPP development to save time and money.
- Use the Checklist as a reference before submitting
- Reference the Regulations:
 - Ordinance 948 Comprehensive Stormwater Management
 - Ordinance 949 Erosion and Sediment Control
 - Ohio EPA NPDES Construction General Permit

Approval Granted!

- When the SWP3 (abbreviated SWP3) and CSMP are determined to be prepared in compliance with the Ordinances, DEI will issue an approval notification to the applicant and the City.
- Following approval of the SWP3 and CSMP, the applicant may now:
 - Submit required bond fees to the City (for SWP3 and CSMP as applicable)
 - Apply for other City permits such as building/zoning permits
 - Install phase 1 controls in accordance with the approved SWP3 (or abbreviated SWP3)
- For projects disturbing ≥ 1 ac.
 - The applicant must arrange for an on-site pre-construction meeting with all principal parties and the City to ensure all Phase 1 controls are implemented in accordance with the SWP3. See Ord. 949

REQUIRED Inspections

Internal (performed by project personnel)

- The SWPPP-responsible party shall designate qualified inspection personnel to conduct inspections of controls at least once every 7 days and after rainfall events (>0.5in in 24 hr)
- All certified inspection reports must be sent to aadkins@div-eng.com no later than 7 days following completion

External (performed by City/DEI)

- A representative from the City/DEI will perform monthly inspections (at a minimum) of the project site to ensure compliance.
- Inspection reports will be prepared and issued to applicable parties with corrective actions and compliance dates listed as necessary.
- The designated entity on the SWPPP will be billed \$150 for each external inspection (including the pre-con meeting) and for any follow up inspections resulting from inadequate corrective action documentation.

Thank you!

The City of New Philadelphia thanks you for your time.

For questions, comments and suggestions regarding this presentation, please contact Diversified Engineering, Inc.

P: 330-364-1631

E: aadkins@div-eng.com

SWPPP Development Resources:

Rainwater and Land Development Manual (Use for BMP design):

<https://epa.ohio.gov/wps/portal/gov/epa/divisions-and-offices/surface-water/guides-manuals/rainwater-and-land-development>

EPA's “ *Maintaining Stormwater Control Measures*” (Use for O&M Plan development, routine inspection checklists):

https://epa.ohio.gov/static/Portals/35/documents/SCM_OM_Manual_Final_7-30-15.pdf

Appendices

OEPA SWP3 Checklist

Ordinance 948 Checklist

Ordinance 949 Checklist

Water Quality Hot Line Sign



Use these checklists to develop your SWPPP! Make sure every item is included and if it is not applicable, include a statement in your SWPPP that it is not applicable and why. These will be used to check for compliance. If you have questions, refer to the regulation.



Construction General Permit OHC000005 Storm Water Pollution Prevention Plan Checklist

State of Ohio Environmental Protection Agency
Division of Surface Water

Facility Name:	Date Received:
SWP3 Reviewer:	Date Reviewed:

Part III.G.1 - Site Description				
Does the SWP3 describe, show or include:	Y	N	N/A	Comments
(a) the nature and type of construction activity (e.g., low density residential, shopping mall, highway, etc.)?				
(b) the area of the site to be disturbed				
(c) the impervious area and percent imperviousness created by the construction activity?				
(d) storm water calculations, (pre and post-construction volumetric runoff coefficients and resulting water quality volume; design details for post-construction storm water facilities and pretreatment practices (e.g. drainage areas, capacities, elevations, outlet details and drain times) and if applicable, explanation of the use of existing post-construction facilities?				
(e) any existing data describing the soil?				
any information on the quality of the storm water discharge from the construction site?				
(f) any information about prior land uses at the site (e.g., was the property used to manage solid or hazardous waste)?				
(g) a description of the condition of on-site streams (e.g. prior channelization, bed instability or headcuts, channels on public maintenance, or natural channels)?				
(h) an implementation schedule which describes the sequence of major construction operations (i.e., grubbing, excavating, grading, utilities infrastructure installation and others) and the implementation of erosion, sediment and storm water management practices or facilities to be employed during each operation of the sequence?				
(i) the name(s) or location(s) of the initial and subsequent surface water bodies receiving the storm water discharge?				
the areal extent and description of the wetland or other special aquatic sites which will be disturbed and/or will receive the storm water discharges?				
(j) a detail drawing of a typical individual lot showing sediment and erosion controls or storm water control practices? (This does not remove responsibility to designate control practices in a SWP3 for critical areas such as steep slopes, stream banks, drainage ways & riparian zones.)				
(k) the location and description of storm water discharges associated with dedicated asphalt and/or concrete batch plants covered by the NPDES construction storm water general permit?				
(l) a cover page identifying the name and location of the site, the name and contact information for site operators and SWP3 authorization agents as well as preparation date, start date, and completion date?				
(m) a log documenting grading & stabilization activity as well as SWP3 amendments that occur after construction commencement?				

Part III.G.1.n - Site Map Requirements				
Does the SWP3 site map show:	Y	N	N/A	Comments
(i) limits of earth-disturbing activity of the site including associated off-site borrow or spoil areas that are not addressed by a separate NOI and associated SWP3?				
(ii) soils types depicted for all areas of the site, including locations of unstable, highly erodible and/or known contaminated soils?				
(iii) existing and proposed contours to delineate drainage watersheds expected during and after major grading activities as well as the size of each drainage watershed, in acres?				
(iv) location of any delineated boundary for required riparian setbacks?				
(v) conservation easements for areas designated as open space, preserved vegetation or otherwise protected from earth disturbing activities with a description of any associated temporary or permanent fencing or signage?				
(vi) surface water locations including springs, wetlands, streams, lakes, water wells, etc., on or within 200 feet of the site, including the boundaries of wetlands or stream channels and first subsequent named receiving water(s) the permittee intends to fill or relocate for which the permittee is seeking approval from the Army Corps of Engineers and/or Ohio EPA?				
(vii) the location of existing and planned buildings, roads, parking facilities, and utilities?				
(viii) include the location of all erosion and sediment control practices, including the location of areas likely to require temporary stabilization during site development?				
(ix) location of sediment traps and basins noting their sediment storage volume and dewatering (detention) volume and contributing drainage area?				
(x) location of permanent storm water management practices (new & existing) as well as pretreatment practices to be used to control pollutants in storm water after construction operations have been completed along with the location of existing and planned drainage features (e.g. catch basins, culverts, ditches, swales, surface inlets and outlet structures)?				
(xi) areas designated for the storage or disposal of solid, sanitary, and toxic wastes (including dumpster areas), areas designated for cement truck washout, and areas for vehicle fueling?				
(xii) location of designated construction entrances where the vehicles will access the construction site?				
(xiii) location of any areas of proposed floodplain fill, floodplain excavation, stream restoration or known temporary or permanent stream crossings?				

Part III.G.2 - Sediment & Erosion Controls				
(a) Preservation Methods	Y	N	N/A	Comments
(1) Has every effort been made to preserve the natural riparian setback adjacent to streams or other surface water bodies? (E.g. preserving existing vegetation, vegetative buffer strips, and existing soil profile and topsoil; and designating tree preservation areas or other protective clearing or grubbing practices.				

OHC000005 – SWP3 Checklist

(2) Have efforts been made to phase in construction activities to minimize the amount of land disturbance at one time?				
(3) Will any portions of the site be left undisturbed (e.g., tree preservation areas)?				
(b) Erosion Control Practices	Y	N	N/A	Comments
(1) Does the SWP3 include erosion controls to provide cover over disturbed soils?				
(2) Does the SWP3 describe the control practices used to re-establish suitable cover (e.g. vegetation) on disturbed areas after grading?				
(3) Does the SWP3 specify the types of stabilization measures to be employed for any time of the year?				
(b)(i) & Part II.B (Table 2): Temporary Stabilization	Y	N	N/A	Comments
For disturbed areas within 50 feet of a stream remaining dormant for over 14 days, will temporary erosion controls be applied within 2 days?				
For disturbed areas over 50 feet away from a stream remaining dormant for over 14 days, will temporary erosion controls be applied within 7 days?				
For disturbed areas that will be left idle over winter, will temporary erosion controls be applied prior to onset of winter weather?				
(b)(i) & Part II.B (Table 1): Permanent Stabilization	Y	N	N/A	Comments
For disturbed areas within 50 feet of a stream at final grade, will permanent erosion controls be applied within 2 days of reaching final grade?				
For disturbed areas remaining dormant for over 1 year or at final grade, will permanent erosion controls be applied within 7 days of the most recent disturbance?				
(b)(ii) Permanent Stabilization of Conveyance Channels				
Will operators undertake special measures to stabilize channels and outfalls and prevent erosive flows?				
(c) Runoff Control Practices - Does the SWP3 incorporate	Y	N	N/A	Comments
(1) measures to reduce flow rates on disturbed areas (e.g., riprap, rock check dams, & pipe slope drains)?				
(2) measures to divert runoff from disturbed areas and steep slopes?				
(d) Sediment Control Practices	Y	N	N/A	Comments
(1) Will sediment control devices be implemented for all areas remaining disturbed for over 14 days?				
(2) Are detail drawings of the sediment controls to be used included in the SWP3?				
(d)(i) Timing of Installing Sediment Controls.	Y	N	N/A	Comments
Does the SWP3 specify that sediment controls will be implemented prior to grading and within 7 days of grubbing?				
Does the SWP3 require additional sediment controls or modifications for changing slopes and topography?				
(d)(ii) Sediment Settling Ponds	Y	N	N/A	Comments
Does the SWP3 include the use of a sediment settling pond? <i>NOTE: This is required for areas with concentrated runoff or when the capacity of sediment barriers or inlet protection has been exceeded.</i>				
Are alternatives proposed in lieu of a required settling pond? These must be equivalent to a sediment settling pond effectiveness.				
Is the dewatering volume appropriately sized (67 yd ³ or 1800 ft ³ per acre of drainage area)?				

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Is the depth of the dewatering volume for each sediment settling pond ≤ 5 feet?				
Will the dewatering volume drain in 48 hours to 72 hours?				
Is a skimmer specified in the SWP3?				
Has a sediment storage zone volume been provided (≥ 1000 ft ³ per disturbed acre or based on RUSLE calculations)?				
Is the length to width ratio of the settling pond $\geq 2:1$? <i>NOTE: Greater distances from storm water inlet of the pond to the outlet increase effectiveness of sediment settlement.</i>				
Is clean-out of the sediment storage zone specified in the SWP3? (E.g. when sediment occupies 50 percent of the sediment storage zone and prior to conversion to a post-construction BMP.)				
Have public safety concerns been considered in pond design and alternative sediment controls?				
(d)(iii) Sediment Barriers & Diversions	Y	N	N/A	Comments
Are sediment barriers or diversions used to intercept sheet flow? <i>NOTE: Sediment barriers are suitable for sheet flow and not for concentrated storm water flow.</i>				
Are alternative sediment barriers, used in lieu of silt fence, at least 12-inches in diameter?				
Are diversions used to keep runoff away from steep slopes or concentrated flow?				
Do sediment barriers meet the maximum drainage area limits of table 3 or the Rainwater and Land Development manual?				

(d)(iv) Inlet Protection	Y	N	N/A	Comments
Do drain inlets and curb inlets drain into a sediment settling pond?				
Inlets not connected to a sediment settling pond are limited to runoff from \leq one acres?				
Does inlet protection meet acceptable standards?				
(d)(v) Stream Protection	Y	N	N/A	Comments
No structural sediment controls are proposed for use in streams.				
Have efforts been made to limit construction disturbance or activities on stream banks, and the width or number of stream crossings? <i>NOTE: If work along a stream bank is necessary, a non-erodible pad or non-erodible stream diversion dams (sand bags) must be installed. If stream crossings are necessary, a non-erodible stream crossing must be installed.</i>				

Part III.G.2.e – Post-Construction Storm Water Management				
	Y	N	N/A	Comments
Does the SWP3 include the installation of a structural post-construction BMP. <i>NOTE: Projects that do not significantly grade or impact pervious areas or install impervious surface such as park lands do not require the installation of post-construction BMPs.</i>				
Is the construction activity a linear project (e.g., pipeline or utility line installation) that does not result in the installation of additional impervious surface? <i>NOTE: If yes, then the installation of structural post-construction BMPs is not required.</i>				
Maintenance Plans	Y	N	N/A	Comments
Has a long-term maintenance plan been developed or included in the SWP3 for maintenance of the structural post-construction BMP?				

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<i>NOTE: The long-term maintenance plan must be developed and provided to the post-construction site operator.</i>				
Does the long-term maintenance plan include the following?				
(1) an entity designated for storm water inspection and maintenance responsibilities?				
(2) the routine and non-routine maintenance tasks to be undertaken?				
(3) a schedule for inspection and maintenance?				
(4) any necessary legally binding maintenance easements and agreements?				
(5) construction drawings or excerpts showing the facility plan view and profile, as well as details of the outlet(s)?				
(6) a map showing all access and maintenance easements?				
(7) a description of how pollutants will be removed and disposed of?				
Does the SWP3 include a structural post-construction BMP designed to release the water quality volume over a 24-hour to 48-hour time period?				
Calculation of Water Quality Volume (WQv)	Y	N	N/A	Comments
Is the calculation of the WQv, shown? With correct values used for the following:				
(a) runoff coefficient (Rv), where $Rv = 0.05 + 0.9i$ i = ratio of impervious surface				
(b) precipitation depth (P = 0.9 inches)?				
(c) and the drainage area (A) to the BMP?				
If the structural post-construction BMP will be used for sediment storage, does it include a sediment accumulation volume of at least 20% of the WQv?				
If a regional storm water BMP will be used to meet the post-construction requirements, does it:				
(1) meet the design requirement for treating the WQv?				
(2) have a legal agreement established with the BMP owner for long-term maintenance?				
Table 4a Do extended detention practices show an appropriate minimum drain time that shall not discharge more than the first half of the WQv in less than one-third of the drain time? <i>NOTE: Dry = 48 hr; Wet, wetland, permeable pavement, underground storage, and sand/media filtration min. 24, <72 hr.</i>				
Table 4a Do extended detention practices show appropriate design features? <ul style="list-style-type: none"> • Wetland and wet basins: permanent pool = 1WQv • Dry, wet and wetland: sediment storage = 0.2WQv • Dry: forebay and micro-pool or acceptable pretreatment and a protected outlet. Underground storage: acceptable pretreatment capable of $\geq 50\%$ TSS.				
Table 4b Do planned infiltrating practices show an appropriate maximum drain time? Note: Bioretention and infiltration basin ≤ 24 ; infiltration trench, permeable pavement and underground storage ≤ 48 hours.				
Table 4b Do planned infiltrating underground storage practices (for credit) show acceptable of pretreatment of $\geq 80\%$ TSS.				
Small Construction Activities ≤ 2 Acres If the SWP3 proposes to use an alternative BMP instead of a Table 4a or 4b practice,	Y	N	N/A	Comments

OHC000005 – SWP3 Checklist

(1) does the SWP3 provide justification on why a standard BMP is infeasible and their use would prevent the project?				
(2) Is the alternative BMP acceptable to the local MS4 or jurisdiction?				
Transportation Projects	Y	N	N/A	Comments
For (public road construction activities), are the post-construction BMPs designed consistent with the Ohio Department of Transportation’s “Location and Design Manual, Volume Two?”				
Offsite Mitigation of Post-Construction	Y	N	N/A	Comments
If the SWP3 is proposing to use an offsite post-construction BMP, then does the SWP3 include:				
(1) a maintenance agreement or policy is established to ensure operations and treatment long-term?				
(2) the offsite location discharges to the same HUC-12 watershed unit?				
(3) the mitigation ratio of the WQv is 1.5 to 1 or the WQv at the point of retrofit, whichever is greater?				
Previously Developed Areas (Redevelopment)	Y	N	N/A	Comments
For construction of a previously developed area, was one of the following options used to as a post-construction practice:				
(a) 20% net reduction in the site’s volumetric runoff coefficient?				
(b) a BMP sized to treat 20% of the WQv for the previously developed area using a standard BMP from Tables 4a or 4b?				
For construction involving both previously developed and undeveloped land, was equation 3 shown to calculate the WQv? $WQv = 0.9\text{inches} * A * [(Rv_1 * 0.2) + (Rv_2 - Rv_1)]/12$				
Runoff Reduction Practices:	Y	N	N/A	Comments
If the SWP3 proposes to use runoff reduction methods to reduce the WQv or size of post-construction practices, are one of the following acceptable practices being used with appropriate credit?				
<ul style="list-style-type: none"> • Green Roof • Impervious Surface Disconnection • Rainwater Harvesting • Bioretention Area/Cell • Infiltration Basin • Infiltration Trench • Permeable Pavement (Infiltration) • Underground Storage (Infiltration) • Grass Swale • Sheet Flow to Filter Strip 				
Sheet Flow to Conservation Area				
Do practices meet Ohio EPA’s Rainwater and Land Development Manual specifications?				
Is any runoff reduction practice(s) used to meet the groundwater recharge requirements for the Big Darby Creek Watershed shown in recharge calculations?				
Is any runoff reduction practice used meet post-construction requirement for areas that cannot drain to a structural practice (e.g., backyards of residential lots) shown in calculations?				
Alternative Post-Construction BMPs	Y	N	N/A	Comments

OHC000005 – SWP3 Checklist

If the SWP3 proposes to use alternative post-construction BMPs to those of Tables 4a and 4b practices, has approval been obtained from Ohio EPA? (Attach correspondence & Alt. Practice Form)				

Part III.G.2.f - Surface Water Protection	Y	N	N/A	Comments
Does the site contain any streams, rivers, lakes, or wetlands?				
If so, has the U.S. Army Corps of Engineers been contacted for a determination of impacts requiring Clean Water Act 401 or 404 permitting? (Attach any reference numbers)				
For storm water discharges from BMPs into wetlands, have appropriate BMPs been proposed to treat and diffuse flows?				

Part III.G.2.g - Other Controls				
(Non-sediment pollutant controls, tracking, dust, wastes, dewatering, and contaminated sediments)				
Handling of Toxic or Hazardous Materials	Y	N	N/A	Comments
(1) The SWP3 considers and addresses potential toxic or hazardous wastes and their proper disposal?				
(2) The SWP3 addresses the need and methods to exclude waste materials or wastewater (e.g. from washout) from storm water or waters of the state? and of responding to chemical spills and leaks (e.g. directs to onsite Spill Prevention Control and Countermeasure (SPCC) plan).				
(3) The SWPPP addresses potential materials and responses to chemical spills and leaks (e.g. directs to onsite Spill Prevention Control and Countermeasure (SPCC) plan).				
Waste Disposal	Y	N	N/A	Comments
Covered and leak-proof containers are planned for disposal of debris, trash, hazardous or petroleum wastes?				
As applicable, the SWP3 states that all waste will comply with applicable state or local waste disposal requirements and provisions address issues such as open burning, sanitary wastes and construction and demolition debris?				
Clean Hard Fill	Y	N	N/A	Comments
(1) If disposal of bricks, hardened concrete, and/or soil is planned, are these materials required to be free from contamination that may leach to waters of the state?				
(2) If clean construction wastes will be disposed into the property, have are there any local prohibitions from this type of disposal?				
Construction Chemical Compounds	Y	N	N/A	Comments
(1) Does the SWP3 designate areas used for mixing or storage of compounds such as fertilizers, lime, asphalt, or concrete?				
(2) If so, are these areas located away from watercourses, drainage ditches, field drains, or other storm water drainage areas?				
Equipment Fueling & Maintenance	Y	N	N/A	Comments
(1) Does the SWP3 designate areas used for fueling or performing vehicle maintenance that provide separation from watercourses, drainage ditches, field drains, or other storm water drainage areas?				
(2) If applicable, has a spill prevention control and countermeasures (SPCC) plan been developed?				

OHC000005 – SWP3 Checklist

<p><i>NOTE: An SPCC plan is required for sites which have the following:</i></p> <ul style="list-style-type: none"> • Aboveground oil/fuel storage capacity of more than 1,320 gallons in all containers 55 gallons or greater in volume, or • Underground oil/fuel storage capacity of more than 42,000 gallons. 				
Concrete Wash Waters	Y	N	N/A	Comments
(1) Does the SWP3 designate areas used for concrete chute cleaning or other concrete wash waters that are these areas located away from watercourses, drainage ditches, field drains, or other drainage areas?				
Trench & Ground Water Control	Y	N	N/A	Comments
Does the construction site have an onsite trench or pond that must be dewatered?				
If so, does the SWP3 call for the discharge of potentially turbid water through a filter bag, sump pit, or other sediment removal device?				
Contaminated Soils	Y	N	N/A	Comments
If applicable, does the SWP3 address proper handling and disposal of soils contaminated by petroleum or other chemical spills? <i>NOTE: Contaminated soils must be treated and/or disposed in Ohio EPA approved solid waste management facilities or hazardous waste treatment, storage or disposal facilities.</i>				
If the facility contains contaminated soil, which of the following practices will be used to prevent contamination from being released?				
(1) Berms, trenches, and pits used to collect contaminated runoff and prevent discharges;				
(2) Runoff is planned to be pumped into a sanitary sewer (requires prior approval of the sanitary sewer operator) or into a container for transport to an appropriate treatment/disposal facility;				
(3) Areas of contamination are planned for covering with tarps or other methods that prevent storm water from coming into contact with the material.				
Spill Reporting Requirements	Y	N	N/A	Comments
(1) The SWP3 describes procedures in the event of a small release (less than 25 gallons) of petroleum waste? <i>NOTE: Petroleum-based and concrete curing compounds must have special handling procedures.</i>				
(2) The SWP3 describe what to do in the event of a larger release (25 or more gallons) of petroleum waste? <i>NOTE: Ohio EPA (1-800-282-9378), the local fire department, and the local emergency planning committee (LEPC) must be contacted within 30 minutes of a spill of 25 or more gallons.</i>				
Open Burning	Y	N	N/A	Comments
(1) If applicable, does the SWPPP restrict open burning to legal limits (as defined in OAC 3745-19)?				
Dust Controls/Suppressants	Y	N	N/A	Comments
(1) If dust suppressants are proposed in the SWP3, are application areas away from catch basins for storm sewers or other drainage ways? <i>NOTE: Used oil may not be used as a dust suppressant</i>				
Air Permitting Requirements	Y	N	N/A	Comments
(1) If applicable (e.g. <i>mobile concrete batch plants, mobile asphalt plants, concrete crushers, and large generators</i>) have appropriate				

OHC000005 – SWP3 Checklist

measures been taken to ensure that all air pollution permits have been obtained?				
(2) In the case of applicable restoration or demolition projects, a notification will be submitted to Ohio EPA, Division of Air Pollution Control to determine if asbestos corrective actions are required?				
Process Wastewater/Leachate Management	Y	N	N/A	Comments
All process wastewaters (e.g., equipment washing, leachate associated with on-site waste disposal, and concrete wash-outs) be collected and disposed of properly (e.g., to a publicly-owned treatment works)? <i>NOTE: The NPDES construction storm water general permit only authorizes the discharge of storm water and certain uncontaminated non-storm waters. The discharge of non-storm waters to waters of the state may be in violation of local, state, and federal laws or regulations.</i>				
Additional Concerns	Y	N	N/A	Comments
For construction activities involving the installation and/or replacement of a centralized sanitary system, (including sewer extensions) or a sewerage system (except those serving one, two, and three family dwellings) and potable water lines, a PTI application was submitted to Ohio EPA? <i>NOTE: Coverage under the NPDES construction storm water general permit does not alone authorize the installation of such sanitary sewerage systems or potable water lines.</i>				
Does the SWP3 include measures for implementing good housekeeping practices?				
Does the SWP3 promote the use of protected storage areas for industrial or construction materials to minimize exposure of such materials to storm water?				

Part III.G.2.h - Maintenance				
	Y	N	N/A	Comments
The SWPPP describes adequate repair and maintenance procedures for each temporary and permanent control practice planned in order to ensure continued function.				
Part III.G.2.i - Inspections				
	Y	N	N/A	Comments
The SWP3 states that only “qualified inspection personnel” will perform the inspections?				
The SWP3 requires construction site inspections to be performed once every 7 calendar days; and after every rain event ≥ 0.5 -inch in a 24-hour period by the end of next calendar day (excluding non-working weekends & holidays)?				
The SWP3 states that the inspection frequency may be reduced to monthly for dormant sites if:				
<ul style="list-style-type: none"> the entire site is temporarily stabilized or 				
<ul style="list-style-type: none"> runoff is unlikely due to weather conditions for extended periods of time (e.g., frozen ground)? 				
Does the SWP3 include an inspection checklist (to be completed and signed after every inspection) that includes:				
<ul style="list-style-type: none"> the inspection date; names, titles, and qualifications of inspectors; 				

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<ul style="list-style-type: none"> • weather for the period since the last inspection (e.g., beginning, duration, & rainfall amount of each storm event and whether a discharge occurred); • weather and a description of any discharges occurring at the time of the inspection; • location(s) of discharges of sediment or other pollutants from the site; • location(s) of BMPs that need to be maintained; • location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location; • location(s) where additional BMPs are needed that did not exist at the time of inspection; • and corrective action required including any changes to the SWP3 necessary and implementation dates 			
<p>The SWP3 details the areas to inspect (disturbed areas; material storage areas; erosion and sediment controls; discharge locations; and vehicle entrance/exit locations)?</p>			
<p>Does the SWP3 state that inspection records will be kept for 3 years after termination of construction activities?</p>			
<p>Does the SWP3 specify the time within which BMPS must be repaired, maintained or a new functional BMP installed? (Within 3 days of inspection for non-sediment pond BMPs, and within 10 days of inspection for sediment ponds to be repaired or cleaned out and replacing a BMP not meeting the intended function or missing from the site.)</p>			

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Project Name:					
Project Number:					
Review Date:					
Reviewer:					
Requirement	Compliant?			Comment	
	Y	N	N/A		
948.08 COMPREHENSIVE STORMWATER MANAGEMENT PLAN					
a) The applicant shall prepare a CSMP...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
• Describing how the quantity and quality of stormwater will be managed after construction for every discharge location;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
• That will illustrate the type, location and dimensions of every structural and non-structural sediment control measure (SCM);	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
• Addresses how the SCMs will address flooding within the site as well as flooding that may be caused by the development upstream and downstream of the site;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
• Describes how the SCMs minimize impacts to the physical, chemical and biological characteristics of on-site and downstream water resources; and	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
• If applicable, the current degradation of water resources that is occurring and and/or measures to prevent predictable degradation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
b) The CSMP shall be prepared by a registered Professional Engineer and include supporting calculations, plan sheets and design details.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
• A site survey shall be performed by a registered professional surveyor to establish boundary lines, measurements, or land surfaces.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
c) Community Procedures. (See ord.)	-	-	-		
d) Contents of a CSMP					
1) Site Description					
A. A description of the nature and type of construction activity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
B. Total area of the site and the area that is expected to be disturbed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
C. A description of prior land uses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
D. An estimate of the impervious area and percent imperviousness created by the soil-disturbing activity at the beginning and at the conclusion of the project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
E. Selection (source and justification) and/or calculations of runoff coefficients for water quality volume determination, peak discharge control (curve number/critical storm method), and rational method.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
F. Existing data describing the soils throughout the site, including soil map units including series, complexes, and associated, hydrologic soil group, porosity, infiltration characteristics, depth to groundwater, depth to bedrock and any impermeable layers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
G. If available, the quality of known pollutant discharge from the site such as that which may result from previous contamination caused by prior land uses.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
H. The location and name of the immediate water resource(s) and the first subsequent water resource	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
I. The aerial (plan view) extent and description of water resources at or near the site that will be disturbed or will receive discharges from the project.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
J. If applicable, identify the point of discharge to the MS4 and the location where that MS4 discharges to a stream, lake, or wetland.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
K. List TMDLs applicable for the site and demonstrate that appropriate SCMs have been selected to address these TMDLs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
L. For each SCM, identify the drainage area, percent impervious cover within the drainage area, runoff coefficient for water quality volume, peak discharge and the time of concentration for each	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

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subwatershed, the SCM surface area, discharge and dewatering time, outlet type and dimensions and individual ID number.				
M. Description of the current conditions of the water resources including the vertical stability of stream channels and indications of channel incision that may be responsible for current or future sources of high sediment loading or loss of channel stability.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2) Site Map				
A. Limits of soil-disturbing activity on the site	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B. Soils map units for the entire site, including location of unstable or highly erodible soils	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
C. Existing and proposed 1' contours with a delineation of drainage watersheds expected before, during and after major grading activities as well as the size of each drainage watershed in acres	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
D. Water resource locations, including springs, wetlands, lakes, water wells, and associated setbacks within 200 ft of the site, including the boundaries of wetlands or streams and first subsequent named receiving water(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
E. Existing and planned locations of utilities, roads, buildings and parking facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
F. Location of any in-stream activities including stream crossings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3) Contact Information				
A. The Professional Engineer who prepared the CSMP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B. The Site Owner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4) Phase of the overall development plan (if applicable)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5) List of subplot numbers if the project is a subdivision	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6) Ohio EPA NPDES Permit Number and other applicable state and federal permit numbers, if available, or status of various permitting requirements if final approvals have not been received.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7) Location including complete site address and subplot numbers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8) Location of any easements or other restrictions placed on the use of the property	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed in OEPA Checklist.
9) A site plan sheet showing				
A. The location of each proposed post-construction SCM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B. The geographic coordinates of the site and each proposed practice in North American Datum Ohio State Plane North	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10) Inspection and Maintenance Agreement. An inspection and maintenance agreement is provided. It should contain:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed in OEPA Checklist.
A. Identification of the landowner(s), organization or municipality responsible for long-term inspection and maintenance, including repairs, of the SCMs	-	-	-	Addressed in OEPA Checklist
B. The landowner(s), organization, or municipality shall maintain SCMs in accordance with this regulation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
C. The City of New Philadelphia has the authority to enter upon the property to conduct inspections as necessary, with prior notification of the property owner, to verify that the SCMs are being maintained and operated in accordance with Ordinance 948.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
D. The City of New Philadelphia shall maintain public records of the results of site inspections, shall inform the landowner(s), organization, or municipality responsible for maintenance of the maintenance problems that require correction, the specifically indicate any corrective actions required to bring the SCMs into proper working condition.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
E. If the City of New Philadelphia notifies the landowner(s), organization or municipality responsible for maintenance of the maintenance problems that require corrective action,	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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the specific corrective actions shall be taken within a reasonable time as determined by the city of New Philadelphia.				
F. The City of New Philadelphia is authorized to enter upon the property to perform corrective actions identified in the inspection report if the landowner(s), organization or municipality responsible for maintenance does not make the required corrections in the specified time period. The City of New Philadelphia shall be reimbursed by for all maintenance for all expenses incurred within 10 days of receipt of invoice from the City of New Philadelphia, or more with written approval from the New Philadelphia Service Director.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
G. The method of funding long-term maintenance and inspections of all SCMs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
H. A release of the City of New Philadelphia from all damages, accidents, casualties, occurrences, or claims that might arise or be asserted against the City of New Philadelphia from the construction, presence, existence, or maintenance of SCMs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11) Inspection and Maintenance Plan is provided. It includes:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A. The location of each SCM and identification of the drainage area served by each SCM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B. Photographs of each SCM, including inlets and outlets upon completion of construction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
C. Schedule of inspection	-	-	-	Addressed in OEPA Checklist
D. A schedule for regular maintenance for each aspect of the stormwater management system; description of routine and non-routine maintenance tasks to ensure continued performance of the system; Inspection and maintenance checklist; Detailed drawing of each SCM and outlet structures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed in OEPA Checklist
E. The location and documentation of all access and maintenance easements on the property.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12) Required Calculations The applicant shall submit calculations for: <ul style="list-style-type: none"> ○ Projected stormwater runoff flows ○ Volumes ○ Timing into and through all SCMs for flood control ○ Channel protection, water quality, condition of the habitat, stability and incision of each water resource and its floodplain ○ Assumptions and hydrologic and hydraulic methods and parameters used for the calculations ○ Critical storm determination ○ Demonstration that the runoff from offsite areas have been considered in design 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13) List of all contractors and subcontractors before construction including names, addresses and phone numbers for for any contractor involved with the implementation of the CSMP including a written document containing signatures of all parties as proof of acknowledgement that they have reviewed and understand the requirements of the CSMP.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14) Existing and proposed drainage patterns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15) For each SCM:				
A. Location, size and detail drawings, maintenance requirements during and after construction, and design calculations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B. Final site conditions including stormwater inlets and permanent non-structural SCMs. Details of SCMs shall be	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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drawn to scale and shall show volumes and sizes of contributing drainage areas.				
C. Any other structural and or non-structural SCM necessary to meet the design criteria in this regulation and any supplemental information requested by the New Philadelphia Service Director.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
D. Each SCM shall be designated with an individual ID number	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
948.09 PERFORMANCE STANDARDS				
(a) General. The stormwater system shall be designed including SCMs for storage, treatment and control, and conveyance facilities, are designed to prevent structure flooding during the 100-yr, 24-hr storm event; to maintain predevelopment runoff patterns, flow and volumes and to meet:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1) Integrated practices that address degradation of water resources. Acceptable practices shall: A. Not disturb riparian areas unless the disturbance is intended to support a watercourse restoration project. B. Maintain predevelopment hydrology and groundwater recharge on as much of the site as practicable C. Only install new impervious surfaces and compact soils where necessary to support future land use D. Compensate for increased runoff volumes caused by new impervious surfaces and soil compaction by reducing stormwater peak flows to less than predevelopment levels E. Be designed according to the methodology included in the most current edition of the R&LD manual or other design manual acceptable for use by the City and OEPA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2) Practices designed for final use. SCMs shall be designed to achieve the stormwater management objectives of this regulation, to be compatible with the proposed post-construction use of the site, to protect public health, safety and welfare, and to function safely with routine maintenance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3) Stormwater management for all lots. Areas developed for a subdivision shall provide stormwater management and water quality controls for the development of all subdivided lots. This shall include provisions for lot grading and drainage that prevent structure flooding for the 100-yr 24 hour rain event and maintain to the extent practicable, the pre-development runoff patterns, volumes and peak flows from each lot.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4) Stormwater Facilities in water resources. SCMs and related activities shall not be shall not be constructed in water resources unless the applicant shows proof of compliance with all appropriate permits.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5) Stormwater ponds and surface conveyance channels. All stormwater ponds and surface conveyance designs must provide a minimum of 1 ft of freeboard above projected peak stage within the facility during the 100-yr, 24-hr storm. Public safety should be considered.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6) Exemption. Site may be exempt if it can be shown that the site is part of a larger common plan of development where the stormwater management requirements for the site are provided by an existing SCM, or if the SW management requirements for the site are provided by practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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defined in a regional or local stormwater management plan approved by the New Philadelphia Service Director.				
7) Maintenance. All SCMs shall be maintained in accordance with the Inspection and Maintenance Plan and Agreements approved by the New Philadelphia Service Director	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8) Ownership. SCMs servicing multiple lots in subdivisions shall be on a separate lot held and maintained by an entity of common ownership or, if compensated by the property owners, the City of New Philadelphia. SCMs serving a single lot shall be placed on the lot, protected with an easement, and maintained by the property owner.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9) Preservation of existing natural drainage. Practices that preserve and/or improves the existing natural drainage shall be used to the maximum extent practicable. Post-construction SWM practices shall provide perpetual management of runoff quality and quantity so that the receiving waters' physical, chemical and biological characteristics are maintained.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10) Preservation of Wetland Hydrology. Concentrated runoff from SCMs to wetlands shall be converted to diffuse flow before the runoff enters the wetlands in order to protect natural hydrology, hydroperiod, and wetland flora. The flow shall be released so that no erosion occurs downslope. See ord. 948.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11) Soil preservation and Post-construction Soil Restoration. To the max. extent practicable, leave native soil undisturbed and protect from compaction during construction. Areas that have been compacted or had the topsoil layer removed should be amended in accordance with Ord. 948.09(a)(11)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(b) Stormwater Conveyance Design Criteria. All SCMs shall be designed to convey stormwater to allow for the maximum removal of pollutants and reduction in flow velocities. This shall include:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1) Surface water protection. The city may allow modification to streams, rivers, lakes wetlands etc. as long as proof of compliance with OEPA, USACE and other applicable agencies is provided.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2) Off-site stormwater discharges. Off-site stormwater runoff that discharges to or across the development site shall be conveyed through the stormwater conveyance system planned for the development site as its existing peak flow rates during each design storm. Off-site flows shall be diverted around stormwater quality control facilities, or, if this is not possible, the stormwater quality control facility shall be sized to treat the off-site flow. CSMP's shall not be approved until it is demonstrated that off-site runoff will be adequately conveyed through the development site in a manner that does not exacerbate upstream or downstream flooding or erosion.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3) Sheet flow. The site shall be graded in a manner that maintains sheet flow over as large an area as possible. The maximum area of sheet flow shall be determined based on slope, the uniformity of site grading, and the use of easements or other legally binding mechanisms that prohibit re-grading and/or the placement of structures within sheet flow areas. In no case shall the sheet flow length be longer than 300 ft., nor shall a sheet flow area exceed 1.5 acres. Flow shall be directed into an open channel, storm sewer or other SCM from areas too long	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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and/or too large to maintain sheet flow, all as determined by the City.				
4) Open channels. Unless otherwise allowed by the City, drainage tributary to SCMs shall be provided by an open channel with vegetated banks and designed to carry the 10-yr, 24 hr stormwater runoff from upstream contributory areas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5) Open drainage systems	-	-	-	
A. Storm sewers are designed such that they do not discharge from runoff caused by the 10-yr, 24-hr storm and that the hydraulic grade line of the storm sewer stays below the gutter flow line of the overlying roadway, or below the top of drainage structures outside the roadway during a 25-yr, 24 hr storm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B. The minimum inside diameter of pipe to be used in public storm sewer systems is 12 inches. Smaller pipes may be used in private systems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
C. All storm sewer systems shall be designed taking into consideration the tailwater of the receiving facility or water resource. The tailwater elevation used shall be based on the design storm frequency. The hydraulic grade line shall be computed with consideration for the energy losses associated with entrance and exit into the system, friction through the system, and turbulence in the individual manholes, catch basins, and junctions within the system.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
D. The inverts of curb inlets, manholes, yard inlets, and other structures shall be formed and channelized to minimize the incidence of quiescent standing water where mosquitoes may breed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
E. Headwalls shall be required at all storm sewer inlets or outlets to and from open channels or lakes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6) Water resource crossings. The following shall be used to design water resources crossings in New Philadelphia:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A. Water resource crossings other than bridges shall be designed to convey the stream's flow for the minimum 25-yr, 24-hr storm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B. Bridges, open bottom arch or spans are the preferred crossing technique and shall be considered in the planning phase of development. Footers and piers for these bridges shall not be constructed below the OHWM.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
C. If a culvert or other closed bottom crossing is used, 25% of the cross-sectional area or a minimum of 1 ft of box culverts shall be embedded below the channel bed. The conduit or conveyance must be sized to carry the 25-yr, 24 hr storm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
D. The minimum inside diameters of pipes to be used for crossings is 12 inches.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
E. The maximum slope allowable shall be a slope that produces a 10 fps velocity within the culvert barrel under design flow conditions. Erosion protection and/or energy dissipaters shall be required to properly control entrance and outlet velocities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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F. All culvert installations shall be designed with consideration for the tailwater of the receiving facility or water resource. The tailwater elevation used shall be based on the design storm frequency.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
G. Headwalls shall be required at all culvert inlets or outlets to and from open channels or lakes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
H. Streams with a drainage area of 5 sq. miles or larger shall incorporate floodplain culverts at the bank fill elevation to restrict head loss differences across the crossing so as to cause no rise in the 100-yr storm event.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I. Bridges shall be designed such that the hydraulic profile through a bridge shall be below the bottom chord of the bridge for either the 100-yr, 24-hr storm, or the 100-yr flood elevation as determined by FEMA, whichever is more restrictive.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7) Overland Flooding. Overland flood routing paths shall be used to convey stormwater runoff from the 100-yr, 24-hr storm event to an adequate receiving water resource or SCM such that the runoff is contained within the drainage easement for the flood routing path and does not cause flooding of buildings or related structures. The peak 100-yr water surface elevation along flood routing paths shall be at least one foot below the finished grade elevation of all structures.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8) Compensatory flood storage mitigation. In order to preserve floodplain storage volumes and thereby avoid increases in water surface elevations, any filling within floodplains approved by the City must be compensated by providing an equivalent storage volume. See Ord. 949	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9) Velocity Dissipation. Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall to provide non-erosive flow velocity from the structure to a water resource so that the natural, physical and biological characteristics and functions of the water resource are maintained.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(c) Stormwater Quality Control:				
1) Direct runoff to an SCM. The site shall direct runoff to one or more of the following SCMs: Infiltration facilities basin or trench, permeable pavement- infiltration, extended detention facilities, pocket wetlands. These SCMs shall meet the following general performance standards:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A. Extended detention facilities that detain stormwater; settle or filter particulate pollutants; and release the controlled stormwater to a water resource	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B. Infiltration facilities that retain stormwater; promote settling, filtering, and biodegradation of pollutants and infiltrate captured stormwater into the ground.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
C. For sites greater than 5 acres, or less than 5 acres but part of a larger common development, the Service director may approved other SCMs if the applicant demonstrates to the New Philadelphia Service director's satisfaction that these SCMs meet the objectives of this regulation as stated in Section 948.09(c)(6) and has prior written approval from the OEPA.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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D. For construction of new roads and roadway improvement projects by public entities, the New Philadelphia Service Director may approve SCMs not included in Table 2 of this regulation but must show compliance with the current version of the Ohio Department of Transportation "Location and Design Manual, Volume II Drainage Design"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2) Criteria applying to all SCMs. All SCMs are sized to treat the water quality volume and to ensure compliance with Ohio Water Quality Standards (3745-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A. The WQv shall be equal to a 0.75" rainfall event and has been determined according to either: 1. Hydrologic study approved by the New Philadelphia Service Director that uses continuous hydrologic simulation; site specific hydrological parameters, including impervious area, soil infiltration characteristics, slope, and surface routing characteristics; proposed SCMs controlling the amount and/or timing of runoff from the site; and local long-term hourly records. 2. $WQv = C * P * A / 12$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Note: OEPA Checklist requires P=0.9 inches.
B. 20% of the calculated WQv shall be incorporated into the stormwater practice for sediment storage.	-	-	-	Addressed in OEPA Checklist
C. Each SCM is sized to treat the WQv from its drainage area.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
D. Drain time for SCMs are designed in accordance with Table 2 (see Ord.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed in OEPA Checklist
E. Sites within watersheds of cold-water habitat streams include SCMs to infiltrate the WQv or reduce the temperature of discharged runoff. SCMs that reduce the temp. of discharged runoff include bioretention, permeable pavement, underground detention, and incorporation of shading and infiltration in parking lot design.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
F. Each SCM facilitates sediment removal, vegetation management, debris control, and other maintenance activities defined in the Inspection Plan and Maintenance Agreement for the site.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3) Additional Criteria applying to infiltration facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A. Infiltration facilities should be designed to meet all criteria in R&LD manual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B. All runoff directed to an infiltration basin must first flow through a pretreatment practice such as a grass channel or filter strip to remove coarser sediments that could cause a loss of infiltration capacity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
C. During construction, all runoff from disturbed areas of the site shall be diverted away from the proposed infiltration basin site. No construction equipment shall be allowed within the infiltration basin site to avoid compaction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4) Additional Criteria for Extended Detention Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A. The outlet is designed to not release more than the first half of the WQv in less than	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed in OEPA Checklist.

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1/3 of the drain time. The outlet is designed to minimize clogging, vandalism, maintenance, and promote the capture of floatable pollutants.				
B. The basin shall incorporate the following features:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1. Side slopes above permanent pool of 4:1 or flatter.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. The perimeter of permanent pool areas deeper than 4' shall be surrounded by an aquatic bench that extends 8-15' outward from the normal water edge. The 8' wide portion shall have an average depth of 6" below the permanent pool. The remainder of the aquatic bench shall be no more than 15" below the permanent pool. The aquatic bench has a max slope of 10:1 and is planted with native species comparable to wetland vegetation that are able to withstand prolonged inundation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. A forebay shall be placed at basin inlets. The forebay and micro-pool volume shall be equal to at least 10% of the WQv.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Detention basins 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. The emergency drain should be designed to drain by gravity where possible.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5) Criteria for Acceptance of Alternative post-construction SCMs. <u>If over 5 acres, prior approval from OEPA is required.</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A. The alternative SCM has a minimum TSS removal efficiency of 80% using the Level II Technology Acceptance Reciprocity Partnership (TARP) testing protocol.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B. The water quality volume discharge rate from the selected SCM is reduced to prevent stream bed erosion, unless there will be negligible hydrologic impact to the receiving surface water of the state. The discharge rate from the SCM will have negligible impacts if the applicant can demonstrate one of the following conditions: (1) The water quality volume is recharged to groundwater, (2) The development will create less than 1 acre impervious surface, (3) the development project is a redevelopment project with an ultra-urban setting where 100% of the project is already impervious and the stormwater discharge is directed into an existing storm sewer system, (4) The storm water drainage system of the development discharges directly into a large river with drainage area equal to 100 square miles or larger upstream of the development site	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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(fourth order or larger) or to a lake where the development area is less than 5 percent of the watershed area, unless a TMDL has identified water quality problems into the receiving surface waters of the state.				
(d) Stormwater Quantity Control:	-	-	-	-
1) The peak discharge rate of runoff from the Critical Storm and all more frequent storms occurring under post-development conditions shall not exceed the peak discharge rate of runoff from a 1-yr, 24-hr storm occurring on the same development drainage area under pre-development conditions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2) Storms of less frequent occurrence than the Critical storm, up to the 100-yr, 24-hr storm shall have a peak runoff discharge rate no greater than the peak runoff rate from equivalent size storms under pre-development conditions. The 1, 2, 5, 10, 25, 50 and 100 yr storms shall be considered in designing a facility to meet this requirement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3) The Critical Storm for each drainage area shall be determined as follows: A. Determine the curve number based hydrologic method and meeting the following:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1. Calculations include lot coverage assumptions used for full build out as proposed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Calculations shall be based on entire contributing watershed to the development area.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Model the pervious, directly connected impervious and disconnected impervious areas as separate subwatersheds.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Drainage area maps shall include area, curve number, time of concentration. Time of concentration shows flow path and separation in flow type.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Rainfall depth from NOAA https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=oh	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Temporal distribution – SCS Type II rainfall distribution for all design events with recurrence interval > 1 yr. Include lot assumptions used for full build-out of the proposed condition.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Curve numbers for the pre-development condition shall reflect the average type of land use over the last 10 years and not only the current land use.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
i. Pre-development Curve Numbers – For wooded or brushy areas, use values from TR-55 NRCS in good hydrologic condition. For meadows use listed values. For all other areas, use pasture, grassland or range in good hydrologic condition.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ii. Post-development Curve Numbers – Open space areas shall use post-construction HSGs from the R&LD manual unless the soil is amended after development according to the following protocol: till the subsoil 15-18", then till using chisel, spade or rotary tillage and incorporate compost through top 12", replace topsoil to a min. depth of 4". All undisturbed areas or open space with	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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amended soils shall be treated as "open space in good condition"				
8. Time of concentration – Use velocity based methods from TR-55 to estimate travel time (Tt) for overland (sheet) flow, shallow concentrated flow and channel flow. i. Max sheet flow length is 100 ft. ii. Use an appropriate "unpaved" velocity equation for shallow concentrated flow from Soil Conservation Service National Engineer Handbook Section 4 – Hydrology (NEH-4).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. The volume reduction provided by permeable pavement, bioretention or other LID SCMs may be subtracted from the post-development stormwater volume.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B. To account for future post-construction improvements to the site, calculations shall assume an impervious surface such as asphalt or concrete for all parking areas and driveways regardless of the surface proposed in the description except in instances of engineered permeable pavement systems. From the volume determined in 948.09(D)(3)(a), determine the percent increase in volume of runoff due to development and select the 24-hr critical storm from Table 3. (See Ord.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(e) Stormwater Management on Redevelopment Projects				
1) Redevelopment projects shall reduce impervious areas by at least 20%. A 1:1 credit toward the 20% net reduction of impervious area can be obtained through the use of green roofs. Where site conditions prevent the reduction of impervious area, the SCM shall be implemented to treat at least 20% of the water quality volume.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2) When a combination of impervious area reduction and stormwater quality control facilities are used, ensure 20% net reduction of the site impervious are, provide for at least 20% of the WQv, or a combination of the two.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3) Where projects are a combination of new development and redevelopment, the total water quality volume required to be treated shall be calculated by a weighted average based on acreage, with the new development at 100% water quality and redevelopment at 20%.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4) Where conditions prevent impervious area reduction or on-site stormwater management for redevelopment projects, practical alternatives as detailed in Section 948.10 may be approved.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
948.10 ALTERNATIVE ACTIONS				
(a) Off-site alternatives may be used that result in an improvement of water quality and a reduction of stormwater quantity. Such alternatives must meet the following:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(1) Shall achieve the same level of stormwater quality and quantity control that would be achieved by the on-site controls required under this regulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(2) Implemented in the same HUC 12 watershed unit as the proposed development project	-	-	-	Addressed in OEPA Checklist
(3) The mitigation ratio of the water quality volume is 1.5 to ,1 or the water quality volume at the point of the retrofit, whichever is greater.	-	-	-	Addressed in OEPA Checklist
(4) An inspection and maintenance agreement as described Chapter 948.08(d)(10) is established	-	-	-	Addressed in OEPA Checklist

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to ensure operations and treatment in perpetuity.				
(5) Obtain prior written approval from OEPA.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
948.11 EASEMENTS				
(a) Easements shall be included in the Inspection and Maintenance Agreement submitted with the CSMP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(b) Easements shall be approved by the City prior to approval of a final plat and shall be recorded with the County Auditor and on property deeds.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(c) Unless otherwise required by the City, access easements between public ROW's and all SCMs shall be no less than 25' wide. The easement shall also incorporate the entire practice plus an additional 25'-wide band around the perimeter of the SCM.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(d) The easement 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 Inspection and Maintenance Agreement for the site.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(e) Easement to structural SCMs shall be restricted against the construction therein of building, fences, walls, and other structures that may obstruct the free flow of stormwater and the passage of inspectors and maintenance equipment; and against the changing of final grade from that described in the final grading plan approved by the City. Any re-grading and/or obstruction placed within a maintenance easement may be removed by the City at the owner's expense.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Project Name:				
Project Number:				
Review Date:				
Reviewer:				
Requirement	Compliant?			Comment
	Y	N	N/A	
949.07 COMPLIANCE WITH STATE AND FEDERAL REGULATIONS				
(a) Provide proof of compliance with Ohio EPA NPDES Construction General Permit by providing a copy of one of the three following: <ul style="list-style-type: none"> • NOI number from OEPA; • OEPA Director's Authorization Letter; • Letter from owner certifying that coverage under the OEPA NPDES Construction General Permit is not applicable. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(b) Provide proof of compliance with Section 401 of the Clean Water Act in the form of: <ul style="list-style-type: none"> • OEPA Water Quality Certification application tracking number; • Public notice; • Project approval; • Letter from the site owner certifying that a qualified professional has surveyed the site and determined that Section 401 of the Clean Water Act is not applicable. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed on OEPA Checklist
(c) Provide proof of compliance with OEPA Isolated Wetland Permit: <ul style="list-style-type: none"> • OEPA Isolated Wetland Permit application tracking number; • Public notice; • Project approval; • Letter from the site owner certifying that a qualified professional has surveyed the site and determined that the OEPA Isolated wetland permit is not applicable. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(d) Provide proof of compliance with Section 404 of the Clean Water Act in the form of: <p>...for projects that require an <u>individual permit</u>:</p> <ul style="list-style-type: none"> • USACE Individual Permit application; • Public notice; • Project approval; <p>...for projects that a <u>nationwide permit</u>:</p> <ul style="list-style-type: none"> • Letter from the site owner certifying that a qualified professional has surveyed the site and determined that Section 404 of the Clean Water act is not applicable; • A site plan showing proposed fill of waters of the US conforms to the general and special conditions specified in the applicable Nationwide Permit and provide a wetland delineation where applicable. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed on OEPA Checklist
949.08 STORMWATER POLLUTION PREVENTION PLAN				
(b) SWP3 includes Best Management Practices (BMPs) and Stormwater Control Measures (SCMs) adequate to prevent pollution of public waters by soil sediment from accelerated runoff from development areas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(c) SWP3 certified by professional engineer, registered surveyor, certified professional erosion and sediment control specialist or registered landscape architect.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(d) SWP3 includes the following note: <i>"The SWP3 shall be amended whenever there is a change in design construction, operation or maintenance, which has a significant effect on the potential for the discharge of pollutants to surface waters of the State or if the SWP3 proves to be ineffective in achieving the general objectives of controlling pollutants in stormwater discharges associated with construction activity."</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(e) Proposed SCMs are designed and incorporated in accordance with the most current edition of the Rainwater and Land Development Manual.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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https://epa.ohio.gov/divisions-and-offices/surface-water/guides-manuals/rainwater-and-land-development				
(1) Cover Page	-	-	-	Addressed on OEPA Checklist
<ul style="list-style-type: none"> • Cover page with name and location of site; • Name and contact information for all construction site operators; • Name and contact info for the person responsible for authorizing and amending the SWP3; • Preparation date; • Estimate start and completion dates of construction; 				
(2) Copy of Ohio EPA NPDES Construction General Permit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(3) Site Description				
A. Description of the nature and type of construction activity	-	-	-	Addressed on OEPA Checklist
B. (Item 1) Total area of the site (Item 2) Area of the site that is expected to be disturbed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed on OEPA Checklist
C. An estimate of impervious area and percent imperviousness created by land disturbance.	-	-	-	Addressed on OEPA Checklist
D. Calculation for pre- and post-construction site condition runoff coefficients	-	-	-	Addressed on OEPA Checklist
E. Existing soil data, and if available, the quality of any known pollutant discharge from the site such as that which may result from previous contamination caused by prior land uses.	-	-	-	Addressed on OEPA Checklist
F. Description of prior land uses	-	-	-	Addressed on OEPA Checklist
G. Implementation schedule which describes the sequence of major soil-disturbing operations, the implementation of erosion and sediment controls to be employed, and the contractor (or subcontractors) responsible for implementation of each control, and... <ul style="list-style-type: none"> • (949.09) signatures from all of the identified subcontractors indicating that they have been informed and understand their roles and responsibilities in complying with the SWP3 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed on OEPA Checklist
H. Location and name of immediate receiving stream or surface water(s) and the first subsequent receiving water(s) and aerial extent and description of wetlands or other special aquatic sites at or near the site which will be the disturbed or which will receive discharges from disturbed areas of the project. For discharges to the MS4 (City Storm), the point of discharge to the MS4 and the location where the Ms4 ultimately discharges to a water resource shall be identified.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed on OEPA Checklist
I. List of TMDLs applicable to the site and demonstrate that appropriate BMPs or SCMs have been selected to address these TMDLs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
J. For subdivided developments, a detail drawing of a typical individual lot showing standard individual lot erosion and sediment control practices	-	-	-	Addressed on OEPA Checklist
K. Location and description of any stormwater discharges associated with dedicated asphalt and dedicated concrete plants associated with the development area and the best management practices to address pollutants in these stormwater discharges.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed on OEPA Checklist
L. A log documenting grading and stabilization activities as well as amendments to the SWP3, which occur after construction activities commence.	-	-	-	Addressed on OEPA Checklist
M. Each temporary and permanent stormwater practice shall be identified with an individual ID number	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
N. Site Map				
i. Limits of soil-disturbing activity, including off-site spoil and borrow piles that re not addressed by a	-	-	-	Addressed on OEPA Checklist

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	separate by a separate NOI and associated SWP3				
ii.	Soil types including unstable/highly erodible soils	-	-	-	Addressed on OEPA Checklist
iii.	Existing and proposed 1' contours with delineation of drainage watersheds expected after major grading activities as well as the size of each watershed in acres	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed on OEPA Checklist
iv.	Surface water locations including springs, wetlands, streams, lakes, water wells, etc., on or within 200 ft of the site, including the boundaries of wetland or stream channels and first subsequent named receiving water(s) the applicant intends to fill or relocate for which the applicant is seeking approval from the USACE and/or OEPA.	-	-	-	Addressed on OEPA Checklist
v.	Existing and planned locations of buildings, roads, parking facilities, and utilities.	-	-	-	Addressed on OEPA Checklist
vi.	The location of all erosion and sediment control practices, including the location of areas likely to require temporary stabilization during the course of site development.	-	-	-	Addressed on OEPA Checklist
vii.	Sediment and stormwater management basins including their sediment settling volume and the maximum expected distributed area that will be directed to the sediment pond during construction. The plan should include a summary of the following: a. The required sediment storage and dewatering volumes b. The provided sediment storage and dewatering volumes c. The required weir length or skimmer size, as applicable d. The provided weir length or skimmer size	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed on OEPA Checklist
viii.	The location of permanent SCMs to be used to control pollutants in stormwater after construction operations have been completed.	-	-	-	Addressed on OEPA Checklist
ix.	Areas designated for the storage or disposal of solid, sanitary and toxic wastes, including dumpster areas, areas designated for cement truck washout, and vehicle fueling.	-	-	-	Addressed on OEPA Checklist
x.	Methods to minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, and sanitary waste to precipitation, stormwater runoff, and snow melt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
xi.	Measures taken to prevent and respond to chemical spills and leaks. Applicants may also reference the existence of other plans (i.e. Spill Prevention Control and countermeasure (SPCC) plans, spill control programs, Safety Response Plans, etc.) provided that such plan addresses this requirement and a copy of such plan is maintained on site.	-	-	-	Addressed on OEPA Checklist
xii.	Methods to minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. No detergents may be used to wash vehicles. Wash waters shall be treated in a sediment basin or alternative control that provides equivalent treatment prior to discharge.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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xiii.	The location of designated stoned construction entrances where vehicles will ingress and egress the construction site.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
xiv.	The location of any in-stream activities including stream crossings.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
xv.	The location where the stormwater quality hotline sign will be posted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
949.09 PERFORMANCE STANDARDS					
	949.09 All properties adjacent to the site of soil-disturbing activity shall be protected from soil erosion and sediment runoff and damage, including but not limited to, private properties, natural and artificial waterways, wetlands, storm sewers and public lands.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	(a) The SWP3 incorporates NON-STRUCTURAL PRESERVATION MEASURES to preserve the existing natural condition to the maximum extent practicable. Such practices may include preserving existing vegetation and vegetative buffer strips, phasing of construction operations, minimizing disturbance of steep slopes, designating tree-save areas or other protective clearing and grubbing practices.	-	-	-	Addressed on OEPA Checklist
	(b) The SWP3 incorporates EROSION CONTROL PRACTICES (1) Stabilization is addressed (Tables 1 and 2 included) for permanent and temporary stabilization. (2) Permanent stabilization of conveyance channels and outfalls to prevent erosive flows – seeding, dormant seeding, mulching, matting, riprap, check dams, etc.	-	-	-	Addressed on OEPA Checklist
	(c) The SWP3 incorporates RUNOFF CONTROL PRACTICES to control the volume and velocity of stormwater runoff. Peak flow rates and total stormwater volume shall be controlled. See Ord.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed on OEPA Checklist
	(d) The SWP3 incorporates SEDIMENT CONTROL PRACTICES (required for any site which will be disturbed for more than 14 days). A detail drawing shall be provided for each practice – silt fence, settling ponds, inlet protection, diversions, dikes, filter sock, etc.	-	-	-	Addressed on OEPA Checklist
	(e) PERFORMANCE STANDARDS: All sediment control practices are capable of ponding runoff. Diversion dikes/channels alone are not considered a sediment control practice unless used in conjunction with a sediment settling pond.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	(1) <u>Timing.</u> Sediment basins and barriers shall be implemented prior to grading and within 7 days from the start of grubbing. They shall continue to function until the up-slope development area is restabilized.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed on OEPA Checklist
	(2) <u>Sediment settling ponds.</u> A sediment settling pond (or equiv.) is provided if any one of the following are met: A. Concentrated stormwater runoff B. Runoff from area which exceeds the design capacity of silt fence, inlet protection, or other barrier C. Runoff from common drainage locations with 10 or more acres of disturbed land	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed on OEPA Checklist
	949.09(e)(2) Continued... The max drainage area to any <u>sediment trap</u> is less than 5 acres. A sediment basin is provided for any drainage area of 5 or more acres.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	949.09(e)(2) Continued... Sediment settling ponds have a sediment storage zone and a dewatering zone.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	949.09(e)(2) Continued... The dewatering zone of the sediment settling pond is 1,800 CF (67 CY) of storage per acre of contributing drainage area.	-	-	-	Addressed on OEPA Checklist
	949.09(e)(2) Continued... The dewatering structure of the sediment basin(s) is designed to have a minimum 48 hr drain time and withdraws runoff from the surface of the pond.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed on OEPA Checklist
	949.09(e)(2) Continued...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed on OEPA Checklist

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A skimmer device consistent with the R&LD Manual is provided to dewater sediment basins.				
949.09(e)(2) Continued... For <u>sediment traps</u> , a dewatering and sediment storage zone is provided and the outlet structure is consistent with the R&LD manual.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
949.09(e)(2) Continued... For existing stormwater ponds are to be used as temporary sediment traps/basins, a skimmer is designed and installed in accordance with R&LD manual, and sediment storage and dewatering zone volumes are met. <u>Dewatering occurs over at least a 48 hr period.</u> During construction, no discharge of runoff below the elevation of the sediment storage zone is permitted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed on OEPA Checklist
949.09(e)(2) Continued... The sediment storage zone is calculated as follows: <ul style="list-style-type: none"> • Method 1: 1000 CF per disturbed acre draining to basin • Method 2: RUSLE And includes off-site (off property) drainage areas and undisturbed drainage area.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed on OEPA Checklist
949.09(e)(2) Continued... The depth of the dewatering zone is less than or equal to 5 ft.	-	-	-	Addressed on OEPA Checklist
949.09(e)(2) Continued... The configuration between the inlet/outlet is at least 2:1 length: width	-	-	-	
949.09(e)(2) Continued... Specification provided to remove sediment once 50% sediment storage capacity has been reached.	-	-	-	Addressed on OEPA Checklist
949.09(e)(2) Continued... Public safety was considered in the design of the ponds.	-	-	-	Addressed on OEPA Checklist
(3) <u>Silt fence and diversions.</u> Sheet flow from denuded areas is intercepted by silt fence or diversion to protect adjacent properties and water resources from sediment transported via sheet flow.	-	-	-	Addressed on OEPA Checklist
949.09(e)(3) Continued... Silt fence is placed on a level contour	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
949.09(e)(3) Continued... The silt fence drainage area: slope ratios of Table 3 are met	-	-	-	Addressed on OEPA Checklist
(4) Any alternative controls for sheet flow do not exceed the drainage area: slope ratios of Table 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(5) Stormwater diversion practices are used to keep runoff away from disturbed areas and steep slopes.	-	-	-	Addressed on OEPA Checklist
(6) <u>Inlet Protection.</u> Erosion and sediment control practices such as boxed inlet protection, shall be installed to minimize sediment laden water entering active storm drain systems. All inlets receiving runoff from drainage areas of one or more acres will require sediment settling trap/basin. <i>Straw or hay bales and or filter sock around inlets are not acceptable forms of inlet protection.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed on OEPA Checklist
(7) <u>Off-site Tracking of Sediment and Dust Control.</u> The following BMPs are implemented: A. Construction entrance – shall serve as the only point of ingress/egress, is stabilized with agg. > 2” in diameter over geotextile, and in accordance with the latest R&LD. B. Streets and catch basins adjacent to construction entrances shall be kept free of sediment tracked off site. Includes any of the following additional BMPs deemed necessary: C. Perimeter fencing to control vehicle traffic ingress/egress	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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D. Designated vehicle and wheel washing areas. Wash water must be directed to a sed trap, sediment settling pond or sump pump for dewatering.				
E. Measures to comply with fugitive dust emissions (i.e. dust control including, wetting disturbed areas, tarping stockpiles, temporary stabilization and vehicle speed regulations.				
(8) <u>Surface waters of the State Protection.</u> A 50 ft buffer shall be provided around surface waters of the state or otherwise complies with 949.09(b)(1), minimize compaction and preserve topsoil.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
949.09(e)(8) Continued... If the 50 buffer around a water resource is disturbed, the following must be met:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A. All BMPs and stream crossing are designed in accordance with the most current R&LD manual				
B. Structural practices shall be designed and implemented on site to protect the water resources from the impacts of sediment runoff.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
C. No structural sediment controls are used in the water resource.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
D. Where stream crossings for roads or utilities are necessary and permitted, the project is designed such that the number of stream crossings and the width of the disturbance is minimized.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
E. Temporary stream crossings are constructed where water resource or wetland will be crossed by construction vehicles during construction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
F. Construction of bridges, culverts or sediment control structures shall not place soil, debris, or other particulate material into or close to the water resources or wetlands in such a manner that is may slough, slip or erode.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
G. <u>Concentrated stormwater runoff from BMPs to natural wetlands shall be converted to diffuse flow through the use of level spreaders or other appropriate measure before the runoff enters the wetland.</u>	-	-	-	Addressed on OEPA Checklist
H. Protected areas or critical areas, including wetlands, shall be physically marked in the field prior to earth disturbing activity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(9) <u>Modifying Controls.</u> A note is included to the effect of "If periodic inspections or other information indicates that a control has been used inappropriately or incorrectly, the applicant shall replace or modify the control for site conditions"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
949.09(f) NON-SEDIMENT POLLUTANT CONTROLS. No solid or liquid waste, including building materials, shall be discharged in stormwater runoff.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(1) <u>Waste Materials.</u> A covered dumpster shall be made available for the proper disposal of garbage, plaster, drywall, grout, gypsum and other waste materials.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(2) <u>Concrete Truck Wash Out.</u> The washing of concrete material into a street, catch basin, or other public facility, natural resource, or water of the state is prohibited. A designated area for concrete washout shall be made available.	-	-	-	Addressed on OEPA Checklist
(3) <u>Disposal of other wastewaters.</u> The discharge of washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials to a street, catch basin, or other public facility, natural resource or other wasters of the state is prohibited. If generated, these wastewaters must be collected and disposed of properly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(4) <u>Fuel/liquid tank storage.</u> All fuel/liquid tanks and drums shall be stored in a marked storage area. A dike shall be	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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constructed around this storage area with a minimum capacity of 110% of the volume of the largest container and/or a spill kit shall be provided to clean up spills. The SWP3 contains spill prevention and response procedures.				
(5) <u>Toxic or Hazardous Waste Disposal.</u> Any toxic or hazardous waste shall be disposed of properly. The discharge of fuels, oils and other pollutants used in vehicle and equipment operation and maintenance is prohibited.	-	-	-	Addressed on OEPA Checklist
(6) <u>Contaminated Soils Disposal and Runoff.</u> A note to the effect of "Previously unknown contaminated soils onsite shall be self-reported to OEPA and local authorities. Contaminated soils from redevelopment sites shall be disposed of properly. Runoff from contaminated soils shall not be discharged from the site. Control measures which may be utilized to meet this requirement A. Use berms, trenches, pits or tanks to collect contaminated runoff and prevent discharge; or B. Pump runoff from contaminated soils to the sanitary sewer with prior approval of the sanitary sewer system operator, or pump into a container for transport to an appropriate treatment or disposal facility; or C. Cover areas of contamination with tarps, daily cover or other such methods to prevent stormwater from coming into contact with contaminated materials."	-	-	-	Addressed on OEPA Checklist
949.09(g) COMPLIANCE WITH OTHER REQUIREMENTS. The SWP3 is consistent with applicable State and/or local waste disposal, sanitary sewer, or septic system regulations including provisions <u>prohibiting waste disposal by open burning</u> , and shall provide for the proper disposal of contaminated soils located within the development area.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed on OEPA Checklist
949.09(h) TRENCH AND GROUND WATER CONTROL. There shall be no sediment-laden or turbid discharges to water resources or wetlands resulting from dewatering activities. If trench and groundwater contain sediment, it must pass through a sediment settling pond or other equally effective sediment control device prior to being discharged from the construction site. (See ord.)	-	-	-	Addressed on OEPA Checklist
949.09(i) INTERNAL INSPECTIONS. The SWP3 requires that qualified personnel be assigned to conduct inspection at least once every 7 calendar days and within 24 hrs after any storm event greater than 1/2 inch of rain per 24 hr period and that certified reports must be submitted to the Service Director with 7 working days from the inspection. The SWP3 shall include: <ul style="list-style-type: none"> • inspection checklist meeting all requirements of this ordinance • Name of the person or entity responsible for conducting inspections is listed. • A note that the applicant must maintain copies of the inspection records for 3 years following final stabilization. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Partially addressed on OEPA Checklist
949.09(j) The applicant provided a description of maintenance procedures needed to ensure the continued performance of control practices and designated a responsible party for funding and maintenance of controls.	-	-	-	Addressed on OEPA Checklist

WATER QUALITY HOTLINE:

330-364-1631



Regulations/ References

Ordinance 948 Comprehensive Stormwater Management Plan

Ordinance 949 Erosion and Sediment Control

OEPA Construction General Permit

CHAPTER 948
Comprehensive Stormwater Management

948.01	Purpose and scope.	948.10	Alternative actions.
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948.07	Compliance with state and federal regulations.	948.16	Installation of water quality stormwater control measures.
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CROSS REFERENCES

Erosion and Sediment Control - see S.U. & P.S. Ch. 949

Illicit Discharge and Illegal Connection Control - see S. U. & P. S. Ch. 950

948.01 PURPOSE AND SCOPE

(a) The purpose of this regulation is to establish technically feasible and economically reasonable stormwater management standards to achieve a level of stormwater quality and quantity control that will minimize damage to property and degradation of water resources and will promote and maintain the health, safety, and welfare of the citizens of the City of New Philadelphia:

(b) This regulation requires owners who develop or re-develop their property within the City of New Philadelphia to:

- (1) Control stormwater runoff from their property and ensure that all Stormwater Control Measures (SCMs) are properly designed, 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 volume, rate, and quality of stormwater runoff originating from their property so that surface water and groundwater are protected and flooding and erosion potential are not increased.

- (4) Minimize the need to construct, repair, and replace subsurface storm drain systems.
- (5) Preserve natural infiltration and ground water recharge, and maintain subsurface flow that replenishes water resources, except in slippage prone soils.
- (6) Incorporate stormwater quality and quantity controls into site planning and design at the earliest possible stage in the development process.
- (7) Reduce the expense of remedial projects needed to address problems caused by inadequate stormwater management.
- (8) Maximize use of SCMs that serve multiple purposes including, but not limited to, flood control, erosion control, fire protection, water quality protection, recreation, and habitat preservation.
- (9) Design sites to minimize the number of stream crossings and the width of associated disturbance in order to minimize the City of New Philadelphia's future expenses related to the maintenance and repair of stream crossings.
- (10) Maintain, promote, and re-establish conditions necessary for naturally occurring stream processes that assimilate pollutants, attenuate flood flows, and provide a healthy water resource.

(c) This regulation shall apply to all parcels used or being developed, either wholly or partially, for new or relocated projects involving highways and roads; subdivisions or larger common plans of development; industrial, commercial, institutional, or residential projects; building activities on farms; redevelopment activities; grading; and all other uses that are not specifically exempted in Section 948.01.

(d) Public entities, including the State of Ohio, Tuscarawas County, and the City of New Philadelphia shall comply with this regulation for roadway projects initiated after March 10, 2006 and, to the maximum extent practicable, for projects initiated before that time.

(e) This regulation does not apply to activities regulated by, and in compliance with, the Ohio Agricultural Sediment Pollution Abatement Rules.

(f) This regulation does not require a Comprehensive Stormwater Management Plan for linear construction projects, such as pipeline or utility line installation, that do not result in the installation of impervious surface as determined by the New Philadelphia Service Director. 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 Chapter 949 Erosion and Sediment Control. (Ord. 12-2017. Passed 9-11-17.)

948.02 DEFINITIONS.

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

- (a) ACRE: A measurement of area equaling 43,560 square feet.
- (b) AS-BUILT SURVEY: A survey shown on a plan or drawing prepared by a registered Professional Surveyor indicating the actual dimensions, elevations, and locations of any structures, underground utilities, swales, detention facilities, and sewage treatment facilities after construction has been completed.

- (c) **BEST MANAGEMENT PRACTICES (BMP):** Also **STORMWATER CONTROL MEASURE (SCMs)**. Schedule of activities, prohibitions of practices, operation and maintenance procedures, treatment requirements, and other management practices (both structural and non-structural) to prevent or reduce the pollution of water resources and to control stormwater volume and rate. This includes practices to control runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. For guidance, please see U.S. EPA's National Menu of BMPs at <http://water.epa.gov/polwaste/npdes/swbmp/index.cfm>.
- (d) **CLEAN WATER ACT:** Pub. L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483, Pub. L. 97-117, and Pub. L. 100-4, 33 U.S.C. 1251 et. seq. Referred to as the Federal Water Pollution Control Act or the Federal Water Pollution Control Act Amendments of 1972.
- (e) **COMMUNITY:** The City of New Philadelphia, its designated representatives, boards, or commissions.
- (f) **COMPREHENSIVE STORMWATER MANAGEMENT PLAN:** The written document and plans meeting the requirements of this regulation that sets forth the plans and practices to minimize stormwater runoff from a development area, to safely convey or temporarily store and release post-development runoff at an allowable rate to minimize flooding and stream bank erosion, and to protect or improve stormwater quality and stream channels.
- (g) **CRITICAL STORM:** A storm that is determined by calculating the percentage increase in volume of runoff by a proposed development area for the 1 year 24 hour event. The critical storm is used to calculate the maximum allowable stormwater discharge rate from a developed site.
- (h) **DEVELOPMENT AREA:** A parcel or contiguous parcels owned by one person or persons, or operated as one development unit, and used or being developed for commercial, industrial, residential, institutional, or other construction or alteration that changes runoff characteristics.
- (I) **DEVELOPMENT DRAINAGE AREA:** A combination of each hydraulically unique watershed with individual outlet points on the development area.
- (j) **DISTURBED AREA:** An area of land subject to erosion due to the removal of vegetative cover and/or soil disturbing activities.
- (k) **DRAINAGE:** The removal of excess surface water or groundwater from land by surface or subsurface drains.
- (l) **EROSION:** The process by which the land surface is worn away by the action of wind, water, ice, gravity, or any combination of those forces.
- (m) **EXTENDED DETENTION FACILITY:** A stormwater control measure that replaces and/or enhances traditional detention facilities by releasing the runoff collected during the stormwater quality event over at least 24 to 48 hours, retarding flow and allowing pollutants to settle within the facility.
- (n) **RESERVED:**
- (o) **FINAL STABILIZATION:** All soil disturbing activities at the site have been completed and a uniform perennial vegetative cover with a density of at least 80% coverage for the area has been established or equivalent stabilization practices, such as the use of mulches or geotextiles, have been employed.
- (p) **GRADING:** The process in which the topography of the land is altered to a new slope.
- (q) **GREEN INFRASTRUCTURE:** Wet weather management approaches and technologies that utilize, enhance or mimic the natural hydrologic cycle processes of infiltration, evapotranspiration and reuse.

- (r) **HYDROLOGIC UNIT CODE:** a cataloging system developed by the United States Geological Survey and the Natural Resource Conservation Service to identify watersheds in the United States.
- (s) **IMPERVIOUS COVER:** Any surface that cannot effectively absorb or infiltrate water. This may include roads, streets, parking lots, rooftops, sidewalks, and other areas not covered by vegetation.
- (t) **INFILTRATION CONTROL MEASURE:** A stormwater control measure that does not discharge to a water resource during the stormwater quality event, requiring collected runoff to either infiltrate into the groundwater and/or be consumed by evapotranspiration, thereby retaining stormwater pollutants in the facility.
- (u) **LARGER COMMON PLAN OF DEVELOPMENT:** A contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan.
- (v) **LOW IMPACT DEVELOPMENT:** Low-impact development (LID) is a site design approach, which seeks to integrate hydrologically functional design with pollution prevention measures to compensate for land development impacts on hydrology and water quality. LID's goal is to mimic natural hydrology and processes by using small-scale, decentralized practices that infiltrate, evaporate, detain, and transpire stormwater. LID stormwater control measures (SCMs) are uniformly and strategically located throughout the site.
- (w) **MAXIMUM EXTENT PRACTICABLE:** The level of pollutant reduction that operators of small municipal separate storm sewer systems regulated under 40 C.F.R. Parts 9, 122, 123, and 124, referred to as NPDES Stormwater Phase II, must meet.
- (x) **MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4):** A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that are:
 - (1) Owned or operated by the federal government, state, municipality, township, county, district, or other public body (created by or pursuant to state or federal law) including a special district under state law such as a sewer district, flood control district or drainage districts, or similar entity, or a designated and approved management agency under section 208 of the Clean Water Act that discharges into water resources; and
 - (2) Designed or used for collecting or conveying solely stormwater,
 - (3) Which is not a combined sewer, and
 - (4) Which is not a part of a publicly owned treatment works.
- (y) **National Pollutant Discharge Elimination System (NPDES):** A regulatory program in the Federal Clean Water Act that prohibits the discharge of pollutants into surface waters of the United States without a permit.
- (z) **NONSTRUCTURAL STORMWATER CONTROL MEASURE (SCM):** Any technique that uses natural processes and features to prevent or reduce the discharge of pollutants to water resources and control stormwater volume and rate.
- (aa) **POST-DEVELOPMENT:** The conditions that exist following the completion of soil disturbing activity in terms of topography, vegetation, land use, and the rate, volume, quality, or direction of stormwater runoff.
- (bb) **PRE-CONSTRUCTION MEETING:** Meeting prior to construction between all parties associated with the construction of the project including government agencies, contractors and owners to review agency requirements and plans as submitted and approved.

- (cc) **PROFESSIONAL ENGINEER:** A Professional Engineer registered in the State of Ohio with specific education and experience in water resources engineering, acting in conformance with the Code of Ethics of the Ohio State Board of Registration for Engineers and Surveyors.
- (dd) **REDEVELOPMENT:** A construction project on land that has been previously developed and where the new land use will not increase the runoff coefficient used to calculate the water quality volume. If the new land use will increase the runoff coefficient, then the project is considered to be a new development project rather than a redevelopment project.
- (ee) **RIPARIAN AREA:** Land adjacent to any brook, creek, river, or stream having a defined bed and bank that, if appropriately sized, helps to stabilize streambanks, limit erosion, reduce flood size flows, and/or filter and settle out runoff pollutants, or performs other functions consistent with the purposes of this regulation.
- (ff) **RIPARIAN AND WETLAND SETBACK:** The real property adjacent to a water resource on which soil disturbing activities are limited, all as defined by the
- (gg) **RUNOFF:** The portion of rainfall, melted snow, or irrigation water that flows across the ground surface and is eventually returned to water resources.
- (hh) **SEDIMENT:** The soils or other surface materials that can be transported or deposited by the action of wind, water, ice, or gravity as a product of erosion.
- (ii) **SEDIMENTATION:** The deposition of sediment in water resources.
- (jj) **SITE OWNER/OPERATOR:** Any individual, corporation, firm, trust, commission, board, public or private partnership, joint venture, agency, unincorporated association, municipal corporation, county or state agency, the federal government, other legal entity, or an agent thereof that is responsible for the overall construction site.
- (kk) **SOIL DISTURBING ACTIVITY:** Clearing, grading, excavating, filling, or other alteration of the earth's surface where natural or human made ground cover is destroyed that may result in, or contribute to, increased stormwater quantity and/or decreased stormwater quality.
- (ll) **STABILIZATION:** The use of Best Management Practices or Stormwater Control Measures that reduce or prevent soil erosion by stormwater runoff, trench dewatering, wind, ice, gravity, or a combination thereof.
- (mm) **STORMWATER OR STORM WATER:** Defined at 40 CFR 122.26(b)(13) and means stormwater runoff, snow melt runoff and surface runoff and drainage.
- (nn) **STORMWATER CONTROL MEASURE (SCM):** Also Best Management Practice (BMP). Schedule of activities, prohibitions of practices, operation and maintenance procedures, treatment requirements, and other management practices (both structural and non-structural) to prevent or reduce the pollution of water resources and to control stormwater volume and rate. This includes practices to control runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. For guidance, please see U.S. EPA's National Menu of BMPs at <http://water.epa.gov/polwaste/npdes/swbmp/index.cfm>.
- (oo) **STRUCTURAL STORM WATER MANAGEMENT PRACTICE OR STORMWATER CONTROL MEASURE (SCM):** Any constructed facility, structure, or device that prevents or reduces the discharge of pollutants to water resources and controls stormwater volume and rate.
- (pp) **SURFACE WATER OF THE STATE:** Also Water Resource. Any stream, lake, reservoir, pond, marsh, wetland, or other waterway situated wholly or partly within the boundaries of the state, except those private waters which do not combine or affect a junction with surface water. Waters defined as sewerage systems, treatment works or disposal systems in Section 6111.01 of the Ohio Revised Code are not included.

- (qq) **TOTAL MAXIMUM DAILY LOAD:** The sum of the existing and/or projected point source, nonpoint source, and background loads for a pollutant to a specified watershed, water body, or water body segment. A TMDL sets and allocates the maximum amount of a pollutant that may be introduced into the water and still ensure attainment and maintenance of water quality standards.
- (rr) **WATER QUALITY VOLUME:** "Water Quality Volume (WQv)" means the volume of stormwater runoff which must be captured and treated prior to discharge from the developed site after construction is complete. WQv is based on the expected runoff generated by the mean storm precipitation volume from post-construction site conditions at which rapidly diminishing returns in the number of runoff events captured begins to occur.
- (ss) **WATER RESOURCE:** Also **SURFACE WATER WATER OF THE STATE.** Any stream, lake, reservoir, pond, marsh, wetland, or waterway situated wholly or partly within the boundaries of the state, except those private waters which do not combine or affect a junction with surface water. Waters defined as sewerage systems, treatment works or disposal systems in Section 6111.01 of the Ohio Revised Code are not included.
- (tt) **WATER RESOURCE CROSSING:** Any bridge, box, arch, culvert, truss, or other type of structure intended to convey people, animals, vehicles, or materials from one side of a watercourse to another. This does not include private, non-commercial footbridges or pole mounted aerial electric or telecommunication lines, nor does it include below grade utility lines.
- (uu) **WATERSHED:** The total drainage area contributing stormwater runoff to a single point.
- (vv) **WETLAND:** Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs, and similar areas (40 CFR 232, as amended). (Ord. 12-2017. Passed 9-11-17.)

948.03 DISCLAIMER OF LIABILITY.

(a) Compliance with the provisions of this regulation shall not relieve any person from responsibility for damage to any person otherwise imposed by law. The provisions of this regulation are promulgated to promote the health, safety, and welfare of the public and are not designed for the benefit of any individual or any particular parcel of property.

(b) By approving a Comprehensive Stormwater Management Plan under this regulation, the City of New Philadelphia does not accept responsibility for the design, installation, and operation and maintenance of SCMs. (Ord. 12-2017. Passed 9-11-17.)

948.04 CONFLICTS, SEVERABILITY, NUISANCES AND RESPONSIBILITY

(a) Where this regulation is in conflict with other provisions of law or ordinance, the most restrictive provisions, as determined by the New Philadelphia Service Director, shall prevail.

(b) If any clause, section, or provision of this regulation is declared invalid or unconstitutional by a court of competent jurisdiction, the validity of the remainder shall not be affected thereby.

(c) This regulation shall not be construed as authorizing any person to maintain a nuisance on their property, and compliance with the provisions of this regulation shall not be a defense in any action to abate such a nuisance.

(d) Failure of the City of New Philadelphia to observe or recognize hazardous or unsightly conditions or to recommend corrective measures shall not relieve the site owner from the responsibility for the condition or damage resulting therefrom, and shall not result in the City of New Philadelphia, its officers, employees, or agents being responsible for any condition or damage resulting therefrom. (Ord. 12-2017. Passed 9-11-17.)

948.05 DEVELOPMENT OF COMPREHENSIVE STORMWATER MANAGEMENT PLANS.

(a) This regulation requires that a Comprehensive Stormwater Management Plan be developed and implemented for all soil disturbing activities disturbing one (1) or more acres of total land, or less than one (1) acre if part of a larger common plan of development or sale disturbing one (1) or more acres of total land, and on which any regulated activity of Section 948.01 (C) is proposed. A Comprehensive Stormwater Management Plan must be developed and implemented for all residential, commercial and industrial site development. The New Philadelphia Service Director may require a comprehensive stormwater management plan on sites disturbing less than 1 acre.

(b) The City of New Philadelphia shall administer this regulation, shall be responsible for determination of compliance with this regulation, and shall issue notices and orders as may be necessary. The City of New Philadelphia may consult with the Tuscarawas County SWCD, state agencies, private engineers, stormwater districts, or other technical experts in reviewing the Comprehensive Stormwater Management Plan. (Ord. 12-2017. Passed 9-11-17.)

948.06 APPLICATION PROCEDURES.

(a) Pre-Application Meeting: The applicant shall attend a Pre-Application Meeting with the New Philadelphia Service Director to discuss the proposed project, review the requirements of this regulation, identify unique aspects of the project that must be addressed during the review process, and establish a preliminary review and approval schedule.

(b) Preliminary Comprehensive Stormwater Management Plan: The applicant shall submit two (2) sets of a Preliminary Comprehensive Stormwater Management Plan (Preliminary Plan) and the applicable fees to the New Philadelphia Service Director. The Preliminary Plan shall show the proposed property boundaries, setbacks, dedicated open space, public roads, water resources, stormwater control facilities, and easements in sufficient detail and engineering analysis to allow the City Engineer to determine if the site is laid out in a manner that meets the intent of this regulation and if the proposed SCMs are capable of controlling runoff from the site in compliance with this regulation. The applicant shall submit two (2) sets of the Preliminary Plan and applicable fees as follows:

- (1) For subdivisions: In conjunction with the submission of the preliminary subdivision plan.
- (2) For other construction projects: In conjunction with the application for a zoning permit.
- (3) For general clearing projects: In conjunction with the application for a zoning permit.

(c) Final Comprehensive Stormwater Management Plan: The applicant shall submit two (2) sets of a Final Comprehensive Stormwater Management Plan (Final Plan) and the applicable fees to the New Philadelphia Service Director in conjunction with the submittal of the final plat, improvement plans, or application for a building or zoning permit for the site. The Final Plan shall meet the requirements of Section 948.08 and shall be approved by the New Philadelphia Service Director prior to approval of the final plat and/or before issuance of a zoning or building permit.

(d) Review and Comment: The New Philadelphia Service Director and/or the shall review the Preliminary and Final Plans submitted, and shall approve or return for revisions with comments and recommendations for revisions. A Preliminary or Final Plan rejected because of deficiencies shall receive a narrative report stating specific problems and the procedures for filing a revised Preliminary or Final Plan.

(e) Approval Necessary: Land clearing and soil-disturbing activities shall not begin and zoning and/or building permits shall not be issued without an approved Comprehensive Stormwater Management Plan.

(f) Valid for Two Years: Approvals issued in accordance with this regulation shall remain valid for two (2) years from the date of approval.
(Ord. 12-2017. Passed 9-11-17.)

948.07 COMPLIANCE WITH STATE AND FEDERAL REGULATIONS.

Approvals issued in accordance with this regulation do not relieve the applicant of responsibility for obtaining all other necessary permits and/or approvals from other federal, state, and/or county agencies. If requirements vary, the most restrictive shall prevail. These permits may include, but are not limited to, those listed below. Applicants are required to show proof of compliance with these regulations before the City of New Philadelphia will issue a building or zoning permit.

- (a) Ohio Environmental Protection Agency (Ohio EPA) National Pollutant Discharge Elimination System (NPDES) Permits authorizing stormwater discharges associated with construction activity or the most current version thereof: Proof of compliance with these requirements shall be the applicant's Notice of Intent (NOI) number from Ohio EPA, a copy of the Ohio EPA Director's Authorization Letter for the NPDES Permit, or a letter from the site owner certifying and explaining why the NPDES Permit is not applicable.
- (b) Section 401 of the Clean Water Act: Proof of compliance shall be a copy of the Ohio EPA Water Quality Certification application tracking number, public notice, project approval, or a letter from the site owner certifying that a qualified professional has surveyed the site and determined that Section 401 of the Clean Water Act is not applicable. Wetlands, and other waters of the United States, shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time of application of this regulation.
- (c) Ohio EPA Isolated Wetland Permit: Proof of compliance shall be a copy of Ohio EPA's Isolated Wetland Permit application tracking number, public notice, project approval, or a letter from the site owner certifying that a qualified professional has surveyed the site and determined that Ohio EPA's Isolated Wetlands Permit is not applicable. Isolated wetlands shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time of application of this regulation.

- (d) Section 404 of the Clean Water Act: Proof of compliance shall be a copy of the U.S. Army Corps of Engineers Individual Permit application, public notice, or project approval, if an Individual Permit is required for the development project. If an Individual Permit is not required, the site owner shall submit proof of compliance with the U.S. Army Corps of Engineer's Nationwide Permit Program. This shall include one of the following:
- (1) A letter from the site owner certifying that a qualified professional has surveyed the site and determined that Section 404 of the Clean Water Act is not applicable.
 - (2) A site plan showing that any proposed fill of waters of the United States conforms to the general and special conditions specified in the applicable Nationwide Permit. Wetlands, and other waters of the United States, shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time of application of this regulation.
- (e) Ohio Dam Safety Law: Proof of compliance shall be a copy of the ODNR Division of Soil and Water Resources permit application tracking number, a copy of the project approval letter from the ODNR Division of Soil and Water Resources, or a letter from the site owner certifying and explaining why the Ohio Dam Safety Law is not applicable. (Ord. 12-2017. Passed 9-11-17.)

948.08 COMPREHENSIVE STORMWATER MANAGEMENT PLAN.

(a) Comprehensive Stormwater Management Plan Required: The applicant shall develop a Comprehensive Stormwater Management Plan describing how the quantity and quality of stormwater will be managed after construction is completed for every discharge from the site and/or into a water resource or small municipal separate storm sewer system (MS4). The Plan will illustrate the type, location, and dimensions of every structural and non-structural SCM incorporated into the site design, and the rationale for their selection. The rationale must address how these SCMs will address flooding within the site as well as flooding that may be caused by the development upstream and downstream of the site. The rationale will also describe how the SCMs minimize impacts to the physical, chemical, and biological characteristics of on-site and downstream water resources and, if necessary, correct current degradation of water resources that is occurring or take measures to prevent predictable degradation of water resources.

(b) Preparation by Professional Engineer: The Comprehensive Stormwater Management Plan shall be prepared by a registered Professional Engineer and include supporting calculations, plan sheets, and design details. To the extent necessary, as determined by the New Philadelphia Service Director, a site survey shall be performed by a registered Professional Surveyor to establish boundary lines, measurements, or land surfaces.

(c) Community Procedures: The New Philadelphia Service Director shall prepare and maintain procedures providing specific criteria and guidance to be followed when designing the stormwater management system for the site. These procedures may be updated from time to time, at the discretion of the New Philadelphia Service Director based on improvements in engineering, science, monitoring, and local maintenance experience. The New Philadelphia Service Director shall make the final determination of whether the practices proposed in the Comprehensive Stormwater Management Plan meet the requirements of this regulation. The New Philadelphia Service Director may also maintain a list of acceptable SCMs that meet the criteria of this regulation to be used in the City of New Philadelphia.

(d) Contents of Comprehensive Stormwater Management Plan: The Comprehensive Stormwater Management Plan shall contain an application, narrative report, construction site plan sheets, a long-term Inspection and Maintenance Plan and Inspection and Maintenance Agreement, and a site description with the following information provided:

(1) Site description:

- A. A description of the nature and type of the construction activity (e.g. residential, shopping mall, highway, etc.).
- B. 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).
- C. A description of prior land uses at the site.
- D. An estimate of the impervious area and percent imperviousness created by the soil-disturbing activity at the beginning and at the conclusion of the project.
- E. Selection (source and justification) and/or calculations of runoff coefficients for water quality volume determination, peak discharge control (curve number/critical storm method), and rational method.
- F. Existing data describing the soils throughout the site, including soil map units including series, complexes, and association, hydrologic soil group, porosity, infiltration characteristics, depth to groundwater, depth to bedrock, and any impermeable layers.
- G. If available, the quality of any known pollutant discharge from the site such as that which may result from previous contamination caused by prior land uses.
- H. The location and name of the immediate water resource(s) and the first subsequent water resource(s).
- I. The aerial (plan view) extent and description of water resources at or near the site that will be disturbed or will receive discharges from the project.
- J. If applicable, identify the point of discharge to a municipal separate storm sewer system and the location where that municipal separate storm sewer system ultimately discharges to a stream, lake, or wetland. The location and name of the immediate receiving stream or surface water(s) and the first subsequent receiving water(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 undisturbed areas of the project.
- K. TMDLs applicable for the site [refer to TMDL community identifier table at <http://www.neohiostormwater.com/>]; demonstrate that appropriate (SCMs) have been selected to address these TMDLs.
- L. For each SCM, identify the drainage area, percent impervious cover within the drainage area, runoff coefficient for water quality volume, peak discharge, and the time of concentration for each subwatershed per Appendix 1 of Ohio's stormwater manual, Rainwater and Land Development. Pervious and impervious areas should be treated as separate subwatersheds unless allowed at the discretion of the community engineer. Identify the SCM surface area, discharge and dewatering time, outlet type and dimensions. Each SCM shall be designated with an individual identification number.

- M. Describe the current condition of water resources including the vertical stability of stream channels and indications of channel incision that may be responsible for current or future sources of high sediment loading or loss of channel stability.
- (2) Site map showing:
- A. Limits of soil-disturbing activity on the site.
 - B. Soils map units for the entire site, including locations of unstable or highly erodible soils.
 - C. Existing and proposed one-foot (1') contours. This must include a delineation of drainage watersheds expected before, during, and after major grading activities as well as the size of each drainage watershed in acres.
 - D. Water resource locations including springs, wetlands, streams, lakes, water wells, and associated setbacks on or within 200 feet of the site, including the boundaries of wetlands or streams and first subsequent named receiving water(s) the applicant intends to fill or relocate for which the applicant is seeking approval from the Army Corps of Engineers and/or Ohio EPA.
 - E. Existing and planned locations of buildings, roads, parking facilities, and utilities.
 - F. The location of any in-stream activities including stream crossings.
- (3) Contact information: Company name and contact information as well as contact name, addresses, and phone numbers for the following:
- A. The Professional Engineer who prepared the Comprehensive Stormwater Management Plan.
 - B. The site owner.
- (4) Phase, if applicable, of the overall development plan.
- (5) List of subplot numbers if project is a subdivision.
- (6) Ohio EPA NPDES Permit Number and other applicable state and federal permit numbers, if available, or status of various permitting requirements if final approvals have not been received.
- (7) Location, including complete site address and subplot number if applicable.
- (8) Location of any easements or other restrictions placed on the use of the property.
- (9) A site plan sheet showing:
- A. The location of each proposed post-construction SCMs.
 - B. The geographic coordinates of the site AND each proposed practice in North American Datum Ohio State Plane North.
- It is preferred that the entire site be shown on one plan sheet to allow a complete view of the site during plan review. If a smaller scale is used to accomplish this, separate sheets providing an enlarged view of areas on individual sheets should also be provided.
- (10) Inspection and Maintenance Agreement. The Inspection and Maintenance Agreement required for SCMs under this regulation as a stand-alone document between the City and the applicant. A copy of this agreement should be attached to the property deed. The agreement shall contain the following information and provisions:
- A. Identification of the landowner(s), organization, or municipality responsible for long-term inspection and maintenance, including repairs, of the SCMs.

- B. The landowner(s), organization, or municipality shall maintain SCMs in accordance with this regulation.
 - C. The City of New Philadelphia has the authority to enter upon the property to conduct inspections as necessary, with prior notification of the property owner, to verify that the SCMs are being maintained and operated in accordance with this regulation.
 - D. The City of New Philadelphia shall maintain public records of the results of site inspections, shall inform the landowner(s), organization, or municipality responsible for maintenance of the inspection results, and shall specifically indicate in writing any corrective actions required to bring the SCMs into proper working condition.
 - E. If the City of New Philadelphia notifies the landowner(s), organization, or municipality responsible for maintenance of the maintenance problems that require correction, the specific corrective actions shall be taken within a reasonable time as determined by the City of New Philadelphia.
 - F. The City of New Philadelphia is authorized to enter upon the property and perform the corrective actions identified in the inspection report if the landowner(s), organization, or municipality responsible for maintenance does not make the required corrections in the specified time period. The City of New Philadelphia shall be reimbursed by the landowner(s), organization, or municipality responsible for maintenance for all expenses incurred within 10 days of receipt of invoice from the City of New Philadelphia, or more with written approval from the New Philadelphia Service Director.
 - G. The method of funding long-term maintenance and inspections of all SCMs.
 - H. A release of the City of New Philadelphia from all damages, accidents, casualties, occurrences, or claims that might arise or be asserted against the City of New Philadelphia from the construction, presence, existence, or maintenance of the SCMs.
- (11) Inspection and Maintenance Plan. This plan will be developed by the applicant and reviewed by the City of New Philadelphia. Once the Inspection and Maintenance Plan is approved, a recorded copy of the Plan must be submitted to the City of New Philadelphia as part of the final inspection approval as described in Section 948.12. The plan will include at a minimum:
- A. The location of each SCM and identification of the drainage area served by each SCM.
 - B. Photographs of each SCM, including all inlets and outlets upon completion of construction.
 - C. Schedule of inspection.
 - D. A schedule for regular maintenance for each aspect of the stormwater management system and description of routine and non-routine maintenance tasks to ensure continued performance of the system as is detailed in the approved Comprehensive Stormwater Management Plan. A maintenance inspection checklist written so the

- average person can understand it shall be incorporated. The maintenance plan will include a detailed drawing of each SCM and outlet structures with the parts of the outlet structure labeled. This schedule may include additional standards, as required by the [City] Engineer, to ensure continued performance of SCMs permitted to be located in, or within 50 feet of, water resources.
- E. The location and documentation of all access and maintenance easements on the property.
Alteration or termination of these stipulations is prohibited.
- (12) Required Calculations: The applicant shall submit calculations for projected stormwater runoff flows, volumes, and timing into and through all SCMs for flood control, channel protection, water quality, and the condition of the habitat, stability, and incision of each water resource and its floodplain, as required in Section 948.09 of this regulation. These submittals shall be completed for both pre- and post-development land use conditions and shall include the underlying assumptions and hydrologic and hydraulic methods and parameters used for these calculations. The applicant shall also include critical storm determination and demonstrate that the runoff from offsite areas have been considered in the calculations.
- (13) List of all contractors and subcontractors before construction: Prior to construction or before the pre-construction meeting, provide the list of all contractors and subcontractors and their names, addresses, and phones involved with the implementation of the Comprehensive Stormwater Management Plan including a written document containing signatures of all parties as proof of acknowledgment that they have reviewed and understand the requirements and responsibilities of the Comprehensive Stormwater Management Plan.
- (14) Existing and proposed drainage patterns: The location and description of existing and proposed drainage patterns and SCMs, including any related SCMs beyond the development area and the larger common development area.
- (15) For each SCM to be employed on the development area, include the following:
- A. Location and size, including detail drawings, maintenance requirements during and after construction, and design calculations, all where applicable.
 - B. Final site conditions including stormwater inlets and permanent nonstructural and structural SCMs. Details of SCMs shall be drawn to scale and shall show volumes and sizes of contributing drainage areas.
 - C. Any other structural and/or non-structural SCMs necessary to meet the design criteria in this regulation and any supplemental information requested by the New Philadelphia Service Director.
 - D. Each SCM shall be designated with an individual identification number. (Ord. 12-2017. Passed 9-11-17.)

948.09 PERFORMANCE STANDARDS.

(a) General: The stormwater system, including SCMs for storage, treatment and control, and conveyance facilities, shall be designed to prevent structure flooding during the 100-year, 24-hour storm event; to maintain predevelopment runoff patterns, flows, and volumes; and to meet the following criteria:

- (1) Integrated practices that address degradation of water resources. The SCMs shall function as an integrated system that controls flooding and minimizes the degradation of the physical, biological, and chemical integrity of the water resources receiving stormwater discharges from the site. Acceptable practices shall:
 - A. Not disturb riparian areas, unless the disturbance is intended to support a watercourse restoration project.
 - B. Maintain predevelopment hydrology and groundwater recharge on as much of the site as practicable.
 - C. Only install new impervious surfaces and compact soils where necessary to support the future land use.
 - D. Compensate for increased runoff volumes caused by new impervious surfaces and soil compaction by reducing stormwater peak flows to less than predevelopment levels.
 - E. Be designed according to the methodology included in the most current edition of Rainwater and Land Development or another design manual acceptable for use by the City and Ohio EPA.SCMs that meet the criteria in this regulation, and additional criteria required by the City of New Philadelphia, shall comply with this regulation.
- (2) Practices designed for final use: SCMs shall be designed to achieve the stormwater management objectives of this regulation, 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 routine maintenance.
- (3) Stormwater management for all lots: Areas developed for a subdivision shall provide stormwater management and water quality controls for the development of all subdivided lots. This shall include provisions for lot grading and drainage that prevent structure flooding during the 100-year, 24-hour storm; and maintain, to the extent practicable, the pre-development runoff patterns, volumes, and peaks from each lot.
- (4) Stormwater facilities in water resources: SCMs stormwater management practices and related activities shall not be constructed in water resources unless the applicant shows proof of compliance with all appropriate permits from the Ohio EPA, the U.S. Army Corps, and other applicable federal, state, and local agencies as required in Section 948.07 of this regulation, and the activity is in compliance with Chapter 949, all as determined by the New Philadelphia Service Director.
- (5) Stormwater ponds and surface conveyance channels: All stormwater pond and surface conveyance designs must provide a minimum of one (1) foot freeboard above the projected peak stage within the facility during the 100-year, 24-hour storm. When designing stormwater ponds and conveyance channels, the applicant shall consider public safety as a design factor and alternative designs must be implemented where site limitations would preclude a safe design.

- (6) Exemption: The site where soil-disturbing activities are conducted shall be exempt from the requirements of Section 948.09 if it can be shown to the satisfaction of the New Philadelphia Service Director that the site is part of a larger common plan of development where the stormwater management requirements for the site are provided by an existing SCMs, or if the stormwater management requirements for the site are provided by practices defined in a regional or local stormwater management plan approved by the New Philadelphia Service Director.
- (7) Maintenance: All SCMs shall be maintained in accordance with the Inspection and Maintenance Plan and Agreements approved by the New Philadelphia Service Director as detailed in Section 948.08.
- (8) Ownership: Unless otherwise required by the City of New Philadelphia, SCMs serving multiple lots in subdivisions shall be on a separate lot held and maintained by an entity of common ownership or, if compensated by the property owners, by the City of New Philadelphia. SCMs serving single lots shall be placed on these lots, protected within an easement, and maintained by the property owner.
- (9) Preservation of Existing Natural Drainage: Practices that preserve and/or improve the existing natural drainage 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 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 and grubbing practices; and maintaining unconcentrated stormwater runoff to and through these areas. Post-construction stormwater practices shall provide perpetual management of runoff quality and quantity so that a receiving stream's physical, chemical and biological characteristics are protected and ecological functions are maintained.
- (10) Preservation of Wetland Hydrology: Concentrated stormwater runoff from SCMs to wetlands shall be converted to diffuse flow before the runoff enters the wetlands in order to protect the natural hydrology, hydroperiod, and wetland flora. The flow shall be released such that no erosion occurs down slope. Practices such as level spreaders, vegetative buffers, infiltration basins, conservation of forest covers, and the preservation of intermittent streams, depressions, and drainage corridors may be used to maintain the wetland hydrology.
If the applicant proposes to discharge to natural wetlands, a hydrological analysis shall be performed to demonstrate that the proposed discharge matches the pre-development hydroperiods and hydrodynamics that support the wetland.
- (11) Soil Preservation and Post-Construction Soil Restoration: To the maximum extent practicable leave native soil undisturbed and protect from compaction during construction. Except for areas that will be covered by impervious surface or have been incorporated into an SCM, the soil moisture-holding capacity of areas that have been cleared and graded must be restored to that of the original, undisturbed soil to the maximum extent practicable. Areas that have been compacted or had the topsoil or duff layer removed should be amended using the following steps: 1. till subsoil to a depth of 15-18 inches, 2. incorporate compost through top 12 inches, 3. Replace with stockpiled site or imported suitable topsoil to a minimum depth of 4 inches.

(b) Stormwater Conveyance Design Criteria: All SCMs shall be designed to convey stormwater to allow for the maximum removal of pollutants and reduction in flow velocities. This shall include but not be limited to:

- (1) Surface water protection: The New Philadelphia Service Director may allow modification to streams, rivers, lakes, wetlands or other surface waters only if the applicant shows proof of compliance with all appropriate permits from the Ohio EPA, the U.S. Army Corps, and other applicable federal, state, and local agencies as required in Section 948.07 of this regulation, and the activity is in compliance with Chapter 949, all as determined by the New Philadelphia Service Director. At a minimum, stream relocation designs must show how the project will minimize changes to the vertical stability, floodplain form, channel form, and habitat of upstream and downstream channels on and off the property.
- (2) Off-site stormwater discharges: Off-site stormwater runoff that discharges to or across the applicant's development site shall be conveyed through the stormwater conveyance system planned for the development site at its existing peak flow rates during each design storm. Off-site flows shall be diverted around stormwater quality control facilities or, if this is not possible, the stormwater quality control facility shall be sized to treat the off-site flow. Comprehensive Stormwater Management Plans will not be approved until it is demonstrated to the satisfaction of the New Philadelphia Service Director that off-site runoff will be adequately conveyed through the development site in a manner that does not exacerbate upstream or downstream flooding and erosion.
- (3) Sheet flow: The site shall be graded in a manner that maintains sheet flow over as large an area as possible. The maximum area of sheet flow shall be determined based on the slope, the uniformity of site grading, and the use of easements or other legally-binding mechanisms that prohibit re-grading and/or the placement of structures within sheet flow areas. In no case shall the sheet flow length be longer than 300 feet, nor shall a sheet flow area exceed 1.5 acres. Flow shall be directed into an open channel, storm sewer, or other SCMs stormwater management practices from areas too long and/or too large to maintain sheet flow, all as determined by the New Philadelphia Service Director.
- (4) Open channels: Unless otherwise allowed by the New Philadelphia Service Director, drainage tributary to SCMs shall be provided by an open channel with vegetated banks and designed to carry the 10-year, 24-hour stormwater runoff from upstream contributory areas.
- (5) Open drainage systems: Open drainage systems shall be preferred on all new development sites to convey stormwater where feasible. Storm sewer systems shall be allowed only when the site cannot be developed at densities allowed under City of New Philadelphia zoning or where the use of an open drainage system affects public health or safety, all as determined by the New Philadelphia Service Director. The following criteria shall be used to design storm sewer systems when necessary:

- A. Storm sewers shall be designed such that they do not surcharge from runoff caused by the 10-year, 24-hour storm, and that the hydraulic grade line of the storm sewer stays below the gutter flow line of the overlying roadway, or below the top of drainage structures outside the roadway during a 25-year, 24-hour storm. The system shall be designed to meet these requirements when conveying the flows from the contributing drainage area within the proposed development and existing flows from offsite areas that are upstream from the development.
 - B. The minimum inside diameter of pipe to be used in public storm sewer systems is 12 inches. Smaller pipe sizes may be used in private systems, subject to the approval of the New Philadelphia Service Director.
 - C. All storm sewer systems shall be designed taking into consideration the tailwater of the receiving facility or water resource. The tailwater elevation used shall be based on the design storm frequency. The hydraulic grade line for the storm sewer system shall be computed with consideration for the energy losses associated with entrance into and exit from the system, friction through the system, and turbulence in the individual manholes, catch basins, and junctions within the system.
 - D. The inverts of all curb inlets, manholes, yard inlets, and other structures shall be formed and channelized to minimize the incidence of quiescent standing water where mosquitoes may breed.
 - E. Headwalls shall be required at all storm sewer inlets or outlets to and from open channels or lakes.
- (6) Water Resource Crossings. The following criteria shall be used to design structures that cross a water resource in the City of New Philadelphia:
- A. Water resource crossings other than bridges shall be designed to convey the stream's flow for the minimum 25-year, 24-hour storm.
 - B. Bridges, open bottom arch or spans are the preferred crossing technique and shall be considered in the planning phase of the development. Bridges and open spans should be considered for all State Scenic Rivers, coldwater habitat, exceptional warmwater habitat, seasonal salmonid habitat streams, and Class III headwater streams. The footers or piers for these bridges and open spans shall not be constructed below the ordinary high water mark.
 - C. If a culvert or other closed bottom crossing is used, twenty-five (25) percent of the cross-sectional area or a minimum of 1 foot of box culverts and pipe arches must be embedded below the channel bed. The conduit or conveyance must to be sized to carry the 25-year storm under these conditions.
 - D. The minimum inside diameter of pipes to be used for crossings shall be 12 inches.
 - E. The maximum slope allowable shall be a slope that produces a 10-fps velocity within the culvert barrel under design flow conditions. Erosion protection and/or energy dissipaters shall be required to properly control entrance and outlet velocities.

- F. All culvert installations shall be designed with consideration for the tailwater of the receiving facility or water resource. The tailwater elevation used shall be based on the design storm frequency.
 - G. Headwalls shall be required at all culvert inlets or outlets to and from open channels or lakes.
 - H. Streams with a drainage area of 5 square miles or larger shall incorporate floodplain culverts at the bankfull elevation to restrict head loss differences across the crossing so as to cause no rise in the 100-year storm event.
 - I. Bridges shall be designed such that the hydraulic profile through a bridge shall be below the bottom chord of the bridge for either the 100-year, 24-hour storm, or the 100-year flood elevation as determined by FEMA, whichever is more restrictive.
- (7) Overland flooding: Overland flood routing paths shall be used to convey stormwater runoff from the 100-year, 24-hour storm event to an adequate receiving water resource or SCM such that the runoff is contained within the drainage easement for the flood routing path and does not cause flooding of buildings or related structures. The peak 100-year water surface elevation along flood routing paths shall be at least one foot below the finished grade elevation at the of all structures. When designing the flood routing paths, the conveyance capacity of the site's storm sewers shall be taken into consideration.
- (8) Compensatory flood storage mitigation: In order to preserve floodplain storage volumes and thereby avoid increases in water surface elevations, any filling within floodplains approved by the City must be compensated by providing an equivalent storage volume. First consideration for the location(s) of compensatory floodplain volumes should be given to areas where the stream channel will have immediate access to the new floodplain within the limits of the development site. Consideration will also be given to enlarging existing or proposed retention basins to compensate for floodplain fill if justified by a hydraulic analysis of the contributing watershed. Unless otherwise permitted by the City of New Philadelphia, reductions in volume due to floodplain fills must be mitigated within the legal boundaries of the development. Embankment slopes used in compensatory storage areas must reasonably conform to the natural slopes adjacent to the disturbed area. The use of vertical retaining structures is specifically prohibited.
- (9) Velocity dissipation: Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall to provide non-erosive flow velocity from the structure to a water resource so that the natural physical and biological characteristics and functions of the water resource are maintained and protected.
- (c) Stormwater Quality Control:
- (1) Direct runoff to an SCM: The site shall be designed to direct runoff to one or more of the following SCMs. These practices are listed in Table 2 of this regulation and shall be designed to meet the following general performance standards:

- A. Extended detention facilities that detain stormwater; settle or filter particulate pollutants; and release the controlled stormwater to a water resource.
 - B. Infiltration facilities that retain stormwater; promote settling, filtering, and biodegradation of pollutants; and infiltrate captured stormwater into the ground. The New Philadelphia Service Director may require a soil engineering report to be prepared for the site to demonstrate that any proposed infiltration facilities meet these performance standards.
For sites less than five (5) acres, but required to create a comprehensive stormwater management plan, the New Philadelphia Service Director may approve other SCMs if the applicant demonstrates to the New Philadelphia Service Director's satisfaction that these SCMs meet the objectives of this regulation as stated in Section 948.09(c)(6).
 - C. For sites greater than five (5) acres, or less than five (5) acres but part of a larger common plan of development or sale which will disturb five (5) or more acres, the New Philadelphia Service Director may approve other SCMs if the applicant demonstrates to the New Philadelphia Service Director's satisfaction that these SCMs meet the objectives of this regulation as stated in Section 948.09(c)(6), and has prior written approval from the Ohio EPA.
 - D. For the construction of new roads and roadway improvement projects by public entities (i.e. the state, counties, townships, cities, or villages), the New Philadelphia Service Director may approve SCMs not included in Table 2 of this regulation, but must show compliance with the current version of the Ohio Department of Transportation "Location and Design Manual, Volume Two Drainage Design".
- (2) Criteria applying to all SCMs. SCMs chosen must be sized to treat the water quality volume (WQv) and to ensure compliance with Ohio Water Quality Standards (OAC Chapter 3745-1).
- A. 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:
 - 1. Through a site hydrologic study approved by the New Philadelphia Service Director that uses continuous hydrologic simulation; site-specific hydrologic parameters, including impervious area, soil infiltration characteristics, slope, and surface routing characteristics; proposed SCMs controlling the amount and/or timing of runoff from the site; and local long-term hourly records, or
 - 2. Using the following equation:

$$WQv = C * P * A / 12$$
 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 stormwater practice, in acres.

Runoff coefficients required by the Ohio Environmental Protection Agency (Ohio EPA) for use in determining the WQv can be determined using the list in Table 1 or using the following equation to calculate the runoff coefficient:

$$C = 0.858i^3 - 0.78i^2 + 0.774i + 0.04, \text{ where:}$$

I = fraction of the drainage area that is impervious

Table 1: Runoff Coefficients Based on the Type of Land Use

Land Use	Runoff Coefficient
Industrial & Commercial	0.8
High Density Residential (> 8 dwellings/acre)	0.5
Medium Density Residential (4 to 8 dwellings/acre)	0.4
Low Density Residential (< 4 dwellings/acre)	0.3
Open Space and Recreational Areas	0.2
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 stormwater treatment structure is Low Density Residential, 30% is High Density Residential, and 10% is Open Space, the runoff coefficient is calculated as follows $(0.6)(0.3) + (0.3)(0.5) + (0.1)(0.2) = (0.35)$	

- B. An additional volume equal to 20% of the WQv shall be incorporated into the stormwater practice for sediment storage. This volume shall be incorporated into the sections of stormwater practices where pollutants will accumulate.
- C. Each individual SCM must be sized to treat the WQv associated with its entire contributing drainage area. Exceptions to this may be granted by the Service Director and/or the OEPA on a case-by-case basis.
- D. Stormwater quality management practices shall be designed such that the drain time is long enough to provide treatment and protect against downstream bank erosion, but short enough to provide storage available for successive rainfall events as defined in Table 2.
- E. Sites within watersheds of coldwater habitat streams shall include SCMs to infiltrate the water quality volume or reduce the temperature of discharged runoff. SCMs that reduce the temperature of discharged runoff include bioretention, permeable pavement, underground detention, and incorporation of shading and infiltration in parking lot design.
- F. Each practice shall be designed to facilitate sediment removal, vegetation management, debris control, and other maintenance activities defined in the Inspection Plan and Maintenance Agreement for the site.

Table 2: Draw Down Times for Stormwater Control Measures

Stormwater Control Measure	Drain Time of WQv
Infiltration Facilities Basin or Trench ¹	48 hours
Permeable Pavement- Infiltration ¹	48 hours
Extended Detention Facilities <ul style="list-style-type: none"> • Dry Extended Dry Detention Basin² • Wet Extended Detention Basin³ • Constructed Wetlands (above permanent pool)⁴ • Bioretention Area/Cell^{5,6} • Sand and other Media Filtration⁵ 	48 hours 24 hours 24 hours 24 hours 24 hours
<ul style="list-style-type: none"> • Pocket Wetland⁷ 	24 hours
<p>¹ TPractices designed to full infiltrate the WQv shall empty within 48 hours to provide storage for subsequent storm events.</p> <p>² The use of a forebay and micropool is required on all dry extended detention basins. Each is to be sized at a minimum 10% of the WQv.</p> <p>³ Provide both a permanent pool and an extended detention volume above the permanent pool, each sized with at least 0.75*WQv.</p> <p>⁴ Extended detention shall be provided for the WQv above the permanent water pool.</p> <p>⁵ The surface ponding area shall completely empty within 24 hours so that there is no standing water. Shorter drawdown times are acceptable as long as design criteria in Rainwater and Land Development have been met.</p> <p>⁶ This includes grassed linear bioretention, which was previously titled enhanced water quality swale.</p> <p>⁷ 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.</p>	

(3) Additional criteria applying to infiltration facilities.

- A. Infiltration facilities should be designed to meet all criteria in Rainwater and Land Development.
- B. All runoff directed into an infiltration basin must first flow through a pretreatment practice such as a grass channel or filter strip to remove coarser sediments that could cause a loss of infiltration capacity.
- C. During construction, all runoff from disturbed areas of the site shall be diverted away from the proposed infiltration basin site. No construction equipment shall be allowed within the infiltration basin site to avoid soil compaction.

(4) Additional criteria for extended detention facilities:

- A. The outlet shall be designed to not release more than the first half of the water quality volume in less than 1/3rd of the drain time. The outlet shall be designed to minimize clogging, vandalism, maintenance, and promote the capture of floatable pollutants.
- B. The basin design shall incorporate the following features to maximize multiple uses, aesthetics, safety, and maintainability:

1. Basin side slopes above the permanent pool shall have a run to rise ratio of 4:1 or flatter.
 2. The perimeter of all permanent pool areas deeper than 4 feet shall be surrounded by an aquatic bench that extends at least 8 feet and no more than 15 feet outward from the normal water edge. The 8 feet wide portion of the aquatic bench closest to the shoreline shall have an average depth of 6 inches below the permanent pool to promote the growth of aquatic vegetation. The remainder of the aquatic bench shall be no more than 15 inches below the permanent pool to minimize drowning risk to individuals who accidentally or intentionally enter the basin, and 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). The aquatic bench shall be planted with native plant species comparable to wetland vegetation that are able to withstand prolonged inundation. The use of invasive plant species is prohibited.
 3. A forebay designed to allow larger sediment particles to settle shall be placed at basin inlets. The forebay and micropool volume shall be equal to at least 10% of the water quality volume (WQv).
 4. Detention basins 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. The emergency drain should be designed to drain by gravity where possible.
- (5) Criteria for the Acceptance of Alternative post-construction SCMs: The applicant may request approval from the Service Director for the use of alternative structural post-construction SCMs if the applicant shows to the satisfaction of the Service Director that these SCMs are equivalent in pollutant removal and runoff flow/volume reduction effectiveness to those listed in Table 2. If the site is greater than five (5) acres, or less than five (5) acres but part of a larger common plan of development or sale which will disturb five (5) or more acres, prior approval from the Ohio EPA is necessary. To demonstrate the equivalency, the applicant must show:
- A. The alternative SCM has a minimum total suspended solid (TSS) removal efficiency of 80 percent, using the Level II Technology Acceptance Reciprocity Partnership (TARP) testing protocol.
 - B. The water quality volume discharge rate from the selected SCM is reduced to prevent stream bed erosion, unless there will be negligible hydrologic impact to the receiving surface water of the State. The discharge rate from the SCM will have negligible impacts if the applicant can demonstrate one of the following conditions:
 1. The entire water quality volume is recharged to groundwater.
 2. The development will create less than one acre of impervious surface.

3. The development project is a redevelopment project with an ultra-urban setting, such as a downtown area, or on a site where 100 percent of the project area is already impervious surface and the stormwater discharge is directed into an existing storm sewer system.
4. The stormwater drainage system of the development discharges directly into a large river of fourth order or greater or to a lake, and where the development area is less than 5 percent of the water area upstream of the development site, unless a (TMDL) has identified water quality problems in the receiving surface water of the State.

(d) Stormwater Quantity Control: The Comprehensive Stormwater Management Plan shall describe how the proposed SCMs are designed to meet the following requirements for stormwater quantity control for each watershed in the development:

- (1) The peak discharge rate of runoff from the Critical Storm and all more frequent storms occurring under post-development conditions shall not exceed the peak discharge rate of runoff from a 1-year, 24-hour storm occurring on the same development drainage area under pre-development conditions.
- (2) Storms of less frequent occurrence (longer return periods) than the Critical Storm, up to the 100-year, 24-hour storm shall have peak runoff discharge rates no greater than the peak runoff rates from equivalent size storms under pre-development conditions. The 1, 2, 5, 10, 25, 50, and 100-year storms shall be considered in designing a facility to meet this requirement.
- (3) The Critical Storm for each specific development drainage area shall be determined as follows:
 - A. Determine, using a curve number-based hydrologic method shall meet the following standards:
 1. Calculations shall include the lot coverage assumptions used for full build out as proposed.
 2. Calculations shall be based on the entire contributing watershed to the development area.
 3. Model pervious, directly connected impervious and disconnected impervious areas as separate subwatersheds.
 4. Drainage area maps shall include area, curve number, time of concentrations. Time of concentration shall also show the flow path and the separation in flow type.
 5. Rainfall Depth - For the most accurate, up-to-date, location-specific rainfall data for stormwater design, use the Precipitation-Frequency Atlas of the United States, NOAA Atlas 14, Vol 2(3). [available online: <http://hdsc.nws.noaa.gov/hdsc/pfds/>.]
 6. Temporal Distribution - Use the SCS Type II rainfall distribution for all design events with a recurrence interval greater than 1 year. Include lot coverage assumptions used for full build out of the proposed condition.
 7. Curve numbers for the pre-development condition shall reflect the average type of land use over the past 10 years and not only the current land use.

- i. Pre-development Curve Numbers - For wooded or brushy areas, use listed values from TR-55 NRCS USDA Urban Hydrology for Small Watersheds, 1986 in good hydrologic condition. For meadows, use listed values. For all other areas (including all types of agriculture), use pasture, grassland, or range in good hydrologic condition.
 - ii. Post-development Curve Numbers - Open space areas shall use post-construction HSGs from Rainwater and Land Development unless the soil is amended after development according to the following protocol: till the subsoil to 15-18 inches, then till using a chisel, spader, or rotary tillage and incorporate compost through top 12 inches, replace topsoil to a minimum depth of 4 inches. All undisturbed areas or open space with amended soils shall be treated as "open space in good condition."
 8. Time of Concentration - Use velocity based methods from (TR-55 NRCS USDA Urban Hydrology in Small Watersheds, 1986) to estimate travel time (Tt) for overland (sheet) flow, shallow concentrated flow and channel flow.
 - i. Maximum sheet flow length is 100 ft.
 - ii. Use the appropriate "unpaved" velocity equation for shallow concentrated flow from Soil Conservation Service National Engineer Handbook Section 4 - Hydrology (NEH-4).
 9. The volume reduction provided by permeable pavement, bioretention, or other LID SCMs may be subtracted from the post development stormwater volume. Volume reductions for these practices may be demonstrated using methods outlined in Rainwater and Land Development or a hydrologic model acceptable to the New Philadelphia Service Director.
- B. To account for future post-construction improvements to the site, calculations shall assume an impervious surface such as asphalt or concrete for all parking areas and driveways, regardless of the surface proposed in the site description except in instances of engineered permeable pavement systems. From the volume determined in Section 948.09 (D)(3)(a), determine the percent increase in volume of runoff due to development. Using the percentage, select the 24-hour Critical Storm from Table 3.

Table 3: 24-Hour Critical Storm

If the Percentage of Increase in Volume of Runoff is:		The Critical Storm will be:
Equal to or Greater Than:	and Less Than:	
----	10	1 year
10	20	2 year
20	50	5 year
50	100	10 year
100	250	25 year
250	500	50 year
500	---	100 year

For example, if the percent increase between the pre- and post-development runoff volume for a 1-year storm is 35%, the Critical Storm is a 5-year storm. The peak discharge rate of runoff for all storms up to this frequency shall be controlled so as not to exceed the peak discharge rate from the 1-year frequency storm under pre-development conditions in the development drainage area. The post-development runoff from all less frequent storms need only be controlled to meet pre-development peak discharge rates for each of those same storms.

(e) Stormwater Management on Redevelopment Projects.

- (1) Comprehensive Stormwater Management Plans for redevelopment projects shall reduce existing site impervious areas by at least 20 percent. A one-for-one credit towards the 20 percent net reduction of impervious area can be obtained through the use of green roofs. Where site conditions prevent the reduction of impervious area, SCMs shall be implemented treat at least 20 percent of the WQv.
- (2) When a combination of impervious area reduction and stormwater quality control facilities are used, ensure a 20 percent net reduction of the site impervious area, provide for treatment of at least 20 percent of the WQv, or a combination of the two.
- (3) Where projects are a combination of new development and redevelopment, the total water quality volume required to be treated shall be calculated by a weighted average based on acreage, with the new development at 100 percent water quality volume and redevelopment at 20 percent.
- (4) Where conditions prevent impervious area reduction or on-site stormwater management for redevelopment projects, practical alternatives as detailed in Section 948.10 may be approved by the New Philadelphia Service Director. (Ord. 12-2017. Passed 9-11-17.)

948.10 ALTERNATIVE ACTIONS.

(a) When the City of New Philadelphia determines that site constraints compromise the intent of this regulation, off-site alternatives may be used that result in an improvement of water quality and a reduction of stormwater quantity. Such alternatives shall meet the following standards:

- (1) Shall achieve the same level of stormwater quantity and quality control that would be achieved by the on-site controls required under this regulation.
- (2) Implemented in the same Hydrologic Unit Code (HUC) 14 12 watershed unit as the proposed development project.
- (3) The mitigation ratio of the water quality volume is 1.5 to 1 or the water quality volume at the point of retrofit, whichever is greater.
- (4) An inspection and maintenance agreement as described in Chapter 948.08(d)(10) is established to ensure operations and treatment in perpetuity.
- (5) Obtain prior written approval from Ohio EPA.

(b) Alternative actions may include, but are not limited to the following. All alternative actions shall be approved by the New Philadelphia Service Director:

- (1) Fees, in an amount specified by the City of New Philadelphia to be applied to community-wide SCMs.
- (2) Implementation of off-site SCMs and/or the retrofit of an existing practice to increase quality and quantity control.
- (3) Stream, floodplain, or wetland restoration.
- (4) Acquisition or conservation easements on protected open space significantly contributing to stormwater control such as wetland complexes.
(Ord. 12-2017. Passed 9-11-17.)

948.11 EASEMENTS.

Access to SCMs as required by the New Philadelphia Service Director for inspections and maintenance shall be secured by easements. The following conditions shall apply to all easements:

- (a) Easements shall be included in the Inspection and Maintenance Agreement submitted with the Comprehensive Stormwater Management Plan.
- (b) Easements shall be approved by the City of New Philadelphia prior to approval of a final plat and shall be recorded with the [county] Auditor and on all property deeds.
- (c) Unless otherwise required by the New Philadelphia Service Director, access easements between a public right-of-way and all SCMs shall be no less than 25-foot wide. The easement shall also incorporate the entire practice plus an additional 25-foot wide band around the perimeter of the SCM.
- (d) The easement 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 Inspection and Maintenance Agreement for the site.
- (e) Easements to structural SCMs shall be restricted against the construction therein of buildings, fences, walls, and other structures that may obstruct the free flow of stormwater and the passage of inspectors and maintenance equipment; and against the changing of final grade from that described by the final grading plan approved by the City of New Philadelphia. Any re-grading and/or obstruction placed within a maintenance easement may be removed by the City of New Philadelphia at the property owners' expense. (Ord. 12-2017. Passed 9-11-17.)

948.12 MAINTENANCE AND FINAL INSPECTION APPROVAL.

To receive final inspection and acceptance of any project, or portion thereof, the following must be completed by the applicant and provided to the New Philadelphia Service Director:

- (a) Final stabilization must be achieved and all permanent SCMs must be installed and made functional, as determined by the New Philadelphia Service Director and per the approved Comprehensive Stormwater Management Plan.
- (b) An As-Built Certification, including As-Built Survey and Inspection, must be sealed, signed and dated by a Professional Engineer and a Professional Surveyor with a statement certifying that the stormwater control measures, as designed and installed, meet the requirements of the Comprehensive Stormwater Management Plan approved by the New Philadelphia Service Director. In evaluating this certification, the New Philadelphia Service Director may require the submission of a new set of stormwater practice calculations if he/she determines that the design was altered significantly from the approved Comprehensive Stormwater Management Plan. 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 Inspection and Maintenance Agreement.
- (c) A copy of the complete and recorded Inspection and Maintenance Plan and Inspection and Maintenance Agreement as specified in Section 948.08 must be provided to the New Philadelphia Service Director.
(Ord. 12-2017. Passed 9-11-17.)

948.13 ON-GOING INSPECTIONS.

The owner shall inspect SCMs regularly as described in the Inspection and Maintenance Plan and Inspection and Maintenance Agreement. The City of New Philadelphia has the authority to enter upon the property to conduct inspections as necessary, with prior notification of the property owner, to verify that the SCMs are being maintained and operated in accordance with this regulation. Upon finding a malfunction or other need for maintenance or repair, the City of New Philadelphia shall provide written notification to the responsible party, as detailed in the Inspection and Maintenance Agreement, of the need for maintenance. Upon notification, the responsible party shall have five (5) working days, or other mutually agreed upon time, to make repairs or submit a plan with detailed action items and established timelines. Should repairs not be made within this time, or a plan approved by the New Philadelphia Service Director for these repairs not in place, the City of New Philadelphia may undertake the necessary repairs and assess the responsible party. (Ord. 12-2017. Passed 9-11-17.)

948.14 FEES.

The Comprehensive Stormwater Management Plan review, filing, and inspection fee is part of a complete submittal and is required to be submitted to the City of New Philadelphia before the review process begins. The New Philadelphia Service Director shall establish a fee schedule based upon the actual estimated cost for providing these services.
(Ord. 12-2017. Passed 9-11-17.)

948.15 BOND.

(a) If a Comprehensive Stormwater Management Plan is required by this regulation, soil-disturbing activities shall not be permitted until a cash bond of 5% of the total project cost has been deposited with the City of New Philadelphia Finance Department. This bond shall be posted for the City of New Philadelphia to perform the obligations otherwise to be performed by the owner of the development area as stated in this regulation and to allow all work to be performed as needed in the event that the applicant fails to comply with the provisions of this regulation. The stormwater bond will be returned, less City of New Philadelphia administrative fees as determined by the New Philadelphia Service Director, when the following three criteria are met:

- (1) After 80% of the lots of the project have been complete or 100% of the total project has been permanently stabilized or three (3) years from the time of permanent stabilization have passed.
- (2) An As-Built Inspection of all stormwater control measures as described in Section 948.12 is approved by the New Philadelphia Service Director.
- (3) An Inspection and Maintenance Plan has been approved by the City of New Philadelphia and Inspection and Maintenance Agreement has been signed by the developer, the contractor, the City of New Philadelphia, and the private owner or homeowners association who will take long term responsibility for these SCMs, is accepted by the New Philadelphia Service Director.

(b) Once these criteria are met, the applicant shall be reimbursed all bond monies that were not used for any part of the project. If all of these criteria are not met after three years of permanent stabilization of the site, the [community] may use the bond monies to fix any outstanding issues with all stormwater management structures on the site and the remainder of the bond shall be given to the private lot owner/ homeowners association for the purpose of long term maintenance of the project. (Ord. 12-2017. Passed 9-11-17.)

948.16 INSTALLATION OF WATER QUALITY STORMWATER CONTROL MEASURES.

The applicant may not direct runoff through any water quality structures or portions thereof that would be degraded by construction site sediment until the entire area tributary to the structure has reached final stabilization as determined by the New Philadelphia Service Director. This occurs after the completion of the final grade at the site, after all of the utilities are installed, and the site is subsequently stabilized with vegetation or other appropriate methods. The developer must provide documentation acceptable to the New Philadelphia Service Director to demonstrate that the site is completely stabilized. Upon this proof of compliance, the water quality structure(s) may be completed and placed into service. Upon completion of installation of these practices, all disturbed areas and/or exposed soils caused by the installation of these practices must be stabilized within 2 days. (Ord. 12-2017. Passed 9-11-17.)

948.17 VIOLATIONS.

No person shall violate or cause or knowingly permit to be violated any of the provisions of this regulation, or fail to comply with any of such provisions or with any lawful requirements of any public authority made pursuant to this regulation, or knowingly use or cause or permit the use of any lands in violation of this regulation or in violation of any permit granted under this regulation. (Ord. 12-2017. Passed 9-11-17.)

948.18 APPEALS.

Any person aggrieved by any order, requirement, determination, or any other action or inaction by the City of New Philadelphia in relation to this regulation may appeal to the court of common pleas. Written notice of appeal shall be served on the City of New Philadelphia. (Ord. 12-2017. Passed 9-11-17.)

948.99 PENALTY.

(a) Any person, firm, entity or corporation; including but not limited to, the owner of the property, his agents and assigns, occupant, property manager, and any contractor or subcontractor who violates or fails to comply with any provision of this regulation is guilty of a misdemeanor of the third degree and shall be fined no more than five hundred dollars (\$500.00) or imprisoned for no more than sixty (60) days, or both, for each offense. A separate offense shall be deemed committed each day during or on which a violation or noncompliance occurs or continues.

(b) The imposition of any other penalties provided herein shall not preclude the City of New Philadelphia instituting an appropriate action or proceeding in a Court of proper jurisdiction to prevent an unlawful development, or to restrain, correct, or abate a violation, or to require compliance with the provisions of this regulation or other applicable laws, ordinances, rules, or regulations, or the orders of the City of New Philadelphia.
(Ord. 12-2017. Passed 9-11-17.)

CHAPTER 949
Erosion and Sediment Control

949.01	Purpose and scope.	949.09	Performance standards.
949.02	Definitions.	949.10	Abbreviated Stormwater Pollution Prevention Plan (SWP3).
949.03	Disclaimer of liability.	949.11	Fees.
949.04	Conflicts, severability, nuisances, and responsibility.	949.12	Bond.
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949.06	Application procedures.	949.14	Violations.
949.07	Compliance with State and Federal regulations.	949.15	Appeals.
949.08	Stormwater Pollution Prevention Plan (SWP3).	949.16	Penalty.

CROSS REFERENCES

Comprehensive Stormwater Management - see S.U. & P.S. Ch. 948
Illicit Discharge and Illegal Connection Control - see S.U. & P.S. Ch. 950

949.01 PURPOSE AND SCOPE.

(a) The purpose of this regulation is to establish technically feasible and economically reasonable standards to achieve a level of erosion and sediment control that will minimize damage to property and degradation of water resources, and will promote and maintain the health and safety of the citizens of the City of New Philadelphia:

- (b) This regulation will:
- (1) Allow development while minimizing increases in erosion and sedimentation.
 - (2) Reduce water quality impact receiving water resources that may be caused by new development or redevelopment activities.

(c) This regulation applies to all parcels used or being developed, either wholly or partially, for new or relocated projects involving highways, underground cables, or pipelines; subdivisions or larger common plans of development; industrial, commercial, institutional, or residential projects; building activities on farms; redevelopment activities; general clearing; and all other uses that are not specifically exempted in Section 949.01(d).

(d) This regulation does not apply to activities regulated by, and in compliance with, the Ohio Agricultural Sediment Pollution Abatement Rules. (Ord. 13-2017. Passed 9-11-17.)

949.02 DEFINITIONS.

(a) **ABBREVIATED STORMWATER POLLUTION PREVENTION PLAN (ABBREVIATED SWP3):** The written document that sets forth the plans and practices to be used to meet the requirements of this regulation.

(b) **ACRE:** A measurement of area equaling 43,560 square feet.

(c) **ADMINISTRATOR:** The person or entity having the responsibility and duty of administering and ensuring compliance with this regulation.

(d) **BEST MANAGEMENT PRACTICES (BMPs):** Also **STORMWATER CONTROL MEASURE (SCM).** Schedule of activities, prohibitions of practices, maintenance procedures, and other management practices (both structural and non-structural) to prevent or reduce the pollution of water resources. BMPs also include treatment requirements, operating procedures, and practices to control facility and/or construction site runoff, spillage or leaks, sludge or waste disposal; or drainage from raw material storage.

(e) **COMMENCEMENT OF CONSTRUCTION:** The initial disturbance of soils associated with clearing, grubbing, grading, placement of fill, or excavating activities or other construction activities.

(f) **COMMUNITY:** Throughout this regulation, this shall refer to the City of New Philadelphia, its designated representatives, boards, or commissions.

(g) **CONCENTRATED STORMWATER RUNOFF:** Any stormwater runoff that flows through a drainage pipe, ditch, diversion, or other discrete conveyance channel.

(h) **CONSTRUCTION ENTRANCE:** The permitted points of ingress and egress to development areas regulated under this regulation.

(i) **DEVELOPMENT AREA:** A parcel or contiguous parcels owned by one person or persons, or operated as one development unit, and used or being developed for commercial, industrial, residential, institutional, or other construction or alteration that changes runoff characteristics.

(j) **DEWATERING VOLUME:** See current Ohio Rainwater and Land Development Manual.

(k) **DISCHARGE:** The addition of any pollutant to surface waters of the state from a point source.

(l) **DISTURBANCE:** Any clearing, grading, excavating, filling, or other alteration of land surface where natural or man-made cover is destroyed in a manner that exposes the underlying soils.

- (m) **DISTURBED AREA:** An area of land subject to erosion due to the removal of vegetative cover and/or soil disturbing activities such as grading, excavating, or filling.
- (n) **DRAINAGE WATERSHED:** For the purpose of this regulation the total contributing drainage area to a BMP, i.e., the "watershed" directed to the practice. This includes offsite contributing drainage.
- (o) **DRAINAGE WAY:** A natural or manmade channel, ditch, or waterway that conveys surface water in a concentrated manner by gravity.
- (p) **EROSION:** The process by which the land surface is worn away by the action of wind, water, ice, gravity, or any combination of those forces.
- (q) **EROSION AND SEDIMENT CONTROL:** The control of soil, both mineral and organic, to minimize the removal of soil from the land surface and to prevent its transport from a disturbed area by means of wind, water, ice, gravity, or any combination of those forces.
- (r) **FINAL STABILIZATION:** All soil disturbing activities at the site have been completed and a uniform perennial vegetative cover with a density of at least 80% coverage for the area has been established or equivalent stabilization measures, such as the use of mulches or geotextiles, have been employed. In addition, all temporary erosion and sediment control practices are removed and disposed of and all trapped sediment is permanently stabilized to prevent further erosion. Final stabilization also requires the installation of permanent (post-construction) stormwater control measures (SCMs).
- (s) **GRADING:** The excavating, filling, or stockpiling of earth material, or any combination thereof, including the land in its excavated or filled condition.
- (t) **GRUBBING:** removing or grinding of roots, stumps and other unwanted material below existing grade.
- (u) **IMPERVIOUS:** That which does not allow infiltration.
- (v) **LANDSCAPE ARCHITECT:** A Professional Landscape Architect registered in the State of Ohio.
- (w) **LARGER COMMON PLAN OF DEVELOPMENT OR SALE:** A contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan.
- (x) **MAXIMUM EXTENT PRACTICABLE (MEP):** The technology-based discharge standard for Municipal Separate Storm Sewer Systems to reduce pollutants in storm water discharges that was established by the Clean Water Act §402(p). A discussion of MEP as it applies to small MS4s is found in 40 CFR 122.34.
- (y) **MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4):** A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that are:

- (1) Owned or operated by the federal government, state, municipality, township, county, district, or other public body (created by or pursuant to state or federal law) including a special district under state law such as a sewer district, flood control district or drainage districts, or similar entity, or a designated and approved management agency under Section 208 of the Federal Water Pollution Control Act that discharges into surface waters of the state; and
- (2) Designed or used for collecting or conveying solely stormwater,
- (3) Which is not a combined sewer, and
- (4) Which is not part of a publicly owned treatment works.

(z) **NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES):** The nation program for issuing, modifying, revoking and issuing, termination, monitoring and enforcing permits and enforcing pretreatment requirements, under sections 307, 402, 318, 405 under the Clean Water Act.

(aa) **OPERATOR:** Any party associated with a construction project that meets either of the following two criteria:

- (1) The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
- (2) The party has day-to-day operational control of those activities at a project which are necessary to ensure compliance with A Stormwater Pollution Prevention Plan (SWP3) for the site or other permit conditions (e.g. they are authorized to direct workers at a site to carry out activities required by the SWP3 or comply with other permit conditions.

(bb) **OWNER OR OPERATOR:** The owner or operator of any "facility or activity" subject to regulation under the NPDES program.

(cc) **SUBDIVISIONS, MAJOR AND MINOR:** See Ohio Administrative Code 711.001 for definition.

(dd) **PARCEL:** Means a tract of land occupied or intended to be occupied by a use, building or group of buildings and their accessory uses and buildings as a unit, together with such open spaces and driveways as are provided and required. A parcel may contain more than one contiguous lot individually identified by a 'Permanent Parcel Number' assigned by the Tuscarawas County Auditor's Office.

(ee) **PERCENT IMPERVIOUSNESS:** The impervious area created divided by the total area of the project site.

(ff) **PERMANENT STABILIZATION:** Establishment of permanent vegetation, decorative landscape mulching, matting, sod, rip rap, and landscaping techniques to provide permanent erosion control on areas where construction operations are complete or where no further disturbance is expected for at least one year.

(gg) **PERSON:** Any individual, corporation, firm, trust, commission, board, public or private partnership, joint venture, agency, unincorporated association, municipal corporation, county or state agency, the federal government, other legal entity, or an agent thereof.

(hh) **PHASING:** Clearing a parcel of land in distinct sections, with the stabilization of each section before the clearing of the next.

(ii) **POINT SOURCE:** Any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or the floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

(jj) **PRE-CONSTRUCTION MEETING:** A meeting between the City of New Philadelphia and all principle parties, prior to the start of any construction, at a site that requires a Stormwater Pollution Prevention Plan.

(kk) **PROFESSIONAL ENGINEER:** A Professional Engineer registered in the State of Ohio.

(ll) **QUALIFIED INSPECTION PERSONNEL:** A person knowledgeable in the principles and practice of erosion and sediment controls, who possess the skills to assess all conditions at the construction site that could impact stormwater quality and to assess the effectiveness of any sediment and erosion control measure selected to control the quality of stormwater discharges from the construction activity.

(mm) **RAINWATER AND LAND DEVELOPMENT:** Ohio's standards for stormwater management, land development, and stream protection. The most current edition of these standards shall be used with this regulation.

(nn) **RIPARIAN AREA:** The transition area between flowing water and terrestrial (land) ecosystems composed of trees, shrubs and surrounding vegetation which serve to stabilize erodible soil, improve both surface and ground water quality, increase stream shading and enhance wildlife habitat.

(oo) **RUNOFF:** The portion of rainfall, melted snow, or irrigation water that flows across the ground surface and is eventually conveyed to water resources or wetlands.

(pp) **RUNOFF COEFFICIENT:** The fraction of rainfall that will appear at the conveyance as runoff.

(qq) **SEDIMENT:** The soils or other surface materials that are transported or deposited by the action of wind, water, ice, gravity, or any combination of those forces, as a product of erosion.

(rr) **SEDIMENTATION:** The deposition or settling of sediment.

(ss) **SEDIMENT SETTLING POND:** A sediment trap, sediment basin or permanent basin that has been temporarily modified for sediment control, as described in the latest edition of Rainwater and Land Development.

(tt) **SEDIMENT STORAGE VOLUME:** See current edition of Rainwater and Land Development.

(uu) **SETBACK:** A designated transition area around water resources that is left in a natural, usually vegetated, state to protect the water resources from runoff pollution. Soil disturbing activities in this area are restricted by this regulation.

(vv) **SOIL DISTURBING ACTIVITY:** Clearing, grading, excavating, filling, grubbing or stump removal that occurs during clearing or timber activities, or other alteration of the earth's surface where natural or human made ground cover is destroyed and that may result in, or contribute to, erosion and sediment pollution.

(ww) **SOIL & WATER CONSERVATION DISTRICT:** An entity organized under Chapter 1515 of the Ohio Revised Code referring to either the Soil and Water Conservation District Board or its designated employee(s). Hereafter referred to as Tuscarawas SWCD.

(xx) **STABILIZATION:** The use of BMPs, such as seeding and mulching, that reduce or prevent soil erosion by water, wind, ice, gravity, or a combination of those forces.

(yy) **STEEP SLOPES:** Slopes that are 15 percent or greater in grade. NOTE: If otherwise defined in community zoning, use community definition.

(zz) **STORMWATER POLLUTION PREVENTION PLAN (SWP3):** The written document that sets forth the plans and practices to be used to meet the requirements of this regulation.

(aaa) **STORMWATER:** Stormwater runoff, snow melt, surface runoff, and drainage.

(bbb) **SURFACE OUTLET:** A dewatering device that only draws water from the surface of the water.

(ccc) **SURFACE WATER OF THE STATE:** Also Water Resource or Water Body. Any stream, lake, reservoir, pond, marsh, wetland, or other waterway situated wholly or partly within the boundaries of the state, except those private waters which do not combine or affect a junction with surface water. Waters defined as sewerage systems, treatment works or disposal systems in Section 6111.01 of the Ohio Revised Code are not included.

(ddd) **TEMPORARY STABILIZATION:** The establishment of temporary vegetation, mulching, geotextiles, sod, preservation of existing vegetation, and other techniques capable of quickly establishing cover over disturbed areas to provide erosion control between construction operations.

(eee) **TOPSOIL:** The upper layer of the soil that is usually darker in color and richer in organic matter and nutrients than subsoil.

(fff) **TOTAL MAXIMUM DAILY LOAD:** The sum of the existing and/or projected point source, nonpoint source, and background loads for a pollutant to a specified watershed, water resource or wetland, or water resource or wetland segment. A TMDL sets and allocates the maximum amount of a pollutant that may be introduced into the water and still ensure attainment and maintenance of water quality standard.

(ggg) **Water Quality Volume (WQv):** The volume of stormwater runoff which must be captured and treated prior to discharge from the developed site after construction is complete. WQv is based on the expected runoff generated by the mean storm precipitation volume from post-construction site conditions at which rapidly diminishing returns in the number of runoff events captured begins to occur.

(hhh) **WATER RESOURCE Also SURFACE WATER OF THE STATE:** Any stream, lake, reservoir, pond, marsh, wetland, or waterway situated wholly or partly within the boundaries of the state, except those private waters which do not combine or affect a junction with surface water. Waters defined as sewerage systems, treatment works or disposal systems in Section 6111.01 of the Ohio Revised Code are not included.

(iii) **WATERSHED:** The total drainage area contributing runoff to a single point.

(jjj) Those areas, that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs, and similar areas (40 CFR 232, as amended). (Ord. 13-2017. Passed 9-11-17.)

949.03 DISCLAIMER OF LIABILITY.

Compliance with the provisions of this regulation shall not relieve any person from responsibility for damage to any person otherwise imposed by law. The provisions of this regulation are promulgated to promote the health, safety, and welfare of the public and are not designed for the benefit of any individual or for the benefit of any particular parcel of property. (Ord. 13-2017. Passed 9-11-17.)

949.04 CONFLICTS, SEVERABILITY, NUISANCES, AND RESPONSIBILITY.

(a) Where this regulation is in conflict with other provisions of law or ordinance, the most restrictive provisions shall prevail.

(b) If any clause, section, or provision of this regulation is declared invalid or unconstitutional by a court of competent jurisdiction, the validity of the remainder shall not be affected thereby.

(c) This regulation shall not be construed as authorizing any person to maintain a private or public nuisance on their property, and compliance with the provisions of this regulation shall not be a defense in any action to abate such a nuisance.

(d) Failure of the City of New Philadelphia to observe or recognize hazardous or unsightly conditions or to recommend corrective measures shall not relieve the site owner from the responsibility for the condition or damage resulting therefrom, and shall not result in the City of New Philadelphia, its officers, employees, or agents being responsible for any condition or damage resulting therefrom. (Ord. 13-2017. Passed 9-11-17.)

949.05 DEVELOPMENT OF STORMWATER POLLUTION PREVENTION PLANS.

(a) This regulation requires that a Storm Water Pollution Prevention Plan be developed and implemented for all soil disturbing activities disturbing one (1) or more acres of total land, or less than one (1) acre if part of a larger common plan of development or sale disturbing one (1) or more acres of total land.

(b) The following activities shall submit an Abbreviated SWP3:

- (1) New single-family and/or multi-family residential construction. If such activities disturb one (1) acre or more, or are part of a larger common plan of development or sale disturbing one (1) acre or more, a full SWP3 and compliance with the Ohio EPA Construction General Permit are required.
- (2) Additions or accessory buildings for single-family and/or multi-family residential construction. If such activities disturb one (1) acre or more, or are part of a larger common plan of development or sale disturbing one (1) acre or more, a full SWP3 and compliance with the Ohio EPA Construction Site General Permit are required.
- (3) All residential and non-residential construction or parcels of less than one (1) acre.
- (4) General clearing activities not related to construction. If such activities disturb one (1) or more acre, or are part of a larger common plan of development or sale disturbing one (1) acre or more, compliance with Ohio EPA Construction Site General Permit and a full SWP3 are required.

(c) Activities disturbing 1/10 (one tenth) or less of an acre are not required to submit a SWP3 or an Abbreviated SWP. These activities must comply with all other provisions of this regulation. (Ord. 13-2017. Passed 9-11-17.)

949.06 APPLICATION PROCEDURES.

(a) Soil Disturbing Activities Submitting a Stormwater Pollution Prevention Plan (SWP3): The applicant shall submit two (2) sets of the SWP3 and the applicable fees to the City of New Philadelphia as follows:

- (1) For subdivisions: After the approval of the preliminary plans and with submittal of the improvement plans.
- (2) For other construction projects: Before issuance of a zoning permit by the Zoning/Building Code Administrator.
- (3) For general clearing projects: Prior to issuance of a zoning permit by the Zoning/Building Code Administrator.

(b) Soil Disturbing Activities Submitting an Abbreviated Stormwater Pollution Prevention Plan (SWP3): The applicant shall submit two (2) sets of the Abbreviated SWP3 and the applicable fees to the City of New Philadelphia as follows:

- (1) For subdivisions: After the approval of the preliminary plans and with submittal of the improvement plans.
- (2) For other construction projects: Before issuance of a zoning permit by the Zoning/Building Code Administrator.
- (3) For general clearing projects: Prior to issuance of a zoning permit by the Zoning/Building Code Administrator.

(c) The City of New Philadelphia Service Director shall review the plans submitted under 949.06 (a) or (b) for conformance with this regulation and approve, or return for revisions with comments and recommendations for revisions.

(d) Soil disturbing activities shall not begin and zoning permits shall not be issued without:

- (1) Approved SWP3 or Abbreviated SWP3
- (2) Installation of erosion and sediment controls
- (3) Physical marking in the field of protected areas or critical areas, including wetlands and riparian areas.

(e) SWP3 for individual sublots in a subdivision will not be approved unless the larger common plan of development or sale containing the subplot is in compliance with this regulation.

(f) The developer, engineer and contractor, and other principal parties, shall meet with the City of New Philadelphia Service Director for a Pre-Construction Meeting no less than seven (7) days prior to soil-disturbing activity at the site to ensure that erosion and sediment control devices are properly installed, limits of disturbance and buffer areas are properly delineated and construction personnel are aware of such devices and areas. Pre-Construction Meetings for Abbreviated SWP3s may be waived at the discretion of the City of New Philadelphia Service Director.

(g) Approvals issued in accordance with this regulation shall remain valid for one (1) year from the date of approval. (Ord. 13-2017. Passed 9-11-17.)

949.07 COMPLIANCE WITH STATE AND FEDERAL REGULATIONS.

Approvals issued in accordance with this regulation do not relieve the applicant of responsibility for obtaining all other necessary permits and/or approvals from the Ohio EPA, the US Army Corps of Engineers, and other federal, state, and/or county agencies. If requirements vary, the most restrictive requirement shall prevail. These permits may include, but are not limited to, those listed below. All submittals required to show proof of compliance with these state and federal regulations shall be submitted with SWP3s or Abbreviated SWP3s.

- (a) Ohio EPA NPDES Permits authorizing stormwater discharges associated with construction activity or the most current version thereof: Proof of compliance with these requirements shall be the applicant's Notice of Intent (NOI) number from Ohio EPA, a copy of the Ohio EPA Director's Authorization Letter for the NPDES Permit, or a letter from the site owner certifying and explaining why the NPDES Permit is not applicable.

- (b) Section 401 of the Clean Water Act: Proof of compliance shall be a copy of the Ohio EPA Water Quality Certification application tracking number, public notice, project approval, or a letter from the site owner certifying that a qualified professional has surveyed the site and determined that Section 401 of the Clean Water Act is not applicable. Wetlands, and other waters of the United States, shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time an application is made under this regulation.
- (c) Ohio EPA Isolated Wetland Permit: Proof of compliance shall be a copy of Ohio EPA's Isolated Wetland Permit application tracking number, public notice, project approval, or a letter from the site owner certifying that a qualified professional has surveyed the site and determined that Ohio EPA's Isolated Wetlands Permit is not applicable. Isolated wetlands shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time an application is made under this regulation.
- (d) Section 404 of the Clean Water Act: Proof of compliance shall be a copy of the U.S. Army Corps of Engineers Individual Permit application, public notice, or project approval, if an Individual Permit is required for the development project. If an Individual Permit is not required, the site owner shall submit proof of compliance with the U.S. Army Corps of Engineer's Nationwide Permit Program. This shall include one of the following:
 - (1) A letter from the site owner certifying that a qualified professional has evaluated the site and determined that Section 404 of the Clean Water Act is not applicable, and provide documentation.
 - (2) A site plan showing that any proposed fill of waters of the United States conforms to the general and special conditions specified in the applicable Nationwide Permit. Wetlands, and other waters of the United States, shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time an application is made under this regulation.
- (e) Ohio Dam Safety Law: Proof of compliance shall be a copy of the ODNR Division of Water permit application tracking number, a copy of the project approval letter from the ODNR Division of Water, or a letter from the site owner certifying and explaining why the Ohio Dam Safety Law is not applicable. (Ord. 13-2017. Passed 9-11-17.)

949.08 STORMWATER POLLUTION PREVENTION PLAN (SWP3).

- (a) In order to control sediment pollution of water resources, the applicant shall submit a SWP3 in accordance with the requirements of this regulation.
- (b) The SWP3 shall include Best Management Practices (BMPs) and Stormwater Control Measures (SCMs) adequate to prevent pollution of public waters by soil sediment from accelerated storm water runoff from development areas.
- (c) The SWP3 shall be certified by a professional engineer, a registered surveyor, certified professional erosion and sediment control specialist, or a registered landscape architect.
- (d) The SWP3 shall be amended whenever there is a change in design, construction, operation or maintenance, which has a significant effect on the potential for the discharge of pollutants to surface waters of the state or if the SWP3 proves to be ineffective in achieving the general objectives of controlling pollutants in stormwater discharges associated with construction activity.

(e) The SWP3 shall incorporate measures as recommended by the most current online edition of Rainwater and Land Development as published by the Ohio Environmental Protection Agency and shall include the following information:

- (1) A cover page or title identifying the name and location of the site, the name and contact information of all construction site operators, the name and contact information for the person responsible for authorizing and amending the SWP3, preparation date, and the estimated start and completion dates for construction.
- (2) A copy of the permit requirements (attaching a copy of the current Ohio EPA NPDES Construction General Permit is acceptable).
- (3) Site description: The SWP3 shall provide:
 - A. A description of the nature and type of the construction activity (e.g. residential, shopping mall, highway, etc.).
 - B. Total area of the site and the area of the site that is expected to be disturbed (i.e., grubbing, clearing, excavating, filling or grading, including off-site borrow areas).
 - C. An estimate of the impervious area and percent of imperviousness created by the land disturbance.
 - D. A calculation of the run-off coefficients for both the pre-construction and post-construction site conditions.
 - E. Existing data describing the soil and, if available, the quality of any known pollutant discharge from the site such as that which may result from previous contamination caused by prior land uses.
 - F. A description of prior land uses.
 - G. An implementation schedule which describes the sequence of major soil-disturbing operations (i.e., grubbing, excavating, grading, utilities and infrastructure installation) and the implementation of erosion and sediment controls to be employed during each operation of the sequence.
 - H. The location and name of the immediate receiving stream or surface water(s) and the first subsequent receiving water(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. For discharges to a municipal separate storm sewer system (MS4), the point of discharge to the MS4 and the location where the MS4 ultimately discharges to a water resource shall be indicated.
 - I. List TMDLs applicable for the site and demonstrate that appropriate BMPs or stormwater control measures (SCMs) have been selected to address these TMDLs.
 - J. For subdivided developments a detail drawing of a typical individual lot showing standard individual lot erosion and sediment control practices. This does not remove the responsibility to designate specific erosion and sediment control practices in the SWP3 for areas such as steep slopes, stream banks, drainage ways, and riparian zones.

- K. Location and description of any stormwater discharges associated with dedicated asphalt and dedicated concrete plants associated with the development area and the best management practices to address pollutants in these stormwater discharges.
- L. A log documenting grading and stabilization activities as well as amendments to the SWP3, which occur after construction activities commence.
- M. Each temporary and permanent stormwater practice shall be designated with an individual identification number.
- N. Site map showing:
 - i. Limits of soil-disturbing activity of the site, including off site spoil and borrow areas.
 - ii. Soils types should be depicted for all areas of the site, including locations of unstable or highly erodible soils.
 - iii. Existing and proposed one-foot (1') contours. This must include a delineation of drainage watersheds expected during and after major grading activities as well as the size of each drainage watershed in acres.
 - iv. Surface water locations including springs, wetlands, streams, lakes, water wells, etc., on or within 200 feet of the site, including the boundaries of wetlands or stream channels and first subsequent named receiving water(s) the applicant intends to fill or relocate for which the applicant is seeking approval from the Army Corps of Engineers and/or Ohio EPA.
 - v. Existing and planned locations of buildings, roads, parking facilities, and utilities.
 - vi. The location of all erosion and sediment control practices, including the location of areas likely to require temporary stabilization during the course of site development.
 - vii. Sediment and stormwater management basins including their sediment settling volume and the maximum expected disturbed area that will be directed to the sediment pond during construction. The plan should include a summary of the following:
 - a. The required sediment storage and dewatering volumes
 - b. The provided sediment storage and dewatering volumes
 - c. The weir length or skimmer size, as applicable
 - d. The weir length or skimmer size provided
 - viii. The location of permanent SCMs to be used to control pollutants in stormwater after construction operations have been completed.
 - ix. Areas designated for the storage or disposal of solid, sanitary and toxic wastes, including dumpster areas, areas designated for cement truck washout, and vehicle fueling.

- x. Methods to minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, and sanitary waste to precipitation, stormwater runoff, and snow melt.
- xi. Measures to prevent and respond to chemical spills and leaks. Applicants may also reference the existence of other plans (i.e., Spill Prevention Control and Countermeasure (SPCC) plans, spill control programs, Safety Response Plans, etc.) provided that such plan addresses this requirement and a copy of such plan is maintained on site.
- xii. Methods to minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. No detergents may be used to wash vehicles. Wash waters shall be treated in a sediment basin or alternative control that provides equivalent treatment prior to discharge.
- xiii. The location of designated stoned construction entrances where the vehicles will ingress and egress the construction site.
- xiv. The location of any in-stream activities including stream crossings. (Ord. 13-2017. Passed 9-11-17.)

949.09 PERFORMANCE STANDARDS.

The SWP3 must contain a description of the controls appropriate for each construction operation and the applicant must implement such controls. The SWP3 must clearly describe for each major construction activity the appropriate control measures; the general sequence during the construction process under which the measures will be implemented; and the contractor responsible for implementation (e.g., contractor A will clear land and install perimeter controls and contractor B will maintain perimeter controls until final stabilization).

The approved SWP3, and the sediment and erosion controls, and non-sediment pollution controls contained therein, shall be implemented upon the commencement of construction. Perimeter controls must be installed two working days prior to commencement of construction. The approved plan must be implemented until the site reaches final stabilization. All properties adjacent to the site of soil-disturbing activity shall be protected from soil erosion and sediment run-off and damage, including, but not limited to, private properties, natural and artificial waterways, wetlands, storm sewers and public lands.

It is the owner's responsibility to maintain current records of contractor(s) responsible for implementation the SWP3 and providing that information to City of New Philadelphia Service Director. The SWP3 shall identify all subcontractors engaged in activities that could impact stormwater runoff. The SWP3 shall contain signatures from all of the identified subcontractors indicating that they have been informed and understand their roles and responsibilities in complying with the SWP3. The applicant shall review the SWP3 with the primary contractor prior to commencement of construction activities and keep a SWP3 training log to demonstrate that this review had occurred.

Erosion and sediment controls shall be designed, installed and maintained effectively to minimize the discharge of pollutants during the course of earth disturbing activities. The controls shall include the following minimum components:

- (a) **NON-STRUCTURAL PRESERVATION MEASURES:** The SWP3 must make use of practices that preserve the existing natural condition to the maximum extent practicable. Such practices may include preserving riparian areas, preserving existing vegetation and vegetative buffer strips, phasing of construction operations in order to minimize the amount of disturbed land at any one time, minimizing disturbance of steep slopes, designation of tree preservation areas or other protective clearing or grubbing practices. Soil compaction shall be minimized and, unless infeasible, topsoil shall be preserved. Provide and maintain a 50-foot buffer of undisturbed natural vegetation around surface waters of the state, or riparian or wetland setbacks, if applicable, whichever is greater, unless maintaining this buffer is infeasible (e.g., stream crossings for roads or utilities, or for channel and floodplain rehabilitation and restoration). Direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration.
- (b) **EROSION CONTROL PRACTICES:** The SWP3 must make use of erosion controls that are capable of providing cover over disturbed soils. The amount of soil exposed during construction activity shall be minimized. A description of control practices designed to restabilize disturbed areas after grading or construction shall be included in the SWP3. The SWP3 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 any time of the year. Such practices may include: temporary seeding, permanent seeding, mulching, matting, sod stabilization, vegetative buffer strips, phasing of construction operations, the use of construction entrances, and the use of alternative ground cover.
- Erosion control practices must meet the following requirements:
- (1) Stabilization. Disturbed areas must be stabilized as specified in Tables 1 and 2 below.

Table 1: Permanent Stabilization

Area Requiring Permanent Stabilization	Time Frame to Apply Erosion Controls
Any area that will lie dormant for one year or more	Within 7 days of the most recent disturbances
Any area within 50 feet of a surface water of the state and at final grade	Within 2 days of reaching final grade
Any other areas at final grade	Within 7 days of reaching final grade with that area

Table 2: Temporary Stabilization

Area Requiring Temporary Stabilization	Time Frame to Apply Erosion Controls
Any disturbed area within 50 feet of a surface water of the state and not at final grade	Within 2 days of the most recent disturbance if that area will remain idle for more than 14 days.
For all construction activities, any disturbed area, including soil stockpiles that will be dormant for more than 14 days but less than one year, and not within 50 feet of a surface water of the state	Within 7 days of the most recent disturbance within the area. For residential subdivisions, disturbed areas must be stabilized at least 7 days prior to transfer of ownership or operational responsibility.
Disturbed areas that will be idle over winter	Prior to November 1, or the onset of winter weather, whichever occurs first.
Note: Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed.	

- (2) Permanent stabilization of conveyance channels. Applicants shall undertake special measures to stabilize channels and outfalls and prevent erosive flows. Measures may include seeding, dormant seeding, mulching, erosion control matting, sodding, riprap, natural channel design with bioengineering techniques, or rock check dams, all as defined in the most recent edition of Rainwater and Land Development or the Field Office Technical Guide available at www.nrcs.usda.gov/technical/efotg/.
- (c) **RUNOFF CONTROL PRACTICES.** The SWP3 shall incorporate measures that control the volume and velocity of stormwater runoff within the site to prevent erosion. Peak flow rates and total stormwater volume shall be controlled to minimize erosion and outlets, downstream channel and streambank erosion. 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. Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected.
- (d) **SEDIMENT CONTROL PRACTICES.** The SWP3 shall include a description of, and detailed drawings for, all structural practices that shall store runoff, allowing sediments to settle and/or divert flows away from exposed soils or otherwise limit runoff from exposed areas to minimize sediment discharges from the site. Structural practices shall be used to control erosion and trap sediment from a site remaining disturbed for more than 14 days. Such practices may include, among others: sediment settling ponds, silt fences, storm drain inlet

protection, and earth diversion dikes or channels which direct runoff to a sediment settling pond. The design, installation and maintenance of erosion and sediment controls shall address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site.

- (e) All sediment control practices must be capable of ponding runoff in order to be considered functional. Earth diversion dikes or channels alone are not considered a sediment control practice unless used in conjunction with a sediment settling pond.

Sediment control practices must meet the following requirements.

- (1) Timing. Sediment control structures shall be functional throughout the course of earth disturbing activity. Sediment basins and perimeter sediment barriers shall be implemented prior to grading and within seven (7) days from the start of grubbing. They shall continue to function until the up slope development area is restabilized. As construction progresses and the topography is altered, appropriate controls must be constructed or existing controls altered to address the changing drainage patterns.
- (2) Sediment settling ponds. A sediment settling pond, or equivalent best management practice upon approval from the City of New Philadelphia Service Director and/or the is required for any one of the following conditions:
 - A. Concentrated stormwater runoff.
 - B. Runoff from drainage areas which exceeds the design capacity of silt fence (see table 3) - inlet protection, or other sediment barriers;
 - C. Runoff from common drainage locations with 10 or more acres of disturbed land.

Sediment settling ponds shall be provided in the form of a sediment trap or sediment basin as defined in the latest edition of Rainwater and Land Development. The maximum allowable contributing drainage area to a sediment trap shall be limited to less than 5 acres. Contributing drainage areas of 5 acres or more shall be treated with a sediment basin. An equivalent best management practice may be utilized upon approval from the City of New Philadelphia.

The sediment-settling pond shall provide both a sediment storage zone and a dewatering zone. The volume of the dewatering zone shall be at least 1,800 cubic feet of storage per acre of total contributing drainage area. The dewatering structure of sediment basins shall be designed to have a minimum 48-hour drain time, and, unless infeasible, be designed to always withdraw runoff from the surface of the pond throughout the storm cycle. As such, a skimmer discharge device consistent with Rainwater and Land Development shall be provided to dewater sediment basins. Sediment traps shall also provide both a sediment storage zone and dewatering zone, but the outlet structure shall be constructed consistent with the specifications contained in the latest edition of Rainwater and Land Development.

When post-construction detention/water quality ponds are to be used as temporary sediment trapping BMPs, a skimmer discharge device consistent with Rainwater and Land Development shall be utilized during construction phase and until the site is deemed permanently stabilized by the City of New Philadelphia

The skimmer shall be designed per the equivalent requirements of sediment basins and the operator must ensure that the outlet structure of the pond provides an equivalent or better sediment storage zone and dewatering zone. As such, temporarily while the site is under construction, there shall be no discharge of runoff below the elevation required for the sediment storage zone and the discharge of stormwater within the dewatering zone shall only occur through the skimmer. The volume of the sediment storage zone shall be calculated by one of the following methods:

Method 1: The volume of the sediment storage zone shall be 1000ft³ per disturbed acre within the watershed of the basin.

Method 2: The volume of the sediment storage zone shall be the volume necessary to store the sediment as calculated with RUSLE or other generally accepted erosion prediction model.

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 settling pond and is not co-mingled with sediment-laden runoff. The depth of the dewatering zone must be less than or equal to five (5) feet. The configuration between the inlets and the outlet of the sediment-settling pond must provide at least two [or four] units of length for each one unit of width ? 2:1 length-to-width ratio; however, a length to width ratio of ? 4:1 is recommended. Sediment must be removed from the sediment-settling pond when the design capacity of the sediment storage zone has been completely filled by sediment accumulations has been reduced by 40 percent. This limit is typically reached when sediment occupies one-half of the basin depth. When designing sediment settling ponds, the applicant must consider public safety, especially as it relates to children, as a design factor for the sediment basin and alternative sediment controls must be used where site limitations would preclude a safe design. The use of a combination of sediment and erosion control measures in order to achieve maximum pollutant removal is encouraged.

- (3) Silt fence and diversions. Sheet flow runoff from denuded areas shall be intercepted by silt fence or diversions to protect adjacent properties and water resources from sediment transported via sheet flow. Where intended to provide sediment control, silt fence shall be placed on a level contour and shall be capable of temporarily ponding runoff. The relationship between the maximum drainage area to silt fence for a particular slope range is shown in Table 3 below. Placing silt fence in a parallel series does not extend the size of the permissible drainage area.

Table 3: Maximum Drainage Area to Silt Fence Based on Slope

Maximum Drainage Area (acres) to 100 linear feet of silt fence	Range of Slope for a Drainage Area (%)
0.5	< 2%
0.25	≥ 2% but < 20%
0.125	≥ 20% but < 50%

- (4) Alternative perimeter controls for sheet flow discharges may be considered by the City of New Philadelphia, but their use shall not exceed the limitations indicated in Table 3 above. Detail drawings and plan notes shall specify the diameter of filter socks, compost berms and other such alternative perimeter controls if used instead of silt fence.
- (5) Stormwater diversion practices shall be used to keep runoff away from disturbed areas and steep slopes. Such devices, which include swales, dikes or berms, may receive storm water runoff from areas up to 10 acres.
- (6) Inlet protection. Erosion and sediment control practices, such as boxed inlet protection, shall be installed to minimize sediment-laden water entering active storm drain systems. All inlets receiving runoff from drainage areas of one or more acres will require a sediment settling pond. Straw or hay bales and filter socks around catch basins are not acceptable forms of inlet protection.
- (7) Off-site tracking of sediment and dust control. Best management practices must be implemented to ensure sediment is not tracked off-site and that dust is controlled. These best management practices must include, but are not limited to, the following:
- A. Construction entrances shall be built and shall serve as the only permitted points of ingress and egress to the development area. These entrances shall be built of a stabilized pad of aggregate stone or recycled concrete or cement sized greater than 2" in diameter, placed over a geotextile fabric, and constructed in conformance with specifications in the most recent edition of Rainwater and Land Development.
 - B. Streets and catch basins adjacent to construction entrances shall be kept free of sediment tracked off site. Streets directly adjacent to construction entrances and receiving traffic from the development area, shall be cleaned daily to remove sediment tracked off-site. If applicable, the catch basins on these streets nearest to the construction entrances shall also be cleaned weekly and protected from sediment-laden runoff, if feasible without posing a public safety hazard.

Based on site conditions, City of New Philadelphia Service Director may require additional best management practices to control off site tracking and dust. These additional BMPs may include:

- C. Fencing shall be installed around the perimeter of the development area to ensure that all vehicle traffic adheres to designated construction entrances.
 - D. Designated vehicle and wheel-washing areas. Wash water from these areas must be directed to a designated sediment trap, the sediment-settling pond, or to a sump pump for dewatering in conformance with Section 949.09 (g) of this regulation. No surfactants or detergents may be used to wash vehicles.
 - E. Applicants shall take all necessary measures to comply with applicable regulations regarding fugitive dust emissions, including obtaining necessary permits for such emissions. The City of New Philadelphia Service Director may require dust controls including the use of water trucks to wet disturbed areas, tarping stockpiles, temporary stabilization of disturbed areas, and regulation of the speed of vehicles on the site.
- (8) Surface Waters of the State protection. Construction vehicles shall avoid water resources. A 50 foot undisturbed natural buffer shall be provided around surface waters of the state unless infeasible. If it is infeasible to provide and maintain an undisturbed 50-foot natural buffer, the SWP3 shall comply with the stabilization requirements in 949.09.B.1 for areas within 50 feet of a surface water, and minimize soil compaction and, unless infeasible, preserve topsoil. If the applicant is permitted to disturb areas within 50 feet of a water resource, the following conditions shall be addressed in the SWP3:
- A. All BMPs and stream crossings shall be designed as specified in the most recent edition of Rainwater and Land Development.
 - B. Structural practices shall be designated and implemented on site to protect water resources from the impacts of sediment runoff.
 - C. No structural sediment controls (e.g., the installation of silt fence or a sediment settling pond in-stream) shall be used in water resources.
 - D. Where stream crossings for roads or utilities are necessary and permitted, the project shall be designed such that the number of stream crossings and the width of the disturbance are minimized.
 - E. Temporary stream crossings shall be constructed if water resources or wetlands will be crossed by construction vehicles during construction.
 - F. Construction of bridges, culverts, or sediment control structures shall not place soil, debris, or other particulate material into or close to the water resources or wetlands in such a manner that it may slough, slip, or erode.
 - G. Concentrated stormwater runoff from BMPs to natural wetlands shall be converted to diffuse flow through the use of level spreaders or other such appropriate measure before the runoff enters the wetlands. The flow should be released such that no erosion occurs downslope. Level spreaders may need to be placed in series to ensure non-erosive velocities.
 - H. Protected areas or critical areas, including wetlands and riparian areas shall be physically marked in the field prior to earth disturbing activities.

- (9) Modifying controls. If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the applicant shall replace or modify the control for site conditions.

(f) **NON-SEDIMENT POLLUTANT CONTROLS:** No solid or liquid waste, including building materials, shall be discharged in stormwater runoff. The applicant must implement site best management practices to prevent toxic materials, hazardous materials, or other debris from entering water resources, wetlands or the MS4. These practices shall include but are not limited to the following:

- (1) Waste Materials: A covered dumpster shall be made available for the proper disposal of garbage, plaster, drywall, grout, gypsum, and other waste materials.
- (2) Concrete Truck Wash Out: The washing of concrete material into a street, catch basin, or other public facility, natural resource, or water of the state is prohibited. A designated area for concrete washout shall be made available.
- (3) Disposal of Other Wastewaters: The discharge of washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials to a street, catch basin, other public facility, natural resource or waters of the state is prohibited. The discharge of soaps or solvents used in vehicle and equipment washing is also prohibited. If generated, these wastewaters must be collected and disposed of properly.
- (4) Fuel/Liquid Tank Storage: All fuel/liquid tanks and drums shall be stored in a marked storage area. A dike shall be constructed around this storage area with a minimum capacity equal to 110% of the volume of the largest containers in the storage area and/or a spill kit shall be provided to clean up spills. The SWP3 shall contain spill prevention and response procedures and these procedures shall be discussed at the pre-construction meeting.
- (5) Toxic or Hazardous Waste Disposal: Any toxic or hazardous waste shall be disposed of properly. The discharge of fuels, oils, and other pollutants used in vehicle and equipment operation and maintenance is prohibited.
- (6) Contaminated Soils Disposal and Runoff: Discovery of previously unknown contaminated soils onsite shall be self-reported to Ohio EPA and local authorities. Contaminated soils from redevelopment sites shall be disposed of properly. Runoff from contaminated soils shall not be discharged from the site. Proper permits shall be obtained for development projects on solid waste landfill sites or redevelopment sites. Where construction activities are to occur on sites with contamination from previous activities, operators shall be aware that concentrations of materials that meet other criteria (i.e. not considered a Hazardous Waste, meeting Voluntary Action Program (VAP standards)) may still result in stormwater discharges in excess of Ohio Water Quality Standards. Such discharges are not authorized by this code. Control measures which may be utilized to meet this requirement include, but are not limited to:
 - A. Use berms, trenches, pits or tanks to collect contaminated runoff and prevent discharge.

- B. Pump runoff from contaminated soils to the sanitary sewer with the prior approval of the sanitary sewer system operator, or pump into a container for transport to an appropriate treatment or disposal facility; and
- C. Cover areas of contamination with tarps, daily cover or other such methods to prevent storm water from coming into contact with contaminated materials.

(g) **COMPLIANCE WITH OTHER REQUIREMENTS.** The SWP3 shall be consistent with applicable State and/or local waste disposal, sanitary sewer, or septic system regulations, including provisions prohibiting waste disposal by open burning, and shall provide for the proper disposal of contaminated soils located within the development area.

(h) **TRENCH AND GROUND WATER CONTROL.** There shall be no sediment-laden or turbid discharges to water resources or wetlands resulting from dewatering activities. If trench or ground water contains sediment, it must pass through a sediment-settling pond or other equally effective sediment control device, prior to being discharged from the construction site. Alternatively, sediment may be removed by settling in place or by dewatering into a sump pit, filter bag or comparable practice. Ground water dewatering which does not contain sediment or other pollutants is not required to be treated prior to discharge. However, care must be taken when discharging ground water to ensure that it does not become pollutant-laden by traversing over disturbed soils or other pollutant sources.

(i) **INTERNAL INSPECTIONS.** All controls on the site shall be inspected a 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. The inspection frequency may be reduced to at least once every month if the entire site is temporarily stabilized or runoff is unlikely due to weather conditions (e.g., site is covered with snow, ice, or the ground is frozen). A waiver of inspection requirements is available until one month before thawing conditions are expected to result in a discharge if prior written approval has been attained from the City of New Philadelphia Service Director and all of the following conditions are met:

- (1) The project is located in an area where frozen conditions are anticipated to continue for extended periods of time (i.e. more than one (1) month).
- (2) Land disturbance activities have been suspended, and temporary stabilization is achieved.
- (3) The beginning date and ending dates of the waiver period are documented in the SWP3.

The applicant shall assign qualified inspection personnel to conduct these inspections to ensure that the control practices are functional and to evaluate whether the SWP3 is adequate, or whether additional control measures are required. Qualified inspection personnel are individuals with knowledge and experience in the installation and maintenance of sediment and erosion controls. Certified inspection reports shall be submitted to the City of New Philadelphia Service Director within seven (7) working days from the inspection and retained at the development site.

These inspections shall meet the following requirements:

- (1) 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.
- (2) Erosion and sediment control measures identified in the SWP3 shall be observed to ensure that they are operating correctly. The applicant shall utilize an inspection form provided by the City of New Philadelphia or an alternate form acceptable to the City of New Philadelphia Service Director. The inspection form shall include:
 - A. The inspection date.
 - B. Names, titles and qualifications of personnel making the inspection.
 - C. Weather information for the period since the last inspection, including a best estimate of the beginning of each storm event, duration of each storm event and approximate amount of rainfall for each storm event in inches, and whether any discharges occurred.
 - D. Weather information and a description of any discharges occurring at the time of inspection.
 - E. Locations of:
 - i. Discharges of sediment or other pollutants from site.
 - ii. BMPs that need maintained
 - iii. BMPs that failed to operate as designed or proved inadequate for a particular location.
 - iv. Where additional BMPs are needed that did not exist at the time of inspection.
 - F. Corrective action required including any necessary changes to the SWP3 and implementation dates
- (3) Discharge locations shall be inspected to determine whether erosion and sediment control measures are effective in preventing significant impacts to the receiving water resource.
- (4) Locations where vehicles enter or exit the site shall be inspected for evidence of off-site vehicle tracking.
- (5) The applicant shall maintain for three (3) years following final stabilization the results of these inspections, the names and qualifications of personnel making the inspections, the dates of inspections, major observations relating to the implementation of the SWP3, a certification as to whether the facility is in compliance with the SWP3, and information on any incidents of non-compliance determined by these inspections.

(j) **MAINTENANCE.** The SWP3 shall be designed to minimize maintenance requirements. All BMPs shall be maintained and repaired as needed to ensure continued performance of their intended function until final stabilization. All sediment control practices must be maintained in a functional condition until all up slope areas they control reach final stabilization. The applicant shall provide a description of maintenance procedures needed to ensure the continued performance of control practices and shall ensure a responsible party and adequate funding to conduct this maintenance, all as determined by the City of New Philadelphia Service Director.

When inspections reveal the need for repair, replacement, or installation of erosion and sediment control BMPs the following procedures shall be followed.

- (1) When BMPs require repair or maintenance. If an internal inspection reveals that a 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. Sediment settling ponds must be repaired or maintained within ten (10) days of the inspection.
- (2) When BMPs fail to provide their intended function. If an internal inspection reveals that a BMP fails to perform its intended function as detailed in the SWP3 and that another, more appropriate control practice is required, the SWP3 must be amended and the new control practice must be installed within three (3) to ten (10) days of the inspection as determined by the City of New Philadelphia Service Director or site inspector.
- (3) When BMPs depicted on the SWP3 are not installed. If an internal inspection reveals that a BMP has not been implemented in accordance with the schedule, the control practice must be implemented within ten (10) days from the date of the inspection. If the internal inspection reveals that the planned control practice is not needed, the record must contain a statement of explanation as to why the control practice is not needed.

(k) FINAL STABILIZATION. Final stabilization shall be determined by the City of New Philadelphia Service Director. Once a definable area has achieved final stabilization, the applicant may note this on the SWP3 and no further inspection requirement applies to that portion of the site. Final stabilization also requires the installation of permanent (post-construction) stormwater control measures (SCMs). Obligations under this ordinance shall not be completed until installation of post-construction BMPs is verified. (Ord. 13-2017. Passed 9-11-17.)

949.10 ABBREVIATED STORMWATER POLLUTION PREVENTION PLAN (SWP3).

- (a) In order to control sediment pollution of water resources, the applicant shall submit an Abbreviated SWP3 in accordance with the requirements of this regulation.
- (b) The Abbreviated SWP3 shall be certified by a professional engineer, a registered surveyor, certified professional erosion and sediment control specialist, or a registered landscape architect.
- (c) The Abbreviated SWP3 shall include a minimum of the following BMPs. City of New Philadelphia may require other BMPs as site conditions warrant.
- (d) Construction Entrances: Construction entrances shall be built and shall serve as the only permitted points of ingress and egress to the development area. These entrances shall be built of a stabilized pad of aggregate stone or recycled concrete or cement sized greater than 2" in diameter, placed over a geotextile fabric, and constructed in conformance with specifications in the most recent edition of Rainwater and Land Development.

- (1) Construction Entrances: Construction entrances shall be built and shall serve as the only permitted points of ingress and egress to the development area. These entrances shall be built of a stabilized pad of aggregate stone or recycled concrete or cement sized greater than 2" in diameter, placed over a geotextile fabric, and constructed in conformance with specifications in the most recent edition of Rainwater and Land Development.
- (2) Concrete Truck Wash Out: The washing of concrete material into a street, catch basin, or other public facility or natural resource is prohibited. A designated area for concrete washout shall be indicated on the plan. Use for other waste and wastewater is prohibited.
- (3) Street Sweeping: Streets directly adjacent to construction entrances and receiving traffic from the development area, shall be cleaned daily to remove sediment tracked off-site. If applicable, the catch basins on these streets nearest to the construction entrances shall be cleaned weekly.
- (4) Stabilization: The development area shall be stabilized as detailed in Table 4.

Table 4: Stabilization

Area Requiring Stabilization	Time Frame to Apply Erosion Controls
Any disturbed area within 50 feet of a surface water of the state and not at final grade.	Within 2 days of the most recent disturbance if that area will remain idle for more than 14 days
For all construction activities, any disturbed area, including soil stockpiles, that will be dormant for more than 14 days but less than one year, and not within 50 feet of a stream.	Within 7 days of the most recent disturbance within the area
Disturbed areas that will be idle over winter	Prior to November 1
Note: Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed. These techniques may include mulching or erosion matting.	

- (5) Inlet Protection: Erosion and sediment control practices, such as boxed inlet protection, shall be installed to minimize sediment-laden water entering active storm drain systems, including rear yard inlets. Straw, hay bales, and filter socks are not acceptable forms of inlet protection.
- (6) Silt Fence and Other Perimeter Controls: Silt fence and other perimeter controls approved by the City of New Philadelphia shall be used to protect adjacent properties and water resources from sediment discharged via sheet (diffused) flow. Silt fence shall be placed along level contours and the permissible drainage area is limited to those indicated in Table 3 in 949.09 of these regulations.
- (7) Internal Inspection and Maintenance: All controls on the development area shall be inspected 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. Maintenance shall occur as detailed below:

- A. When BMPs require repair or maintenance. If the internal inspection reveals that a 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. Sediment settling ponds must be repaired or maintained within ten (10) days of the inspection.
 - B. When BMPs fail to provide their intended function. If the internal inspection reveals that a BMP fails to perform its intended function and that another, more appropriate control practice is required, the Abbreviated SWP3 must be amended and the new control practice must be installed within ten (10) days of the inspection.
 - C. When BMPs depicted on the Abbreviated SWP3 are not installed. If the internal inspection reveals that a BMP has not been implemented in accordance with the schedule, the control practice must be implemented within ten (10) days from the date of the inspection. If the inspection reveals that the planned control practice is not needed, the record must contain a statement of explanation as to why the control practice is not needed.
- (8) Final Stabilization: Final stabilization shall be determined by the City of New Philadelphia Service Director.
(Ord. 13-2017. Passed 9-11-17.)

949.11 FEES.

The SWP3 and Abbreviated SWP3 review, filing, and inspection fee is part of a complete submittal and is required to be submitted to the City of New Philadelphia before the review process begins. Please consult with City of New Philadelphia Service Director for current fee schedule. (Ord. 13-2017. Passed 9-11-17.)

949.12 BOND.

(a) If a SWP3 or abbreviated SWP3 is required by this regulation, soil disturbing activities shall not be permitted until a cash bond or deposit has been deposited with the City of New Philadelphia Service Director's Office. The amount shall be a [\$1,500] minimum, and an additional [\$1,500] paid for each subsequent acre. The bond will be used for the City of New Philadelphia to perform the obligations otherwise to be performed by the owner of the development area as stated in this regulation and to allow all work to be performed as needed in the event that the applicant fails to comply with the provisions of this regulation. The cash bond shall be returned after all work required by this regulation has been completed and final stabilization has been reached, all as determined by the City of New Philadelphia Service Director.

(b) No project subject to this regulation shall commence without a SWP3 or Abbreviated SWP3 approved by the City of New Philadelphia Service Director.
(Ord. 13-2017. Passed 9-11-17.)

949.13 ENFORCEMENT.

(a) If the City of New Philadelphia or its duly authorized representative determines that a violation of the rules adopted under this code exist, the City of New Philadelphia or representative may issue an immediate stop work order if the violator failed to obtain any federal, state, or local permit necessary for sediment and erosion control, earth movement, clearing, or cut and fill activity.

(b) All development areas may be subject to external inspections by City of New Philadelphia Service Director to ensure compliance with the approved SWP3 or Abbreviated SWP3.

(c) After each external inspection, City of New Philadelphia Service Director shall prepare and distribute a status report to the applicant.

(d) If an external inspection determines that operations are being conducted in violation of the approved SWP3 or Abbreviated SWP3 City of New Philadelphia Service Director may take action as detailed in Section 949.14 of this regulation.

(e) Failure to maintain and repair erosion and sediment controls per the approved SWP3 plan may result in the following escalation:

- (1) First violation: The City of New Philadelphia Service Director will issue a Notice of Deficiency to the owner or operator. All controls are to be repaired or maintained per the SWP3 plan within three (3) days of the notification. If controls have not been corrected after this time, the City of New Philadelphia Service Director may issue a Stop Work Order for all activities until corrections have been made.
- (2) Second violation: The City of New Philadelphia Service Director may issue a formal Notice of Violation which includes a \$250 administrative fee against the SWP3 Bond or site plan deposit. All controls are to be repaired or maintained per the approved SWP3 plan within three (3) days of the Notice of Violation. If controls have not been corrected after this time, the City of New Philadelphia Service Director may issue a Stop Work Order for all activities until corrections have been made.
- (3) Third and subsequent violations: The City of New Philadelphia Service Director may issue a Stop Work Order for all construction activities and charge a \$250 administrative fee against the SWP3 bond or site plan deposit. The Stop Work Order will be lifted once all controls are in compliance with the approved SWP3 plan.

(f) A final inspection will be made to determine if the criteria of this code has been satisfied and a report will be presented to the City of New Philadelphia on the site's compliance status.

(g) The City of New Philadelphia Service Director will monitor soil-disturbing activities for non-farm residential, commercial, industrial, or other non-farm purposes on land of less than one contiguous acre to ensure compliance required by these Rules.

(h) The City of New Philadelphia Service Director shall notify the U.S. Army Corps of Engineers when a violation on a development project covered by an Individual or Nationwide Permit is identified. The City of New Philadelphia Service Director shall notify the Ohio Environmental Protection Agency when a violation on a development project covered by a Section 401 Water Quality Certification and/or Isolated Wetland Permit is identified.

(i) The City of New Philadelphia shall not issue building permits for projects regulated under this code that have not received approval for an SWP3 for said project(s). (Ord. 13-2017. Passed 9-11-17.)

949.14 VIOLATIONS.

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

(b) Upon notice, the Mayor and/or designee may suspend any active soil disturbing activity for a period not to exceed ninety (90) days, and may require immediate erosion and sediment control measures whenever he or she determines that such activity is not meeting the intent of this regulation. Such notice shall be in writing, shall be given to the applicant, and shall state the conditions under which work may be resumed. In instances, however, where the Mayor and/or designee finds that immediate action is necessary for public safety or the public interest, he or she may require that work be stopped upon verbal order pending issuance of the written notice. (Ord. 13-2017. Passed 9-11-17.)

949.15 APPEALS.

Any person aggrieved by any order, requirement, determination, or any other action or inaction by the City of New Philadelphia in relation to this regulation may appeal to the court of common pleas. Such an appeal shall be made in conformity with Ohio Revised Code. Written notice of appeal shall be served on the City of New Philadelphia. (Ord. 13-2017. Passed. 9-11-17.)

949.16 PENALTY.

(a) Any person, firm, entity or corporation; including but not limited to, the owner of the property, his agents and assigns, occupant, property manager, and any contractor or subcontractor who violates or fails to comply with any provision of this regulation is guilty of a misdemeanor of the third degree and shall be fined no more than five hundred dollars (\$500.00) or imprisoned for no more than sixty (60) days, or both, for each offense. A separate offense shall be deemed committed each day during or on which a violation or noncompliance occurs or continues.

(b) The imposition of any other penalties provided herein shall not preclude the City of New Philadelphia instituting an appropriate action or proceeding in a Court of proper jurisdiction to prevent an unlawful development, or to restrain, correct, or abate a violation, or to require compliance with the provisions of this regulation or other applicable laws, ordinances, rules, or regulations, or the orders of the City of New Philadelphia. (Ord. 13-2017. Passed 9-11-17.)

Issuance Date: April 23, 2018
Effective Date: April 23, 2018
Expiration Date: April 22, 2023

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OHIO ENVIRONMENTAL PROTECTION AGENCY

**GENERAL PERMIT AUTHORIZATION FOR STORM WATER DISCHARGES ASSOCIATED
WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT
DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the federal Water Pollution Control Act, as amended (33 U.S.C. Section 1251 et. seq. hereafter referred to as "the Act") and the Ohio Water Pollution Control Act [Ohio Revised Code ("ORC") Chapter 6111], dischargers of storm water from sites where construction activity is being conducted, as defined in Part I.B of this permit, are authorized by the Ohio Environmental Protection Agency, hereafter referred to as "Ohio EPA," to discharge from the outfalls at the sites and to the receiving surface waters of the state identified in their Notice of Intent ("NOI") application form on file with Ohio EPA in accordance with the conditions specified in Parts I through VII of this permit.

It has been determined that a lowering of water quality of various waters of the state associated with granting coverage under this permit is necessary to accommodate important social and economic development in the state of Ohio. In accordance with OAC 3745-1-05, this decision was reached only after examining a series of technical alternatives, reviewing social and economic issues related to the degradation, and considering all public and intergovernmental comments received concerning the proposal.

This permit is conditioned upon payment of applicable fees, submittal of a complete NOI application form, development (and submittal, if applicable) of a complete Storm Water Pollution Prevention Plan (SWP3) and written approval of coverage from the director of Ohio EPA in accordance with Ohio Administrative Code ("OAC") Rule 3745-38-02.



Craig W. Butler
Director

Total Pages: 60

I certify this to be a true and accurate copy of the official documents as filed in the records of the Ohio Environmental Protection Agency.

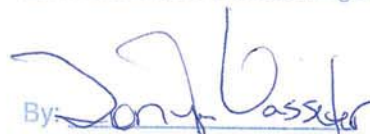
By:  Date: 4-23-18

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PART I. COVERAGE UNDER THIS PERMIT

A. Permit Area.

This permit covers the entire State of Ohio. Appendices A and B of this permit contain additional watershed specific requirements for construction activities located partially or fully within the Big Darby Creek Watershed and portions of the Olentangy River Watershed. Projects within portions of the Olentangy River watershed shall seek coverage under this permit following the expiration of OHCO00002 (May 31, 2019).

B. Eligibility.

1. Construction activities covered. Except for storm water discharges identified under Part I.B.2, this permit may cover all new and existing discharges composed entirely of storm water discharges associated with construction activity that enter surface waters of the state or a storm drain leading to surface waters of the state.

For the purposes of this permit, construction activities include any clearing, grading, excavating, grubbing and/or filling activities that disturb one or more acres. Discharges from trench dewatering are also covered by this permit as long as the dewatering activity is carried out in accordance with the practices outlined in Part III.G.2.g.iv of this permit.

Construction activities disturbing one or more acres of total land or will disturb less than one acre of land but are part of a larger common plan of development or sale that will ultimately disturb one or more acres of land are eligible for coverage under this permit. The threshold acreage includes the entire area disturbed in the larger common plan of development or sale.

This permit also authorizes storm water discharges from support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) provided:

- a. The support activity is directly related to a construction site that is required to have NPDES permit coverage for discharges of storm water associated with construction activity;
 - b. The support activity is not a commercial operation serving multiple unrelated construction projects and does not operate beyond the completion of the construction activity at the site it supports;
 - c. Appropriate controls and measures are identified in a storm water pollution prevention plan (SWP3) covering the discharges from the support activity; and
 - d. The support activity is on or contiguous with the property defined in the NOI (offsite borrow pits and soil disposal areas, which serve only one project, do not have to be contiguous with the construction site).
2. Limitations on coverage. The following storm water discharges associated with construction activity are not covered by this permit:

- a. Storm water discharges that originate from the site after construction activities have ceased, including any temporary support activity, and the site has achieved final stabilization. Industrial post-construction storm water discharges may need to be covered by an NPDES permit;
 - b. Storm water discharges associated with construction activity that the director has shown to be or may reasonably expect to be contributing to a violation of a water quality standard; and
 - c. Storm water discharges authorized by an individual NPDES permit or another NPDES general permit.
3. Waivers. After March 10, 2003, sites whose larger common plan of development or sale have at least one, but less than five acres of land disturbance, which would otherwise require permit coverage for storm water discharges associated with construction activities, may request that the director waive their permit requirement. Entities wishing to request such a waiver must certify in writing that the construction activity meets one of the two waiver conditions:
- a. Rainfall Erosivity Waiver. For a construction site to qualify for the rainfall erosivity waiver, the cumulative rainfall erosivity over the project duration must be five or less and the site must be stabilized with a least a 70 percent vegetative cover or other permanent, non-erosive cover. The rainfall erosivity must be calculated according to the method in U.S. EPA Fact Sheet 3.1 Construction Rainfall Erosivity Waiver dated January 2001 and be found at: http://epa.ohio.gov/portals/35/permits/USEPAfact3-1_s.pdf. If it is determined that a construction activity will take place during a time period where the rainfall erosivity factor is less than five, a written waiver certification must be submitted to Ohio EPA at least 21 days before construction activity is scheduled to begin. If the construction activity will extend beyond the dates specified in the waiver certification, the operator must either: (a) recalculate the waiver using the original start date with the new ending date (if the R factor is still less than five, a new waiver certification must be submitted) or (b) submit an NOI application form and fee for coverage under this general permit at least seven days prior to the end of the waiver period; or
 - b. TMDL (Total Maximum Daily Load) Waiver. Storm water controls are not needed based on a TMDL approved or established by U.S. EPA that addresses the pollutant(s) of concern or, for non-impaired waters that do not require TMDLs, and equivalent analysis that determines allocations for small construction sites for the pollutant(s) of concern or that determines that such allocations are not needed to protect water quality based on consideration of existing in-stream concentrations, expected growth in pollutant contributions from all sources, and a margin of safety. The pollutant(s) of concern include sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity. The operator must certify to the director of Ohio EPA that the construction activity will take place, and storm water discharges will occur, within the drainage area addressed by the TMDL or equivalent analysis. A written waiver certification must be submitted to Ohio EPA at least 21 days before the construction activity is scheduled to begin.

4. Prohibition on non-storm water discharges. All discharges covered by this permit must be composed entirely of storm water with the exception of the following: discharges from firefighting activities; fire hydrant flushings; potable water sources including waterline flushings; irrigation drainage; lawn watering; routine external building washdown which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; springs; uncontaminated ground water from trench or well point dewatering and foundation or footing drains where flows are not contaminated with process materials such as solvents. Dewatering activities must be done in compliance with Part II.C and Part III.G.2.g.iv of this permit. Discharges of material other than storm water or the authorized non-storm water discharges listed above must comply with an individual NPDES permit or an alternative NPDES general permit issued for the discharge.

Except for flows from firefighting activities, sources of non-storm water listed above that are combined with storm water discharges associated with construction activity must be identified in the SWP3. The SWP3 must identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

5. Spills and unintended releases (Releases in excess of Reportable Quantities). This permit does not relieve the permittee of the reporting requirements of Title 40 of the Code of Federal Regulations ("CFR") Part 117 and 40 CFR Part 302. In the event of a spill or other unintended release, the discharge of hazardous substances in the storm water discharge(s) from a construction site must be minimized in accordance with the applicable storm water pollution prevention plan for the construction activity and in no case, during any 24-hour period, may the discharge(s) contain a hazardous substance equal to or in excess of reportable quantities.

40 CFR Part 117 sets forth a determination of the reportable quantity for each substance designated as hazardous in 40 CFR Part 116. The regulation applies to quantities of designated substances equal to or greater than the reportable quantities, when discharged to surface waters of the state. 40 CFR Part 302 designates under section 102(a) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, those substances in the statutes referred to in section 101(14), identifies reportable quantities for these substances and sets forth the notification requirements for releases of these substances. This regulation also sets forth reportable quantities for hazardous substances designated under section 311(b)(2)(A) of the Clean Water Act (CWA).

C. Requiring an individual NPDES permit or an alternative NPDES general permit.

1. The director may require an alternative permit. The director may require any operator eligible for this permit to apply for and obtain either an individual NPDES permit or coverage under an alternative NPDES general permit in accordance with OAC Rule 3745-38-02. Any interested person may petition the director to take action under this paragraph.

The director will send written notification that an alternative NPDES permit is required. This notice shall include a brief statement of the reasons for this decision, an application form and a statement setting a deadline for the operator to file the application. If an operator fails to submit an application in a timely manner as required by the director under this paragraph, then coverage, if in effect, under this permit is automatically terminated at the end of the day specified for application submittal.

2. Operators may request an individual NPDES permit. Any owner or operator eligible for this permit may request to be excluded from the coverage of this permit by applying for an individual permit. The owner or operator shall submit an individual application with reasons supporting the request to the director in accordance with the requirements of 40 CFR 122.26. If the reasons adequately support the request, the director shall grant it by issuing an individual NPDES permit.
3. When an individual NPDES permit is issued to an owner or operator otherwise subject to this permit or the owner or operator is approved for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the effective date of the individual permit or the date of approval for coverage under the alternative general permit, whichever the case may be.

D. Permit requirements when portions of a site are sold

If an operator obtains a permit for a development, and then the operator (permittee) sells off lots or parcels within that development, permit coverage must be continued on those lots until a Notice of Termination (NOT) in accordance with Part IV.B is submitted. For developments which require the use of centralized sediment and erosion controls (i.e., controls that address storm water runoff from one or more lots) for which the current permittee intends to terminate responsibilities under this permit for a lot after sale of the lot to a new owner and such termination will either prevent or impair the implementation of the controls and therefore jeopardize compliance with the terms and conditions of this permit, the permittee will be required to maintain responsibility for the implementation of those controls. For developments where this is not the case, it is the permittee's responsibility to temporarily stabilize all lots sold to individual lot owners unless an exception is approved in accordance with Part III.G.4. In cases where permit responsibilities for individual lot(s) will be terminated after sale of the lot, the permittee shall inform the individual lot owner of the obligations under this permit and ensure that the Individual Lot NOI application is submitted to Ohio EPA.

E. Authorization

1. Obtaining authorization to discharge. Operators that discharge storm water associated with construction activity must submit an NOI application form and Storm Water Pollution Prevention Plan (SWP3) if located within the Big Darby Creek watershed or portions of the Olentangy watershed in accordance with the requirements of Part I.F of this permit to obtain authorization to discharge under this general permit. As required under OAC Rule 3745-38-06(E), the director, in response to the NOI submission, will notify the applicant in writing that he/she has or has not been granted general permit coverage to discharge storm water associated with construction activity under the terms and conditions of this permit or that the applicant must apply for an individual NPDES permit or coverage under an alternate general NPDES permit as described in Part I.C.1.

2. No release from other requirements. No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations. Other permit requirements commonly associated with construction activities include, but are not limited to, section 401 water quality certifications, isolated wetland permits, permits to install sanitary sewers or other devices that discharge or convey polluted water, permits to install drinking water lines, single lot sanitary system permits and disturbance of land which was used to operate a solid or hazardous waste facility (i.e., coverage under this NPDES general permit does not satisfy the requirements of OAC Rule 3745-27-13 or ORC Section 3734.02(H)). The issuance of this permit is subject to resolution of an antidegradation review. This permit does not relieve the permittee of other responsibilities associated with construction activities such as contacting the Ohio Department of Natural Resources, Division of Water, to ensure proper well installation and abandonment of wells.

F. Notice of Intent Requirements

1. Deadlines for notification.
 - a. Initial coverage: Operators who intend to obtain initial coverage for a storm water discharge associated with construction activity under this general permit must submit a complete and accurate NOI application form, a completed Storm Water Pollution Prevention Plan (SWP3) for projects within the Big Darby Creek and portions of the Olentangy river watersheds and appropriate fee at least 21 days (or 45 days in the Big Darby Creek watershed and portions of the Olentangy watershed) prior to the commencement of construction activity. If more than one operator, as defined in Part VII of this general permit, will be engaged at a site, each operator shall seek coverage under this general permit prior to engaging in construction activities. Coverage under this permit is not effective until an approval letter granting coverage from the director of Ohio EPA is received by the applicant. Where one operator has already submitted an NOI prior to other operator(s) being identified, the additional operator shall request modification of coverage to become a co-permittee. In such instances, the co-permittees shall be covered under the same facility permit number. No additional permit fee is required.
 - b. Individual lot transfer of coverage: Operators must each submit an individual lot notice of intent (Individual Lot NOI) application form (no fee required) to Ohio EPA at least seven days prior to the date that they intend to accept responsibility for permit requirements for their portion of the original permitted development from the previous permittee. Transfer of permit coverage is not granted until an approval letter from the director of Ohio EPA is received by the applicant.
2. Failure to notify. Operators who fail to notify the director of their intent to be covered and who discharge pollutants to surface waters of the state without an NPDES permit are in violation of ORC Chapter 6111. In such instances, Ohio EPA may bring an enforcement action for any discharges of storm water associated with construction activity.
3. How to submit an NOI. Operators seeking coverage under this permit must submit a complete and accurate Notice of Intent (NOI) application using Ohio EPA's electronic application form which is available through the Ohio EPA eBusiness Center at: <https://ebiz.epa.ohio.gov/>. Submission through the Ohio EPA eBusiness Center will

require establishing an Ohio EPA eBusiness Center account and obtaining a unique Personal Identification Number (PIN) for final submission of the NOI. Existing eBusiness Center account holders can access the NOI form through their existing account and submit using their existing PIN. Please see the following link for guidance: <http://epa.ohio.gov/dsw/ebs.aspx#170669803-streams-guidance>. Alternatively, if you are unable to access the NOI form through the agency eBusiness Center due to a demonstrated hardship, the NOI may be submitted on a paper NOI form provided by Ohio EPA. NOI information shall be typed on the form. Please contact Ohio EPA, Division of Surface Water at (614) 644-2001 if you wish to receive a paper NOI form.

4. Additional notification. NOIs and SWP3s are considered public documents and shall be made available to the public in accordance with Part III.C.2. The permittee shall make NOIs and SWP3s available upon request of the director of Ohio EPA, local agencies approving sediment and erosion control plans, grading plans or storm water management plans, local governmental officials, or operators of municipal separate storm sewer systems (MS4s) receiving drainage from the permitted site. Each operator that discharges to an NPDES permitted MS4 shall provide a copy of its Ohio EPA NOI submission to the MS4 in accordance with the MS4's requirements, if applicable.
5. Re-notification. Existing permittees having coverage under the previous generations of this general permit shall have continuing coverage under OHC000005 with the submittal of a timely renewal application. Within 180 days from the effective date of this permit, existing permittees shall submit the completed renewal application expressing their intent for continued coverage. In accordance with Ohio Administrative Code (OAC) 3745-38-02(E)(2)(a)(i), a renewal application fee will only apply to existing permittees having general permit coverage for 5 or more years as of the effective date of this general permit. Permit coverage will be terminated if Ohio EPA does not receive the renewal application within this 180-day period.

Part II. NON-NUMERIC EFFLUENT LIMITATIONS

You shall comply with the following non-numeric effluent limitations for discharges from your site and/or from construction support activities. Part III of this permit contains the specific design criteria to meet the objectives of the following non-numeric effluent limitations. You shall develop and implement the SWP3 in accordance with Part III of this permit to satisfy these non-numeric effluent limitations.

- A. **Erosion and Sediment Controls.** You shall design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls shall be designed, installed and maintained to:
 1. Control storm water volume and velocity within the site to minimize soil and stream erosion;
 2. Control storm water discharges, including both peak flowrates and total storm water volume, to minimize erosion at outlets and to minimize downstream channel and streambank erosion;
 3. Minimize the amount of soil exposed during construction activity;

4. Minimize the disturbance of steep slopes;
 5. Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls shall address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting storm water runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;
 6. If feasible, provide and maintain a 50-foot undisturbed natural buffer around surface waters of the state, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration. If it is infeasible to provide and maintain an undisturbed 50-foot natural buffer, you shall comply with the stabilization requirements found in Part II.B for areas within 50 feet of a surface water; and
 7. Minimize soil compaction and, unless infeasible, preserve topsoil.
- B. Soil Stabilization.** Stabilization of disturbed areas shall, at a minimum, be initiated in accordance with the time frames specified in the following tables.

Table 1: Permanent Stabilization

Area requiring permanent stabilization	Time frame to apply erosion controls
Any areas that will lie dormant for one year or more	Within seven days of the most recent disturbance
Any areas within 50 feet of a surface water of the state and at final grade	Within two days of reaching final grade
Other areas at final grade	Within seven days of reaching final grade within that area

Table 2: Temporary Stabilization

Area requiring temporary stabilization	Time frame to apply erosion controls
Any disturbed areas within 50 feet of a surface water of the state and not at final grade	Within two days of the most recent disturbance if the area will remain idle for more than 14 days
Any disturbed areas that will be dormant for more than 14 days but less than one year, and not within 50 feet of a surface water of the state	Within seven days of the most recent disturbance within the area For residential subdivisions, disturbed areas must be stabilized at least seven 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

Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed. Permanent and temporary stabilization are defined in Part VII.

- C. Dewatering.** Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls.
- D. Pollution Prevention Measures.** Design, install, implement and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented and maintained to:
1. Minimize the discharge of pollutants from equipment and vehicle washing, wheel washwater, and other washwaters. Washwaters shall be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
 2. Minimize the exposure of construction materials, products, and wastes; landscape materials, fertilizers, pesticides, and herbicides; detergents, sanitary waste and other materials present on the site to precipitation and to storm water; and
 3. Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.
- E. Prohibited Discharges.** The following discharges are prohibited:
1. Wastewater from washout of concrete, unless managed by an appropriate control;
 2. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
 3. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and
 4. Soaps or solvents used in vehicle and equipment washing or all other waste water streams which could be subject to an individual NPDES permit (Part III.G.2.g).
- F. Surface Outlets.** When discharging from sediment basins utilize outlet structures that withdraw water from the surface, unless infeasible. (Note: Ohio EPA believes that the circumstances in which it is infeasible to design outlet structures in this manner are rare. Exceptions may include time periods with extended cold weather during winter months. If you have determined that it is infeasible to meet this requirement, you shall provide documentation in your SWP3 to support your determination.)
- G. Post-Construction Storm Water Management Controls.** So that receiving stream's physical, chemical and biological characteristics are protected, and stream functions are maintained, post-construction storm water practices shall provide long-term management of runoff quality and quantity.

PART III. STORM WATER POLLUTION PREVENTION PLAN (SWP3)

A. Storm Water Pollution Prevention Plans.

A SWP3 shall be developed for each site covered by this permit. For a multi-phase construction project, a separate NOI shall be submitted when a separate SWP3 will be prepared for

subsequent phases. SWP3s 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 SWP3 shall clearly identify all activities which are required to be authorized under Section 401 and subject to an antidegradation review. The SWP3 shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with construction activities. The SWP3 shall be a comprehensive, stand-alone document, which is not complete unless it contains the information required by Part III.G of this permit. In addition, the SWP3 shall describe and ensure the implementation of best management practices (BMPs) that reduce the pollutants and impact of storm water discharges during construction and pollutants associated with the post-construction land use to ensure compliance with ORC Section 6111.04, OAC Chapter 3745-1 and the terms and conditions of this permit.

B. Timing.

An acceptable SWP3 shall be completed and submitted to the applicable regulated MS4 entity (for projects constructed entirely within a regulated MS4 area) prior to the timely submittal of an NOI. Projects within the Big Darby Creek and portions of the Olentangy watersheds must submit a SWP3 with the NOI. The SWP3 shall be updated in accordance with Part III.D. Submission of a SWP3 does not constitute review and approval on the part of Ohio EPA. Upon request and good cause shown, the director may waive the requirement to have a SWP3 completed at the time of NOI submission. If a waiver has been granted, the SWP3 must be completed prior to the initiation of construction activities. The SWP3 must be implemented upon initiation of construction activities.

In order to continue coverage from the previous generations of this permit, the permittee shall review and update the SWP3 to ensure that this permit's requirements are addressed within 180 days after the effective date of this permit. If it is infeasible for you to comply with a specific requirement in this permit because (1) the provision was not part of the permit you were previously covered under, and (2) because you are prevented from compliance due to the nature or location of earth disturbances that commenced prior to the effective date of this permit, you shall include documentation within your SWP3 of the reasons why it is infeasible for you to meet the specific requirement.

Examples of OHC000005 permit conditions that would be infeasible for permittees renewing coverage to comply with include:

- OHC000005 post-construction requirements, for projects that obtained NPDES construction storm water coverage and started construction activities prior to the effective date of this permit;
- OHC000005 post-construction requirements, for multi-phase development projects with an existing regional post-construction BMP issued under previous NPDES post-construction requirements. This only applies to construction sites authorized under Ohio EPA's Construction Storm Water Permits issued after April 20, 2003;
- OHC000005 post-construction requirements, for renewing or initial coverage and you have a SWP3 approved locally and you will start construction within 180 days of the effective date of this permit;

- Sediment settling pond design requirements, if the general permit coverage was obtained prior to April 21, 2013 and the sediment settling pond has been installed; or
- Case-by-case situations approved by the Director.

C. SWP3 Signature and Review.

1. Plan Signature and Retention On-Site. The SWP3 shall include the certification in Part V.H, be signed in accordance with Part V.G., and be retained on site during working hours.
2. Plan Availability
 - a. On-site: The plan shall be made available immediately upon request of the director or his authorized representative and MS4 operators or their authorized representative during working hours. A copy of the NOI and letter granting permit coverage under this general permit also shall be made available at the site.
 - b. By written request: The permittee must provide the most recent copy of the SWP3 within 7 days upon written request by any of the following:
 - i. The director or the director's authorized representative;
 - ii. A local agency approving sediment and erosion plans, grading plans or storm water management plans; or
 - iii. In the case of a storm water discharge associated with construction activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the operator of the system.
 - c. To the public: All NOIs, general permit approval for coverage letters, and SWP3s are considered reports that shall be available to the public in accordance with the Ohio Public Records law. The permittee shall make documents available to the public upon request or provide a copy at public expense, at cost, in a timely manner. However, the permittee may claim to Ohio EPA any portion of an SWP3 as confidential in accordance with Ohio law.
3. Plan Revision. The director or authorized representative may notify the permittee at any time that the SWP3 does not meet one or more of the minimum requirements of this part. Within 10 days after such notification from the director or authorized representative (or as otherwise provided in the notification), the permittee shall make the required changes to the SWP3 and shall submit to Ohio EPA the revised SWP3 or a written certification that the requested changes have been made.

D. Amendments.

The permittee shall amend the SWP3 whenever there is a change in design, construction, operation or maintenance, which has a significant effect on the potential for the discharge of pollutants to surface waters of the state or if the SWP3 proves to be ineffective in achieving the

general objectives of controlling pollutants in storm water discharges associated with construction activity. Amendments to the SWP3 may be reviewed by Ohio EPA in the same manner as Part III.C.

E. Duty to inform contractors and subcontractors.

The permittee shall inform all contractors and subcontractors not otherwise defined as “operators” in Part VII of this general permit who will be involved in the implementation of the SWP3 of the terms and conditions of this general permit. The permittee shall maintain a written document containing the signatures of all contractors and subcontractors involved in the implementation of the SWP3 as proof acknowledging that they reviewed and understand the conditions and responsibilities of the SWP3. The written document shall be created, and signatures shall be obtained prior to commencement of earth disturbing activity on the construction site.

F. Total Maximum Daily Load (TMDL) allocations.

If a TMDL is approved for any waterbody into which the permittee’s site discharges and requires specific BMPs for construction sites, the director may require the permittee to revise his/her SWP3. Specific conditions have been provided in Appendix A (for the Big Darby Creek Watershed) and Appendix B (for portions of the Olentangy river watershed).

G. SWP3 Requirements.

Operations that discharge storm water from construction activities are subject to the following requirements and the SWP3 shall include the following items:

1. Site description. Each SWP3 shall provide:
 - a. A description of the nature and type of the construction activity (e.g., low density residential, shopping mall, highway, etc.);
 - b. 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);
 - c. A measure of the impervious area and percent imperviousness created by the construction activity (existing, new and total impervious area after construction);
 - d. Storm water calculations, including the volumetric runoff coefficients for both the pre-construction and post- construction site conditions, and resulting water quality volume; design details for post-construction storm water facilities and pretreatment practices such as contributing drainage areas, capacities, elevations, outlet details and drain times shall be included in the SWP3; and if applicable, explanation of the use of existing post-construction facilities. Ohio EPA recommends the use of data sheets (see Ohio’s Rainwater and Land Development manual and Ohio EPA resources for examples);
 - e. Existing data describing the soil and, if available, the quality of any discharge from the site;

- f. A description of prior land uses at the site;
- g. A description of the condition of any on-site streams (e.g. prior channelization, bed instability or headcuts, channels on public maintenance, or natural channels);
- h. An implementation schedule which describes the sequence of major construction operations (i.e., designation of vegetative preservation areas, grubbing, excavating, grading, utilities, infrastructure installation and others) and the implementation of erosion, sediment and storm water management practices or facilities to be employed during each operation of the sequence;
- i. The name and/or location of the immediate receiving stream or surface water(s) and the first subsequent named receiving water(s) and the areal 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. For discharges to an MS4, the point of discharge to the MS4 and the location where the MS4 ultimately discharges to a stream or surface water of the state shall be indicated;
- j. For subdivided developments, a detail drawing of individual parcels with their erosion, sediment or storm water control practices and/or a typical individual lot showing standard individual lot erosion and sediment control practices.

A typical individual lot drawing does not remove the responsibility to designate specific erosion and sediment control practices in the SWP3 for critical areas such as steep slopes, stream banks, drainage ways and riparian zones;
- k. Location and description of any storm water discharges associated with dedicated asphalt and dedicated concrete plants covered by this permit and the best management practices to address pollutants in these storm water discharges;
- l. A cover page or title identifying the name and location of the site, the name and contact information of all construction site operators, the name and contact information for the person responsible for authorizing and amending the SWP3, preparation date, and the estimated dates that construction will start and be complete;
- m. A log documenting grading and stabilization activities as well as amendments to the SWP3, which occur after construction activities commence; and
- n. Site map showing:
 - i. Limits of earth-disturbing activity of the site including associated off-site borrow or spoil areas that are not addressed by a separate NOI and associated SWP3;
 - ii. Soils types for all areas of the site, including locations of unstable or highly erodible and/or known contaminated soils;

- iii. Existing and proposed contours. A delineation of drainage watersheds expected during and after major grading activities as well as the size of each drainage watershed, in acres;
- iv. The location of any delineated boundary for required riparian setbacks;
- v. Conservation easements or areas designated as open space, preserved vegetation or otherwise protected from earth disturbing activities. A description of any associated temporary or permanent fencing or signage;
- vi. Surface water locations including springs, wetlands, streams, lakes, water wells, etc., on or within 200 feet of the site, including the boundaries of wetlands or stream channels and first subsequent named receiving water(s) the permittee intends to fill or relocate for which the permittee is seeking approval from the Army Corps of Engineers and/or Ohio EPA;
- vii. Existing and planned locations of buildings, roads, parking facilities and utilities;
- viii. The location of all erosion and sediment control practices, including the location of areas likely to require temporary stabilization during site development;
- ix. Sediment traps and basins noting their sediment storage and dewatering (detention) volume and contributing drainage area. Ohio EPA recommends the use of data sheets (see Ohio EPA's Rainwater and Land Development manual and website for examples) to provide data for all sediment traps and basins noting important inputs to design and resulting parameters such as their contributing drainage area, disturbed area, detention volume, sediment storage volume, practice surface area, dewatering time, outlet type and dimensions;
- x. The location of permanent storm water management practices (new and existing) including pretreatment practices to be used to control pollutants in storm water after construction operations have been completed along with the location of existing and planned drainage features including catch basins, culverts, ditches, swales, surface inlets and outlet structures;
- xi. Areas designated for the storage or disposal of solid, sanitary and toxic wastes, including dumpster areas, areas designated for cement truck washout, and vehicle fueling;
- xii. The location of designated construction entrances where the vehicles will access the construction site; and
- xiii. The location of any areas of proposed floodplain fill, floodplain excavation, stream restoration or known temporary or permanent stream crossings.

2. Controls. In accordance with Part II.A, the SWP3 shall contain a description of the controls appropriate for each construction operation covered by this permit and the operator(s) shall implement such controls. The SWP3 shall clearly describe for each major construction activity identified in Part III.G.1.h: (a) appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented; and (b) which contractor is responsible for implementation (e.g., contractor A will clear land and install perimeter controls and contractor B will maintain perimeter controls until final stabilization). The SWP3 shall identify the subcontractors engaged in activities that could impact storm water runoff. The SWP3 shall contain signatures from all of the identified subcontractors indicating that they have been informed and understand their roles and responsibilities in complying with the SWP3. Ohio EPA recommends that the primary site operator review the SWP3 with the primary contractor prior to commencement of construction activities and keep a SWP3 training log to demonstrate that this review has occurred.

Ohio EPA recommends that the erosion, sediment, and storm water management practices used to satisfy the conditions of this permit should meet the standards and specifications in the most current edition of Ohio's Rainwater and Land Development (see definitions) manual or other standards acceptable to Ohio EPA. The controls shall include the following minimum components:

- a. Preservation Methods. The SWP3 shall make use of practices which preserve the existing natural condition as much as feasible. Such practices may include: preserving existing vegetation, vegetative buffer strips, and existing soil profile and topsoil; phasing of construction operations to minimize the amount of disturbed land at any one time; and designation of tree preservation areas or other protective clearing or grubbing practices. For all construction activities immediately adjacent to surface waters of the state, the permittee shall comply with the buffer non-numeric effluent limitation in Part II.A.6, as measured from the ordinary high water mark of the surface water.
- b. Erosion Control Practices. The SWP3 shall make use of erosion controls that provide cover over disturbed soils unless an exception is approved in accordance with Part III.G.4. A description of control practices designed to re-establish vegetation or suitable cover on disturbed areas after grading shall be included in the SWP3. The SWP3 shall provide specifications for stabilization of all disturbed areas of the site and provide guidance as to which method of stabilization will be employed for any time of the year. Such practices may include: temporary seeding, permanent seeding, mulching, matting, sod stabilization, vegetative buffer strips, phasing of construction operations, use of construction entrances and the use of alternative ground cover.
- i. **Stabilization.** Disturbed areas shall be stabilized in accordance with Table 1 (Permanent Stabilization) and Table 2 (Temporary Stabilization) in Part II.B of this permit.
- ii. **Permanent stabilization of conveyance channels.** Operators shall undertake special measures to stabilize channels and outfalls and prevent erosive flows. Measures may include seeding, dormant seeding (as defined in the most current edition of the Rainwater and Land

Development manual), mulching, erosion control matting, sodding, riprap, natural channel design with bioengineering techniques or rock check dams.

- c. Runoff Control Practices. The SWP3 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. Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected.
- d. Sediment Control Practices. The plan shall include a description of structural practices that shall store runoff allowing sediments to settle and/or divert flows away from exposed soils or otherwise limit runoff from exposed areas. Structural practices shall be used to control erosion and trap sediment from a site remaining disturbed for more than 14 days. Such practices may include, among others: sediment settling ponds, sediment barriers, earth diversion dikes or channels which direct runoff to a sediment settling pond and storm drain inlet protection. All sediment control practices must be capable of ponding runoff in order to be considered functional. Earth diversion dikes or channels alone are not considered a sediment control practice unless those are used in conjunction with a sediment settling pond.

The SWP3 shall contain detail drawings for all structural practices.

- i. **Timing.** Sediment control structures shall be functional throughout the course of earth disturbing activity. Sediment basins and perimeter sediment barriers shall be implemented prior to grading and within seven days from the start of grubbing. They shall continue to function until the upslope development area is stabilized with permanent cover. As construction progresses and the topography is altered, appropriate controls shall be constructed, or existing controls altered to address the changing drainage patterns.
- ii. **Sediment settling ponds.** A sediment settling pond is required for any one of the following conditions:
- Concentrated or collected storm water runoff (e.g., storm sewer or ditch);
 - Runoff from drainage areas, which exceed the design capacity of silt fence or other sediment barriers; or
 - Runoff from drainage areas that exceed the design capacity of inlet protection.

The permittee may request approval from Ohio EPA to use alternative controls if the permittee can demonstrate the alternative controls are equivalent in effectiveness to a sediment settling pond.

In accordance with Part II.F, if feasible, sediment settling ponds shall be dewatered at the pond surface using a skimmer or equivalent device. The sediment settling pond volume consists of both a dewatering zone and a sediment storage zone. The volume of the dewatering zone shall be a minimum of 1800 cubic feet (ft³) per acre of drainage (67 yd³/acre) with a minimum 48-hour drain time. The volume of the sediment storage zone shall be calculated by one of the following methods:

Method 1: The volume of the sediment storage zone shall be 1000 ft³ per disturbed acre within the watershed of the basin. OR

Method 2: The volume of the sediment storage zone shall be the volume necessary to store the sediment as calculated with RUSLE or a similar generally accepted erosion prediction model.

Accumulated sediment shall be removed from the sediment storage zone once it exceeds 50 percent of the minimum required sediment storage design capacity and prior to the conversion to the post-construction practice unless suitable storage is demonstrated based upon over-design. When determining the total contributing drainage area, off-site areas and areas which remain undisturbed by construction activity shall be included unless runoff from these areas is diverted away from the sediment settling pond and is not co-mingled with sediment-laden runoff. The depth of the dewatering zone shall be less than or equal to five feet. The configuration between inlets and the outlet of the basin shall provide at least two units of length for each one unit of width ($\geq 2:1$ length:width ratio); however, a length to width ratio of 4:1 is recommended. When designing sediment settling ponds, the permittee shall consider public safety, especially as it relates to children, as a design factor for the sediment basin and alternative sediment controls shall be used where site limitations would preclude a safe design. Combining multiple sediment and erosion control measures in order to maximize pollutant removal is encouraged.

- iii. **Sediment Barriers and Diversions.** Sheet flow runoff from denuded areas shall be intercepted by sediment barriers or diversions to protect adjacent properties and water resources from sediment transported via sheet flow. Where intended to provide sediment control, silt fence shall be placed on a level contour downslope of the disturbed area. For most applications, standard silt fence may be substituted with a 12-inch diameter sediment barrier. The relationship between the maximum drainage area to sediment barrier for a particular slope range is shown in the following table:

Table 3 Sediment Barrier Maximum Drainage Area Based on Slope

Maximum drainage area (in acres) to 100 linear feet of sediment barrier	Range of slope for a particular drainage area (in percent)
0.5	< 2%
0.25	$\geq 2\%$ but < 20%
0.125	$\geq 20\%$ but < 50%

Placing sediment barriers in a parallel series does not extend the size of the drainage area. Storm water diversion practices shall be used to keep runoff away from disturbed areas and steep slopes where practicable. Diversion practices, which include swales, dikes or berms, may receive storm water runoff from areas up to 10 acres.

- iv. **Inlet Protection.** Other erosion and sediment control practices shall minimize sediment laden water entering active storm drain systems. All inlets receiving runoff from drainage areas of one or more acres will require a sediment settling pond.
- v. **Surface Waters of the State Protection.** If construction activities disturb areas adjacent to surface waters of the state, structural practices shall be designed and implemented on site to protect all adjacent surface waters of the state from the impacts of sediment runoff. No structural sediment controls (e.g., the installation of silt fence or a sediment settling pond) shall be used in a surface water of the state. For all construction activities immediately adjacent to surface waters of the state, the permittee shall comply with the buffer non-numeric effluent limitation in Part II.A.6, as measured from the ordinary high water mark of the surface water. Where impacts within this buffer area are unavoidable, due to the nature of the construction (e.g., stream crossings for roads or utilities), the project shall be designed such that the number of stream crossings and the width of the disturbance within the buffer area are minimized.
- vi. **Modifying Controls.** If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the permittee shall replace or modify the control for site conditions.
- e. Post-Construction Storm Water Management Requirements. So that receiving stream's physical, chemical and biological characteristics are protected, and stream functions are maintained, post-construction storm water practices shall provide long-term management of runoff quality and quantity. To meet the post-construction requirements of this permit, the SWP3 shall contain a description of the post-construction BMPs that will be installed during construction for the site and the rationale for their selection. The rationale shall address the anticipated impacts on the channel and floodplain morphology, hydrology, and water quality. Post-construction BMPs cannot be installed within a surface water of the state (e.g., wetland or stream) unless it is authorized by a CWA 401 water quality certification, CWA 404 permit, or Ohio EPA non-jurisdictional wetland/stream program approval. Note: local jurisdictions may have more stringent post-construction requirements.

Detail drawings and maintenance plans shall be provided for all post-construction BMPs in the SWP3. Maintenance plans shall be provided by the permittee to the post-construction operator of the site (including homeowner associations) upon completion of construction activities (prior to termination of permit coverage). Maintenance plans shall ensure that pollutants collected within structural post-construction practices are disposed of in accordance with local, state, and federal regulations. To ensure that storm water management systems function as

designed and constructed, the post-construction operation and maintenance plan shall be a stand-alone document which contains: (1) a designated entity for storm water inspection and maintenance responsibilities; (2) the routine and non-routine maintenance tasks to be undertaken; (3) a schedule for inspection and maintenance; (4) any necessary legally binding maintenance easements and agreements; (5) construction drawings or excerpts showing the plan view, profile and details of the outlet(s); (6) a map showing all access and maintenance easements; and (7) for table 4a/4b practices, provide relevant elevations and associated volumes that dictate when removal of accumulated sediments must occur. Permittees are responsible for assuring all post-construction practices meet plan specifications and intended post-construction conditions have been met (e.g., sediment removed from, and sediment storage restored to, permanent pools, sediment control outlets removed and replaced with permanent post-construction discharge structures, and all slopes and drainageways permanently stabilized), but are not responsible under this permit for operation and maintenance of post-construction practices once coverage under this permit is terminated.

Post-construction storm water BMPs that discharge pollutants from point sources once construction is completed may in themselves need authorization under a separate NPDES permit (one example is storm water discharges from regulated industrial sites).

Construction activities that do not include the installation of any impervious surface (e.g., park lands), abandoned mine land reclamation activities regulated by the Ohio Department of Natural Resources, stream and wetland restoration activities, and wetland mitigation activities are not required to comply with the conditions of Part III.G.2.e of this permit. Linear construction projects (e.g., pipeline or utility line installation) which do not result in the installation of additional impervious surface are not required to comply with the conditions of Part III.G.2.e of this permit. However, linear construction projects shall be designed to minimize the number of stream crossings and the width of disturbance, and to achieve final stabilization of the disturbed area as defined in Part VII.M.1.

For all construction activities that will disturb two or more acres of land or will disturb less than two acres that are part of a larger common plan of development or sale which will disturb two or more acres of land, the post construction BMP(s) chosen shall be able to manage storm water runoff for protection of stream channels, stream stability, and water quality. The BMP(s) chosen must be compatible with site and soil conditions. Structural post-construction storm water treatment practices shall be incorporated into the permanent drainage system for the site. The BMP(s) chosen must be sized to treat the water quality volume (WQ_v) and ensure compliance with Ohio's Water Quality Standards in OAC Chapter 3745-1. The WQ_v shall be equivalent to the volume of runoff from a 0.90-inch rainfall and shall be determined using the following equations:

$$WQ_v = R_v * P * A / 12 \quad \text{(Equation 1)}$$

where:

- WQ_v = water quality volume in acre-feet
- R_v = the volumetric runoff coefficient calculated using equation 2
- P = 0.90 inch precipitation depth
- A = area draining into the BMP in acres

$$R_v = 0.05 + 0.9i \quad \text{(Equation 2)}$$

where i = fraction of post-construction impervious surface

An additional volume equal to 20 percent of the WQ_v shall be incorporated into the BMP for sediment storage. Ohio EPA recommends BMPs be designed according to the methodology described in the most current edition of the Rainwater and Land Development manual or in another design manual acceptable for use by Ohio EPA.

The BMPs listed in Tables 4a and 4b below are considered standard BMPs approved for general use. However, communities with a regulated MS4 may limit the use of some of these BMPs. BMPs shall be designed such that the drain time is long enough to provide treatment but short enough to provide storage for successive rainfall events and avoid the creation of nuisance conditions. The outlet structure for the post-construction BMP shall not discharge more than the first half of the WQ_v in less than one-third of the drain time. The WQ_v is the volume of storm water runoff that must be detained by a post-construction practice as specified by the most recent edition of the Rainwater and Land Development manual.

Post-construction practices shall be sized to treat 100% of the WQ_v associated with their contributing drainage area. If there is an existing post-construction BMP that treats runoff from the disturbed area and the BMP meets the post-construction requirements of this permit, no additional post-construction BMP will be required. A regional storm water BMP may be used to meet the post-construction requirement if: (1) the BMP meets the design requirements for treating the WQ_v; and (2) a legal agreement is established through which the regional BMP owner or operator agrees to provide this service in the long term. Design information for such facilities such as contributing drainage areas, capacities, elevations, outlet details and drain times shall be included in the SWP3.

Table 4a Extended Detention Post-Construction Practices with Minimum Drain Times

Extended Detention Practices	Minimum Drain Time of WQv
Wet Extended Detention Basin ^{1,2}	24 hours
Constructed Extended Detention Wetland ^{1,2}	24 hours
Dry Extended Detention Basin ^{1,3}	48 hours
Permeable Pavement – Extended Detention ¹	24 hours
Underground Storage – Extended Detention ^{1,4}	24 hours
Sand & Other Media Filtration - Extended Detention ^{1, 5}	24 hours

Notes:

1. The outlet structure shall not discharge more than the first half of the WQv in less than one-third of the drain time.
2. Provide a permanent pool with a minimum volume equal to the WQv and an extended detention volume above the permanent pool equal to 1.0 x WQv.
3. Dry basins must include a forebay and a micropool each sized at a minimum of 0.1 x WQv and a protected outlet, or include acceptable pretreatment and a protected outlet.
4. Underground storage must have pretreatment for removal of suspended sediments included in the design and documented in the SWP3. This pretreatment shall concentrate sediment in a location where it can be readily removed. For non-infiltrating, underground extended detention systems, pretreatment shall be 50% effective at capturing total suspended solids according to the testing protocol established in the Alternative Post-Construction BMP Testing Protocol.
5. The WQv ponding area shall completely empty between 24 and 72 hours.

Table 4b Infiltration Post-Construction Practices with Maximum Drain Times

Infiltration Practices	Maximum Drain Time of WQv
Bioretention Area/Cell ^{1,2}	24 hours
Infiltration Basin ²	24 hours
Infiltration Trench ³	48 hours
Permeable Pavement – Infiltration ³	48 hours
Underground Storage – Infiltration ^{3,4}	48 hours

Notes:

1. Bioretention soil media shall have a permeability of approximately 1 – 4 in/hr. Meeting the soil media specifications in the Rainwater and Land Development manual is considered compliant with this requirement. Bioretention cells must have underdrains unless in-situ conditions allow for the WQv (surface ponding) plus the bioretention soil (to a depth of 24 inches) to drain completely within 48 hours.
2. Infiltrating practices with the WQv stored aboveground (bioretention, infiltration basin) shall fully drain the WQv within 24 hours to minimize nuisance effects of standing water and to promote vigorous communities of appropriate vegetation.
3. Subsurface practices designed to fully infiltrate the WQv (infiltration trench, permeable pavement with infiltration, underground storage with infiltration) shall empty within 48 hours to recover storage for subsequent storm events.
4. Underground storage systems with infiltration must have adequate pretreatment of suspended sediments included in the design and documented in the SWP3 in order to minimize clogging of the infiltrating surface. Pretreatment shall concentrate sediment in a location where it can be readily removed. Examples include media filters situated upstream of the storage or other suitable alternative approved by Ohio EPA. For infiltrating underground systems, pretreatment shall be 80% effective at capturing total suspended solids according to the testing protocol established in the Alternative Post-Construction BMP Testing Protocol.

Small Construction Activities. For all construction activities authorized under this permit which result in a disturbance less than 2 acres, a post-construction practice shall be used to treat storm water runoff for pollutants and to reduce adverse impacts on receiving waters. The applicant must provide a justification in the SWP3 why the use of table 4a and 4b practices are not feasible. The justification must address limiting factors which would prohibit the project going forward should table 4a and 4b practices be required. Please note that additional practices selected will require approval from the regulated MS4. The use of green infrastructure BMPs such as runoff reducing practices is also encouraged.

Transportation Projects. The construction of new roads and roadway improvement projects by public entities (i.e., the state, counties, townships, cities, or villages) may implement post-construction BMPs in compliance with the current version (as of the effective date of this permit) of the Ohio Department of Transportation's "Location and Design Manual, Volume Two Drainage Design" that has been accepted by Ohio EPA as an alternative to the conditions of this permit.

Offsite Mitigation of Post-Construction. Ohio EPA may authorize the offsite mitigation of the post-construction requirements of Part III.G.2.e of this permit on a case by case basis provided the permittee clearly demonstrates the BMPs listed in Tables 4a and 4b are not feasible and the following criteria are met: (1) a maintenance agreement or policy is established to ensure operations and treatment long-term; (2) the offsite location discharges to the same HUC-12 watershed unit; and (3) the mitigation ratio of the WQv is 1.5 to 1 or the WQv at the point of retrofit, whichever is greater. Requests for offsite mitigation must be received prior to receipt of the NOI application.

Previously Developed Areas - Ohio EPA encourages the redevelopment of previously graded, paved or built upon sites through a reduction of the WQv treatment requirement. For a previously developed area, one or a combination of the following two conditions shall be met:

- A 20 percent net reduction of the site's volumetric runoff coefficient through impervious area reduction with soil restoration or replacing impervious roof area with green roof area (for these purposes green roofs shall be considered pervious surface) or
- Treatment of 20 percent of the WQv for the previously developed area using a practice meeting Table 4a/4b criteria.

Where there is a combination of redeveloped areas and new development, a weighted approach shall be used with the following equation:

$$WQv = P * A * [(Rv_1 * 0.2) + (Rv_2 - Rv_1)] / 12 \quad (\text{Equation 3})$$

where

P = 0.90 inches

A = area draining into the BMP in acres

Rv₁ = volumetric runoff coefficient for existing conditions (current site impervious area)

Rv₂ = volumetric runoff coefficient for proposed conditions (post-construction site impervious area)

Post-construction practices shall be located to treat impervious areas most likely to generate the highest pollutant load, such as parking lots or roadways, rather than areas predicted to be cleaner such as rooftops.

Runoff Reduction Practices. The size of structural post-construction practices used to capture and treat the WQv can be reduced by incorporating runoff

reducing practices into the design of the site's drainage system. The approach to calculate and document runoff reduction is detailed in the Rainwater and Land Development Manual. BMP-specific runoff reduction volumes are set by specifications in the Rainwater and Land Development Manual for the following practices:

- Impervious surface disconnection
- Rainwater harvesting
- Bioretention
- Infiltration basin
- Infiltration trench
- Permeable pavement with infiltration
- Underground storage with infiltration
- Grass swale
- Sheet flow to filter strip
- Sheet flow to conservation area

A runoff reduction approach may be used to meet the groundwater recharge requirements in the Big Darby Creek Watershed. The runoff reduction practices used for groundwater recharge may be used to reduce the WQv requirement, see appendix A for details on groundwater recharge requirements.

In order to promote the implementation of green infrastructure, the Director may consider the use of runoff reducing practices to demonstrate compliance with Part III.G.2.e of this permit for areas of the site not draining into a common drainage system of the site, e.g., sheet flow from perimeter areas such as the rear yards of residential lots, low density development scenarios, or where the permittee can demonstrate that the intent of pollutant removal and stream protection, as required in Part III.G.2.e of this permit is being addressed through non-structural post-construction BMPs based upon review and approval by Ohio EPA.

Use of Alternative Post-Construction BMPs. This permit does not preclude the use of innovative or experimental post-construction storm water management technologies. Alternative post-construction BMPs shall previously have been tested to confirm storm water treatment efficacy equivalent to those BMPs listed in Tables 4a and 4b using the protocol described in this section. BMP testing may include laboratory testing, field testing, or both.

Permittees shall request approval from Ohio EPA to use alternative post-construction BMPs on a case-by-case basis. To use an alternative post-construction BMP, the permittee must demonstrate that use of a BMP listed in Tables 4a and 4b is not feasible and the proposed alternative post-construction BMP meets the minimum treatment criteria as described in this section. The permittee shall submit an application to Ohio EPA for any proposed alternative post-construction BMP. Where the development project is located within a regulated municipal separate storm sewer system (MS4) community, the use of an alternative practice requires pre-approval by the MS4 before submittal of the

Ohio EPA permit application. Ohio EPA requires that approvals for alternative post-construction BMPs are finalized before permittees submit an NOI for permit coverage.

In addition to meeting sediment removal criteria, the discharge rate from the proposed alternative practice shall be reduced to prevent stream bed erosion and protect the physical and biological stream integrity unless there will be negligible hydrological impact to the receiving surface water of the state. Discharge rate is considered to have a negligible impact if the permittee can demonstrate that one of the following three conditions exist:

- i. The entire WQv is recharged to groundwater;
- ii. The larger common plan of development or sale will create less than one acre of impervious surface;
- iii. The storm water drainage system of the development discharges directly into a large river with drainage area equal to 100 square miles or larger upstream of the development site or to a lake where the development area is less than 5 percent of the watershed area, unless a TMDL has identified water quality problems into the receiving surface waters of the state.

If the conditions above that minimize the potential for hydrological impact to the receiving surface water of the state do not exist, then the alternative post-construction BMP must prevent stream erosion by reducing the flow rate from the WQ_v. In such cases, discharge of the WQ_v must be controlled. A second storm water BMP that provides extended detention of the WQ_v may be needed to meet the post-construction criteria.

Alternative Post-Construction BMP Testing Protocol. For laboratory testing, the alternative BMP shall be tested using sediment with a specific gravity of 2.65, a particle size distribution closely matching the distribution shown in Table 5, and total suspended sediment (TSS) concentrations within 10% of 200 mg/L (180 mg/L – 220 mg/L TSS). For an alternative BMP to be acceptable, the test results must demonstrate that the minimum treatment rate is 80% TSS removal at the design flow rate for the tested BMP.

Table 5 Particle Size Distribution for Testing Alternative Post-Construction BMPs

Particle Size (microns)	Percent Finer (%)
1,000	100
500	95
250	90
150	75
100	60
75	50
50	45
20	35
8	20
5	10
2	5

- For field testing, the alternative BMP shall be tested using storm water runoff

from the field, not altered by adding aggregate or subjecting to unusually high sediment loads such as those from unstabilized construction disturbance. The storm water runoff used for field testing shall be representative of runoff from the proposed installation site for the alternative BMP after all construction activities have ceased and the ground has been stabilized. The influent and effluent TSS concentrations of storm water runoff must be collected in the field. For an alternative BMP to be acceptable, the test results must demonstrate the minimum treatment rate is 80% TSS removal for influent concentrations equal to or greater than 100 mg/L TSS. If the influent concentration to the proposed alternative BMP is less than 100 mg/L TSS in the field, then the BMP must achieve an average effluent concentration less than or equal to 20 mg/L TSS.

- Testing of alternative post-construction BMPs shall be performed or overseen by a qualified independent, third-party testing organization;
- Testing shall demonstrate the maximum flow rate at which the alternative post-construction BMP can achieve the necessary treatment efficacy, including consideration for the potential of sediment resuspension;
- Testing shall demonstrate the maximum volume of sediment and floatables that can be collected in the alternative post-construction BMP before pollutants must be removed to maintain 80% treatment efficacy;
- Testing shall indicate the recommended maintenance frequency and maintenance protocol to ensure ongoing performance of the alternative post-construction BMP.

The alternative post-construction BMP testing protocol described in this section is similar to testing requirements specified by the New Jersey Department of Environmental Protection (NJDEP) for storm water Manufactured Treatment Devices (MTD) and therefore testing results certified by NJDEP shall be accepted by Ohio EPA. For examples of BMPs that have been tested using New Jersey Department of Environmental Protection's procedures, see the website: www.njstormwater.org.

Another nationally recognized storm water product testing procedure is the Technology Assessment Protocol – Ecology (TAPE) administered by the State of Washington, Department of Ecology. The TAPE testing procedure describes testing to achieve 80% TSS removal using a sediment mix with a particle size distribution with approximately 75% of the mass of the aggregate with particle diameters less than 45 microns. Overall, this particle size distribution is finer than the distribution in Table 5. Therefore, if TAPE testing results are available for a proposed alternative post-construction BMP, those results shall be accepted by Ohio EPA. The State of Washington, Department of Ecology website is <https://ecology.wa.gov/>.

Alternative BMPs that utilize treatment processes such as filtering or centrifugal separation, rather than a detention and settling volume, must be designed to ensure treatment of 90 percent of the average annual runoff

volume. For the design of these BMPs, the water quality flow rate (WQF) considered equivalent to the Water Quality Volume (WQv) shall be determined utilizing the Rational Method (Equation 4) with an intensity (i) appropriate for the water quality precipitation event. This intensity shall be calculated using the table given in Appendix C.

$$WQF = C * i * A \quad \text{(Equation 4)}$$

Where

WQF = water quality flow rate in cubic feet per second (cfs)
C = rational method runoff coefficient
i = intensity (in/hr)
A = area draining to the BMP (acres)

Alternative post-construction BMPs may include, but are not limited to: vegetated swales, vegetated filter strips, hydrodynamic separators, high-flow media filters, cartridge filters, membrane filters, subsurface flow wetlands, multi-chamber treatment trains, road shoulder media filter drains, wetland channels, rain barrels, green roofs, and rain gardens. The Director may also consider non-structural post-construction approaches.

- f. Surface Water Protection. If the project site contains any streams, rivers, lakes, wetlands or other surface waters, certain construction activities at the site may be regulated under the CWA and/or state isolated wetland permit requirements. Sections 404 and 401 of the Act regulate the discharge of dredged or fill material into surface waters and the impacts of such activities on water quality, respectively. Construction activities in surface waters which may be subject to CWA regulation and/or state isolated wetland permit requirements include, but are not limited to: sewer line crossings, grading, backfilling or culverting streams, filling wetlands, road and utility line construction, bridge installation and installation of flow control structures. If the project contains streams, rivers, lakes or wetlands or possible wetlands, the permittee shall contact the appropriate U.S. Army Corps of Engineers District Office. (CAUTION: Any area of seasonally wet hydric soil is a potential wetland - please consult the Soil Survey and list of hydric soils for your County, available at your county's Soil and Water Conservation District. If you have any questions about Section 401 water quality certification, please contact the Ohio Environmental Protection Agency, Section 401 Coordinator.)

U.S. Army Corps of Engineers (Section 404 regulation):

- Huntington, WV District (304) 399-5210 (Muskingum River, Hocking River, Scioto River, Little Miami River, and Great Miami River Basins)
- Buffalo, NY District (716) 879-4330 (Lake Erie Basin)
- Pittsburgh, PA District (412) 395-7155 (Mahoning River Basin)
- Louisville, KY District (502) 315-6686 (Ohio River)

Ohio EPA 401/404 and non-jurisdictional stream/wetland coordinator can be contacted at (614) 644-2001 (all of Ohio)

Concentrated storm water runoff from BMPs to natural wetlands shall be converted to diffuse flow before the runoff enters the wetlands. The flow should be released such that no erosion occurs downslope. Level spreaders may need to be placed in series, particularly on steep sloped sites, to ensure non-erosive velocities. Other structural BMPs may be used between storm water features and natural wetlands, in order to protect the natural hydrology, hydroperiod, and wetland flora. If the applicant proposes to discharge to natural wetlands, a hydrologic analysis shall be performed. The applicant shall attempt to match the pre-development hydroperiods and hydrodynamics that support the wetland. The applicant shall assess whether their construction activity will adversely impact the hydrologic flora and fauna of the wetland. Practices such as vegetative buffers, infiltration basins, conservation of forest cover, and the preservation of intermittent streams, depressions, and drainage corridors may be used to maintain wetland hydrology.

g. Other controls.

- i. **Non-Sediment Pollutant Controls.** In accordance with Part II.E, no solid (other than sediment) or liquid waste, including building materials, shall be discharged in storm water runoff. The permittee must implement all necessary BMPs to prevent the discharge of non-sediment pollutants to the drainage system of the site or surface waters of the state or an MS4. Under no circumstance shall wastewater from the washout of concrete trucks, stucco, paint, form release oils, curing compounds, and other construction materials be discharged directly into a drainage channel, storm sewer or surface waters of the state. Also, no pollutants from vehicle fuel, oils, or other vehicle fluids can be discharged to surface waters of the state. No exposure of storm water to waste materials is recommended. The SWP3 must include methods to minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, and sanitary waste to precipitation, storm water runoff, and snow melt. In accordance with Part II.D.3, the SWP3 shall include measures to prevent and respond to chemical spills and leaks. You may also reference the existence of other plans (i.e., Spill Prevention Control and Countermeasure (SPCC) plans, spill control programs, Safety Response Plans, etc.) provided that such plan addresses conditions of this permit condition and a copy of such plan is maintained on site.
- ii. **Off-site traffic.** Off-site vehicle tracking of sediments and dust generation shall be minimized. In accordance with Part II.D.1, the SWP3 shall include methods to minimize the discharge of pollutants from equipment and vehicle washing, wheel washwater, and other washwaters. No detergents may be used to wash vehicles. Washwaters shall be treated in a sediment basin or alternative control that provides equivalent treatment prior to discharge.
- iii. **Compliance with other requirements.** The SWP3 shall be consistent with applicable State and/or local waste disposal, sanitary sewer or septic system regulations, including provisions prohibiting waste disposal by

open burning and shall provide for the proper disposal of contaminated soils to the extent these are located within the permitted area.

- iv. **Trench and ground water control.** In accordance with Part II.C, there shall be no turbid discharges to surface waters of the state resulting from dewatering activities. If trench or ground water contains sediment, it shall pass through a sediment settling pond or other equally effective sediment control device, prior to being discharged from the construction site. Alternatively, sediment may be removed by settling in place or by dewatering into a sump pit, filter bag or comparable practice. Ground water which does not contain sediment or other pollutants is not required to be treated prior to discharge. However, care must be taken when discharging ground water to ensure that it does not become pollutant-laden by traversing over disturbed soils or other pollutant sources.
- v. **Contaminated Sediment.** Where construction activities are to occur on sites with contamination from previous activities, operators shall be aware that concentrations of materials that meet other criteria (is not considered a Hazardous Waste, meeting VAP standards, etc.) may still result in storm water discharges in excess of Ohio Water Quality Standards. Such discharges are not authorized by this permit. Appropriate BMPs include, but are not limited to:
- The use of berms, trenches, and pits to collect contaminated runoff and prevent discharges;
 - Pumping runoff into a sanitary sewer (with prior approval of the sanitary sewer operator) or into a container for transport to an appropriate treatment/disposal facility; and
 - Covering areas of contamination with tarps or other methods that prevent storm water from coming into contact with the material.

Operators should consult with Ohio EPA Division of Surface Water prior to seeking permit coverage.

- h. Maintenance. All temporary and permanent control practices shall be maintained and repaired as needed to ensure continued performance of their intended function. All sediment control practices must be maintained in a functional condition until all up-slope areas they control are permanently stabilized. The SWP3 shall be designed to minimize maintenance requirements. The applicant shall provide a description of maintenance procedures needed to ensure the continued performance of control practices.
- i. Inspections. The permittee shall assign “qualified inspection personnel” to conduct inspections to ensure that the control practices are functional and to evaluate whether the SWP3 is adequate and properly implemented in accordance with the schedule proposed in Part III.G.1.h of this permit or whether additional control measures are required. At a minimum, procedures in a SWP3 shall provide that all controls on the site are inspected:

- after any storm event greater than one-half inch of rain per 24-hour period by the end of the next calendar day, excluding weekends and holidays unless work is scheduled; and
- once every seven calendar days.

The inspection frequency may be reduced to at least once every month for dormant sites if:

- the entire site is temporarily stabilized or
- runoff is unlikely due to weather conditions for extended periods of time (e.g., site is covered with snow, ice, or the ground is frozen).

The beginning and ending dates of any reduced inspection frequency shall be documented in the SWP3.

Once a definable area has achieved final stabilization, the area may be marked on the SWP3 and no further inspection requirements shall apply to that portion of the site.

Following each inspection, a checklist must be completed and signed by the qualified inspection personnel representative. At a minimum, the inspection report shall include:

- i. the inspection date;
- ii. names, titles, and qualifications of personnel making the inspection;
- iii. weather information for the period since the last inspection (or since commencement of construction activity if the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether any discharges occurred;
- iv. weather information and a description of any discharges occurring at the time of the inspection;
- v. location(s) of discharges of sediment or other pollutants from the site;
- vi. location(s) of BMPs that need to be maintained;
- vii. location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location;
- viii. location(s) where additional BMPs are needed that did not exist at the time of inspection; and
- ix. corrective action required including any changes to the SWP3 necessary and implementation dates.

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. Erosion and sediment control measures identified in the SWP3 shall be observed to ensure that those are operating correctly. Discharge locations shall be inspected to ascertain whether erosion and sediment control measures are effective in preventing significant impacts to the receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site vehicle tracking.

The permittee shall maintain for three years following the submittal of a notice of termination form, a record summarizing the results of the inspection, names(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWP3 and a certification as to whether the facility is in compliance with the SWP3 and the permit and identify any incidents of non-compliance. The record and certification shall be signed in accordance with Part V.G. of this permit.

- i. **When practices require repair or maintenance.** If the inspection reveals that a control practice is in need of repair or maintenance, with the exception of a sediment settling pond, it shall be repaired or maintained within 3 days of the inspection. Sediment settling ponds shall be repaired or maintained within 10 days of the inspection.
 - ii. **When practices fail to provide their intended function.** If the inspection reveals that a control practice fails to perform its intended function and that another, more appropriate control practice is required, the SWP3 shall be amended and the new control practice shall be installed within 10 days of the inspection.
 - iii. **When practices depicted on the SWP3 are not installed.** If the inspection reveals that a control practice has not been implemented in accordance with the schedule contained in Part III.G.1.h of this permit, the control practice shall be implemented within 10 days from the date of the inspection. If the inspection reveals that the planned control practice is not needed, the record shall contain a statement of explanation as to why the control practice is not needed.
3. Approved State or local plans. All dischargers regulated under this general permit must comply, except those exempted under state law, with the lawful requirements of municipalities, counties and other local agencies regarding discharges of storm water from construction activities. All erosion and sediment control plans and storm water management plans approved by local officials shall be retained with the SWP3 prepared in accordance with this permit. Applicable requirements for erosion and sediment control and storm water management approved by local officials are, upon submittal of a NOI form, incorporated by reference and enforceable under this permit even if they are not specifically included in an SWP3 required under this permit. When the project is located within the jurisdiction of a regulated municipal separate storm sewer system (MS4), the permittee shall certify that the SWP3 complies with the requirements of the storm water management program of the MS4 operator.
4. Exceptions. If specific site conditions prohibit the implementation of any of the erosion and sediment control practices contained in this permit or site-specific conditions are such that implementation of any erosion and sediment control practices contained in this permit will result in no environmental benefit, then the permittee shall provide justification for rejecting each practice based on site conditions. Exceptions from implementing the erosion and sediment control standards contained in this permit will be approved or denied on a case-by-case basis.

The permittee may request approval from Ohio EPA to use alternative methods to satisfy conditions in this permit if the permittee can demonstrate that the alternative methods are sufficient to protect the overall integrity of receiving streams and the watershed. Alternative methods will be approved or denied on a case-by-case basis.

PART IV. NOTICE OF TERMINATION REQUIREMENTS

A. Failure to notify.

The terms and conditions of this permit shall remain in effect until a signed Notice of Termination (NOT) form is submitted. Failure to submit an NOT constitutes a violation of this permit and may affect the ability of the permittee to obtain general permit coverage in the future.

B. When to submit an NOT.

1. Permittees wishing to terminate coverage under this permit shall submit an NOT form in accordance with Part V.G. of this permit. Compliance with this permit is required until an NOT form is submitted. The permittee's authorization to discharge under this permit terminates at midnight of the day the NOT form is submitted. Prior to submitting the NOT form, the permittee shall conduct a site inspection in accordance with Part III.G.2.i of this permit and have a maintenance plan in place to ensure all post-construction BMPs will be maintained in perpetuity.
2. All permittees shall submit an NOT form within 45 days of completing all permit requirements. Enforcement actions may be taken if a permittee submits an NOT form without meeting one or more of the following conditions:
 - a. Final stabilization (see definition in Part VII) has been achieved on all portions of the site for which the permittee is responsible (including, if applicable, returning agricultural land to its pre-construction agricultural use);
 - b. Another operator(s) has assumed control over all areas of the site that have not been finally stabilized;
 - c. A maintenance plan is in place to ensure all post construction BMPs are adequately maintained in the long-term;
 - d. For non-residential developments, all elements of the storm water pollution prevention plan have been completed, the disturbed soil at the identified facility have been stabilized and temporary erosion and sediment control measures have been removed at the appropriate time, or all storm water discharges associated with construction activity from the identified facility that are authorized by the above referenced NPDES general permit have otherwise been eliminated. (i) For residential developments only, temporary stabilization has been completed and the lot, which includes a home, has been transferred to the homeowner; (ii) final stabilization has been completed and the lot, which does not include a home, has been transferred to the property owner; (iii) no stabilization has been implemented on a lot, which includes a home, and the lot has been transferred to the homeowner; or

- e. An exception has been granted under Part III.G.4.

C. How to submit an NOT.

To terminate permit coverage, the permittee shall submit a complete and accurate Notice of Termination (NOT) form using Ohio EPA's electronic application form which is available through the Ohio EPA eBusiness Center at: <https://ebiz.epa.ohio.gov/>. Submission through the Ohio EPA eBusiness Center will require establishing an Ohio EPA eBusiness Center account and obtaining a unique Personal Identification Number (PIN) for final submission of the NOT. Existing eBusiness Center account holders can access the NOT form through their existing account and submit using their existing PIN. Please see the following link for guidance: <http://epa.ohio.gov/dsw/ebs.aspx#170669803-streams-guidance>. Alternatively, if you are unable to access the NOT form through the agency eBusiness Center due to a demonstrated hardship, the NOT may be submitted on paper NOT forms provided by Ohio EPA. NOT information shall be typed on the form. Please contact Ohio EPA, Division of Surface Water at (614) 644-2001 if you wish to receive a paper NOT form.

PART V. STANDARD PERMIT CONDITIONS.

A. Duty to comply.

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of ORC Chapter 6111 and is grounds for enforcement action.

Ohio law imposes penalties and fines for persons who knowingly make false statements or knowingly swear or affirm the truth of a false statement previously made.

B. Continuation of an expired general permit.

An expired general permit continues in force and effect until a new general permit is issued.

C. Need to halt or reduce activity not a defense.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to mitigate.

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. Duty to provide information.

The permittee shall furnish to the director, within 10 days of written request, any information which the director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee

shall also furnish to the director upon request copies of records required to be kept by this permit.

F. Other information.

When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the NOI, SWP3, NOT or in any other report to the director, he or she shall promptly submit such facts or information.

G. Signatory requirements.

All NOIs, NOTs, SWP3s, reports, certifications or information either submitted to the director or that this permit requires to be maintained by the permittee, shall be signed.

1. These items shall be signed as follows:
 - a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - i. A president, secretary, treasurer or vice-president of the corporation in charge of a principal business function or any other person who performs similar policy or decision-making functions for the corporation; or
 - ii. The manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
 - b. For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or
 - c. For a municipality, State, Federal or other public agency: By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (1) the chief executive officer of the agency or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA).
2. All reports required by the permits and other information requested by the director shall be signed by a person described in Part V.G.1 of this permit or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- a. The authorization is made in writing by a person described in Part V.G.1 of this permit and submitted to the director;
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator of a well or well field, superintendent, position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - c. The written authorization is submitted to the director.
3. Changes to authorization. If an authorization under Part V.G.2 of this permit is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part V.G.2 of this permit must be submitted to the director prior to or together with any reports, information or applications to be signed by an authorized representative.

H. Certification.

Any person signing documents under this section shall make the following 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 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."

I. Oil and hazardous substance liability.

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under section 311 of the CWA or 40 CFR Part 112. 40 CFR Part 112 establishes procedures, methods and equipment and other requirements for equipment to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable surface waters of the state or adjoining shorelines.

J. Property rights.

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

K. Severability.

The provisions of this permit are severable and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

L. Transfers.

Ohio NPDES general permit coverage is transferable. Ohio EPA must be notified in writing sixty days prior to any proposed transfer of coverage under an Ohio NPDES general permit. The transferee must inform Ohio EPA it will assume the responsibilities of the original permittee transferor.

M. Environmental laws.

No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

N. Proper operation and maintenance.

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of SWP3s. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

O. Inspection and entry.

The permittee shall allow the director or an authorized representative of Ohio EPA, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment); and
4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

P. Duty to Reapply.

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

Q. Permit Actions.

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

R. Bypass.

The provisions of 40 CFR Section 122.41(m), relating to "Bypass," are specifically incorporated herein by reference in their entirety. For definition of "Bypass," see Part VII.C.

S. Upset.

The provisions of 40 CFR Section 122.41(n), relating to "Upset," are specifically incorporated herein by reference in their entirety. For definition of "Upset," see Part VII.GG.

T. Monitoring and Records.

The provisions of 40 CFR Section 122.41(j), relating to "Monitoring and Records," are specifically incorporated herein by reference in their entirety.

U. Reporting Requirements.

The provisions of 40 CFR Section 122.41(l), relating to "Reporting Requirements," are specifically incorporated herein by reference in their entirety.

PART VI. REOPENER CLAUSE

If there is evidence indicating potential or realized impacts on water quality due to any storm water discharge associated with construction activity covered by this permit, the permittee of such discharge may be required to obtain coverage under an individual permit or an alternative general permit in accordance with Part I.C of this permit or the permit may be modified to include different limitations and/or requirements.

Permit modification or revocation will be conducted according to ORC Chapter 6111.

PART VII. DEFINITIONS

- A. "Act" means Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483, Pub. L. 97-117 and Pub. L. 100-4, 33 U.S.C. 1251 et. seq.
- B. "Bankfull channel" means a channel flowing at channel capacity and conveying the bankfull discharge. Delineated by the highest water level that has been maintained for a sufficient period of time to leave evidence on the landscape, such as the point where the natural vegetation changes from predominantly aquatic to predominantly terrestrial or

the point at which the clearly scoured substrate of the stream ends and terrestrial vegetation begins.

- C. “Bankfull discharge” means the streamflow that fills the main channel and just begins to spill onto the floodplain; it is the discharge most effective at moving sediment and forming the channel.
- D. “Best management practices (BMPs)” means schedules of activities, prohibitions of practices, maintenance procedures and other management practices (both structural and non-structural) to prevent or reduce the pollution of surface waters of the state. BMP's also include treatment requirements, operating procedures and practices to control plant and/or construction site runoff, spillage or leaks, sludge or waste disposal or drainage from raw material storage.
- E. “Bypass” means the intentional diversion of waste streams from any portion of a treatment facility.
- F. “Channelized stream” means the definition set forth in Section 6111.01 (M) of the ORC.
- G. “Commencement of construction” means the initial disturbance of soils associated with clearing, grubbing, grading, placement of fill, or excavating activities or other construction activities.
- H. “Concentrated storm water runoff” means any storm water runoff which flows through a drainage pipe, ditch, diversion or other discrete conveyance channel.
- I. “Director” means the director of the Ohio Environmental Protection Agency.
- J. “Discharge” means the addition of any pollutant to the surface waters of the state from a point source.
- K. “Disturbance” means any clearing, grading, excavating, filling, or other alteration of land surface where natural or man-made cover is destroyed in a manner that exposes the underlying soils.
- L. “Drainage watershed” means for purposes of this permit the total contributing drainage area to a BMP, i.e., the “watershed” directed to the practice. This would also include any off-site drainage.
- M. “Final stabilization” means that either:
 - 1. All soil disturbing activities at the site are complete and a uniform perennial vegetative cover (e.g., evenly distributed, without large bare areas) with a density of at least 70 percent cover for the area has been established on all unpaved areas and areas not covered by permanent structures or equivalent stabilization measures (such as the use of mulches, rip-rap, gabions or geotextiles) have been employed. In addition, all temporary erosion and sediment control practices are removed and disposed of and all trapped sediment is permanently stabilized to prevent further erosion; or

2. For individual lots in residential construction by either:
 - a. The homebuilder completing final stabilization as specified above or
 - b. The homebuilder establishing temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner and informing the homeowner of the need for and benefits of, final stabilization. (Homeowners typically have an incentive to put in the landscaping functionally equivalent to final stabilization as quick as possible to keep mud out of their homes and off sidewalks and driveways.); or
 3. For construction projects on land used for agricultural purposes (e.g., pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its pre-construction agricultural use. Areas disturbed that were previously used for agricultural activities, such as buffer strips immediately adjacent to surface waters of the state and which are not being returned to their pre-construction agricultural use, must meet the final stabilization criteria in (1) or (2) above.
- N. “General contractor” – for the purposes of this permit, the primary individual or company solely accountable to perform a contract. The general contractor typically supervises activities, coordinates the use of subcontractors, and is authorized to direct workers at a site to carry out activities required by the permit.
- O. “Individual lot NOI” means a Notice of Intent for an individual lot to be covered by this permit (see Part I of this permit).
- P. “Larger common plan of development or sale”- means a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan.
- Q. “MS4” means municipal separate storm sewer system which means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains) that are:
 1. Owned or operated by the federal government, state, municipality, township, county, district(s) or other public body (created by or pursuant to state or federal law) including special district under state law such as a sewer district, flood control district or drainage districts or similar entity or a designated and approved management agency under section 208 of the act that discharges into surface waters of the state; and
 2. Designed or used for collecting or conveying solely storm water,
 3. Which is not a combined sewer and
 4. Which is not a part of a publicly owned treatment works.
- R. “National Pollutant Discharge Elimination System (NPDES)” means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits and enforcing pretreatment requirements, under sections 307, 402, 318 and 405 of the CWA. The term includes an "approved program."

- S. “Natural channel design” means an engineering technique that uses knowledge of the natural process of a stream to create a stable stream that will maintain its form and function over time.
- T. “NOI” means notice of intent to be covered by this permit.
- U. “NOT” means notice of termination.
- V. “Operator” means any party associated with a construction project that meets either of the following two criteria:
1. The party has day-to-day operational control of all activities at a project which are necessary to ensure compliance with a SWP3 for the site and all permit conditions including the ability to authorize modifications to the SWP3, construction plans and site specification to ensure compliance with the General Permit, or
 2. Property owner meets the definition of operator should the party which has day to day operational control require additional authorization from the owner for modifications to the SWP3, construction plans, and/or site specification to ensure compliance with the permit or refuses to accept all responsibilities as listed above (Part VII.V.1).

Subcontractors generally are not considered operators for the purposes of this permit. As set forth in Part I.F.1, there can be more than one operator at a site and under these circumstances, the operators shall be co-permittees.

- W. “Ordinary high water mark” means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.
- X. “Owner or operator” means the owner or operator of any “facility or activity” subject to regulation under the NPDES program.
- Y. “Permanent stabilization” means the establishment of permanent vegetation, decorative landscape mulching, matting, sod, rip rap and landscaping techniques to provide permanent erosion control on areas where construction operations are complete or where no further disturbance is expected for at least one year.
- Z. “Percent imperviousness” means the impervious area created divided by the total area of the project site.
- AA. “Point source” means any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or the floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

- BB. “Qualified inspection personnel” means a person knowledgeable in the principles and practice of erosion and sediment controls, who possesses the skills to assess all conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activity.
- CC. “Rainwater and Land Development” is a manual describing construction and post-construction best management practices and associated specifications. A copy of the manual may be obtained by contacting the Ohio Department of Natural Resources, Division of Soil & Water Conservation.
- DD. “Riparian area” means the transition area between flowing water and terrestrial (land) ecosystems composed of trees, shrubs and surrounding vegetation which serve to stabilize erodible soil, improve both surface and ground water quality, increase stream shading and enhance wildlife habitat.
- EE. “Runoff coefficient” means the fraction of total rainfall that will appear at the conveyance as runoff.
- FF. “Sediment settling pond” means a sediment trap, sediment basin or permanent basin that has been temporarily modified for sediment control, as described in the latest edition of the Rainwater and Land Development manual.
- GG. “State isolated wetland permit requirements” means the requirements set forth in Sections 6111.02 through 6111.029 of the ORC.
- HH. “Storm water” means storm water runoff, snow melt and surface runoff and drainage.
- II. “Steep slopes” means slopes that are 15 percent or greater in grade. Where a local government or industry technical manual has defined what is to be considered a “steep slope,” this permit’s definition automatically adopts that definition.
- JJ. “Stream edge” means the ordinary high water mark.
- KK. “Subcontractor” – for the purposes of this permit, an individual or company that takes a portion of a contract from the general contractor or from another subcontractor.
- LL. “Surface waters of the state” or “water bodies” means all streams, lakes, reservoirs, ponds, marshes, wetlands or other waterways which are situated wholly or partially within the boundaries of the state, except those private waters which do not combine or effect a junction with natural surface or underground waters. Waters defined as sewerage systems, treatment works or disposal systems in Section 6111.01 of the ORC are not included.
- MM. “SWP3” means storm water pollution prevention plan.
- NN. “Upset” means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment

facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

- OO. “Temporary stabilization” means the establishment of temporary vegetation, mulching, geotextiles, sod, preservation of existing vegetation and other techniques capable of quickly establishing cover over disturbed areas to provide erosion control between construction operations.
- PP. “Water Quality Volume (WQ_v)” means the volume of storm water runoff which must be captured and treated prior to discharge from the developed site after construction is complete.

Appendix A Big Darby Creek Watershed

CONTENTS OF THIS APPENDIX

- A.1 Permit Area
- A.2 TMDL Conditions
- A.3 Sediment Settling Ponds and Sampling
- A.4 Riparian Setback Requirements
- A.5 Riparian Setback Mitigation
- A.6 Groundwater Recharge Requirements
- A.7 Groundwater Recharge mitigation

Attachment A-A: Big Darby Creek Watershed Map

Attachment A-B: Stream Assessment and Restoration

A.1 Permit Area.

This appendix to Permit OHC00005 applies to the entire Big Darby Creek Watershed located within the State of Ohio. Please see Attachment A for permit area boundaries.

A.2 TMDL Conditions.

This general permit requires control measures/BMPs for construction sites that reflect recommendations set forth in the U.S. EPA approved Big Darby Creek TMDL.

A.3 Sediment Settling Ponds and Sampling

Sediment settling ponds additional conditions. The sediment settling pond shall be sized to provide a minimum sediment storage volume of 134 cubic yards of effective sediment storage per acre of drainage and maintain a target discharge performance standard of 45 mg/l Total Suspended Solids (TSS) up to a 0.75-inch rainfall event within a 24-hour period. Unless infeasible, sediment settling ponds must be dewatered at the pond surface using a skimmer or equivalent device. The depth of the sediment settling pond must be less than or equal to five feet. Sediment must be removed from the sediment settling pond when the design capacity has been reduced by 40 percent (This is typically reached when sediment occupies one-half of the basin depth).

Silt Fence and Diversions. For sites five or more acres in size, the use of sediment barriers as a primary sediment control is prohibited. Centralized sediment basins shall be used for sites 5 or more acres in size. Diversions shall direct all storm water runoff from the disturbed areas to the impoundment intended for sediment control. The sediment basins and associated diversions shall be implemented prior to the major earth disturbing activity.

The permittee shall sample in accordance with sampling procedures outlined in 40 CFR 136. Sampling shall occur as follows:

- i. Occur at the outfall of each sediment settling pond associated with the site. Each associated outfall shall be identified by a three-digit number (001, 002, etc.);
- ii. The applicable rainfall event for sampling to occur shall be a rainfall event of 0.25-inch to a 0.75-inch rainfall event to occur within a 24-hour period. Grab sampling shall be initiated at a site within 14 days, or the first applicable rainfall event thereafter, once upslope disturbance of each sampling location is initiated and shall continue on a quarterly basis. Quarterly periods shall be represented as January - March, April - June, July - September and October - December. Sampling results shall be retained on site and available for inspection.

If any sample is greater than the performance standard of 45 mg/l TSS, the permittee shall modify the SWP3 and install/implement new control practice(s) within 10 days to ensure the TSS performance standard is maintained. Within 3 days of improvement(s), or the first applicable rainfall event thereafter, the permittee shall resample to ensure SWP3 modifications maintain the TSS performance standard target.

For each sample taken, the permittee shall record the following information:

- the outfall and date of sampling;
- the person(s) who performed the sampling;
- the date the analyses were performed on those samples;
- the person(s) who performed the analyses;
- the analytical techniques or methods used; and
- the results of all analyses.

Both quarterly and sampling results following a discharge target exceedance shall be retained on site and available for inspection.

A.4 Riparian Setback Requirements.

The SWP3 shall clearly delineate the boundary of required stream setback distances. No construction activity shall occur, without appropriate mitigation, within the delineated setback boundary except activities associated with restoration or recovery of natural floodplain and channel form characteristics as described in Attachment B, storm water conveyances from permanent treatment practices and approvable utility crossings. Such conveyances must be designed to minimize the width of disturbance. If intrusion within the delineated setback boundary is necessary to accomplish the purposes of a project, then mitigation shall be required in accordance with Appendix A.5 of this permit. Streams requiring protection under this section are defined as perennial, intermittent or ephemeral streams with a defined bed, bank or channel. National Resources Conservation Service (NRCS) soil survey maps should be used as one reference and the presence of a stream requiring protection should also be confirmed in the field. Any required setback distances shall be clearly displayed in the field prior to any construction related activity.

Riparian setbacks distance shall be delineated based upon one of the following two methods:

- i. The setback distance shall be sized as the greater of the following:

1. The regulatory 100-year floodplain based on FEMA mapping;
2. A minimum of 100 feet from the top of the streambank on each side; or
3. A distance calculated using the following equation:

$$W = 133DA^{0.43} \quad (\text{Equation 1, Appendix A})$$

where:

DA = drainage area (mi²)

W = total width of riparian setback (ft)

W shall be centered over the meander pattern of the stream such that a line representing the setback width would evenly intersect equal elevation lines on either side of the stream.

If the DA remains relatively constant throughout the stretch of interest, then the DA of the downstream edge of the stretch should be used. Where there is a significant increase in the DA from the upstream edge to the downstream edge of the area of interest, the setback width shall increase accordingly.

- ii. **Stream Restoration with 100 feet (each side) Riparian Setback.** Each stream segment within the proposed site boundaries can be assessed in accordance with Attachment B, Part 1. In the event the stream segment is classified as a "Previously Modified Low Gradient Headwater Stream", the permittee has the option to restore the stream segment in accordance with Attachment B and include a 100-foot water quality setback distance from the top of the streambank on each side. In the event the stream segment exceeds the minimum criteria in Attachment B to be classified as a "Previously Modified Low Gradient Headwater Stream," this Appendix A, Attachment B may be considered on a case-by-case basis.

No structural sediment controls (e.g., the installation of sediment barriers or a sediment settling pond) or structural post-construction controls shall be used in a surface water of the State or the delineated setback corridor.

Previously developed projects (as defined in Part III.G.2.e.) located within the delineated setback boundary are exempt from Riparian Setback Mitigation (A.5) provided the proposed project does not further intrude into the delineated setback boundary.

Linear transportation projects which are caused solely by correcting safety related issues, mandates of modern design requirements and/or resulting from other mitigation activities are exempt from Riparian Setback Mitigation (Appendix A, A.5) if less than one acre of total new right-of-way is associated with the project.

A.5 Riparian Setback Mitigation.

The mitigation required for intrusion into the riparian setback shall be determined by the horizontal distance the intrusion is from the stream. Up to three zones will be used in determining the required mitigation. Zone 1 extends from 0 to 25 feet from the stream edge. Zone 2 extends from 25 to 100 feet from the stream edge, and Zone 3 extends from 100 feet to the outer edge of the setback corridor. Intrusion into these zones will require the following mitigation within the same Watershed Assessment Unit (12-digit HUC scale):

- i. Four times the total area disturbed in the stream and within Zone 1 of the site being developed shall be mitigated within Zone 1 of the mitigation location.
- ii. Three times the area disturbed within Zone 2 of the site being developed shall be mitigated within Zones 1 and/or 2 of the mitigation location.
- iii. Two times the area disturbed within Zone 3 of the site being developed shall be mitigated within any zone of the mitigation location.

In lieu of mitigation ratios found within in this section, linear transportation projects which result in total new right-of-way greater than one acre and less than two acres, which are caused solely by correcting safety related issues, mandates of modern design requirements and/or resulting from other mitigation activities, shall provide Riparian Setback Mitigation at a ratio of 1.5 to 1.

All mitigation shall, at a minimum, include conserved or restored setback zone and should be designed to maximize the ecological function of the mitigation. Including mitigation at the stream edge along with associated setback areas is one way to maximize ecological function. Mitigation shall be protected in perpetuity by binding conservation easements or environmental covenants which must be recorded within 6 months of receiving permit authorization. Granting of binding conservation easements or environmental covenants protected in perpetuity for land outside of disturbed area but within a required riparian setback counts towards required mitigation.

Mitigation may also be satisfied by approved pooled mitigation areas and in-lieu fee sponsored mitigation areas. Mitigation resulting from State or Federal environmental regulations may be adjusted in recognition of these requirements.

A.6 Groundwater Recharge Requirements.

The SWP3 shall ensure that the overall site post-development groundwater recharge equals or exceeds the pre-development groundwater recharge. The SWP3 shall describe the conservation development strategies, BMPs and other practices deemed necessary by the permittee to maintain or improve pre-development rates of groundwater recharge. Pre-development and post-development groundwater recharge shall be calculated using the following equation:

i. $Vre_x = A_x * Dre_x / 12$ (Equation 2, Appendix A)

where:

- X = represents a land use and hydrologic soil group pair
- Vre_x = volume of total annual recharge from land use-soil group X (in acre-ft)
- Dre_x = depth of total annual recharge associated with land use-soil group X from Tables 1 or 2 (in inches)
- A_x = area of land use-soil group X (in acres)

Table A-1 values should be used for land where the underlying geology indicates a potential for downward migration of groundwater. Table A-1 values represent the combined total groundwater recharge potential including groundwater contribution to stream baseflow and to the underlying bedrock aquifer. The potential for downward migration can be determined from a comparison of the potentiometric maps for the glacial and bedrock aquifers. Use Table A-2 when this potential is unlikely to exist. Detailed potentiometric maps for the Franklin county portion of the Darby watershed, and coarse potentiometric maps for the Darby watershed outside of Franklin County and hydrologic soil group data are available at:

http://www.epa.state.oh.us/dsw/permits/GP_ConstructionSiteStormWater_Darby.aspx.

Table A-1 (Appendix A) Annual Average Expected Total Groundwater Recharge³

Land Use	Density (DU ¹ /acre)	% Impervious	Recharge (inches) by Hydrologic Soil Group ²			
			A	B	C	D
Woods / Forest	-	-	17.0	16.6	15.6	14.6
Brush	-	-	17.0	16.6	15.6	14.6
Meadow	-	-	17.0	16.5	15.4	14.4
Managed Wood	-	-	16.9	16.0	14.7	13.4
Pasture	-	-	16.5	15.9	14.4	13.0
Row Crop	-	-	15.8	14.2	11.9	8.1
Urban Grasses	-	-	15.7	15.7	14.2	12.7
Low Density Residential	0.5	12%	15.7	15.7	14.2	12.7
Low Density Residential	1	20%	14.8	14.8	13.7	12.2
Medium Density Residential	2	25%	11.5	11.5	11.5	11.5
Medium Density Residential	3	30%	11.2	11.2	11.2	11.2
Medium Density Residential	4	38%	9.6	9.6	9.6	9.6
High Density Residential	≥5	65%	7.3	7.3	7.3	7.3
Commercial & Road Right-of-Way ⁴	-	90%	4.3	4.3	4.3	4.3

¹ DU = Dwelling Units

² Hydrologic soil group designations of A/D, B/D, and C/D should be considered as D soils for this application.

³ These values apply when recharge of the aquifer is expected; recharge to the bedrock aquifer can be expected when the potentiometric head of the glacial aquifer is greater than the bedrock aquifer.

⁴ The 4.3 infiltration value may only be used for an area as a whole (includes impervious and pervious areas) which includes a minimum of 10 percent pervious area. If all land uses (pervious and impervious) are tabulated separately, then impervious areas have 0 inches of recharge.

Table A-2 (Appendix A) Annual Average Expected Baseflow Recharge³

Land Use	Density (DU ¹ /acre)	% Impervious	Recharge (inches) by Hydrologic Soil Group ²			
			A	B	C	D
Woods / Forest	-	-	11.8	11.4	10.7	9.9
Brush	-	-	11.7	11.4	10.7	9.9
Meadow	-	-	11.8	11.3	10.6	9.8
Managed Wood	-	-	11.7	11.0	10.0	9.1
Pasture	-	-	11.3	11.0	9.9	8.9
Row Crop	-	-	11.1	10.1	9.0	6.2
Urban Grasses	-	-	11.2	11.2	10.3	9.3
Low Density Residential	0.5	12%	11.2	11.2	10.3	9.3
Low Density Residential	1	20%	9.5	9.5	9.0	8.6
Medium Density Residential	2	25%	7.8	7.8	7.8	7.8
Medium Density Residential	3	30%	7.6	7.6	7.6	7.6
Medium Density Residential	4	38%	6.5	6.5	6.5	6.5
High Density Residential	≥5	65%	5.0	5.0	5.0	5.0
Commercial & Road Right-of-Way ⁴	-	90%	2.9	2.9	2.9	2.9

¹ DU = Dwelling Units

² Hydrologic soil group designations of A/D, B/D, and C/D should be considered as D soils for this application.

³ These values apply when no recharge of the aquifer is expected.

⁴ The 2.9 infiltration value may only be used for an area as a whole (includes impervious and pervious areas) which includes a minimum of 10 percent pervious area. If all land uses (pervious and impervious) are tabulated separately, then impervious areas have 0 inches of recharge.

Table A-3 (Appendix A) Land Use Definitions

Land Use	Definition
Woods / Forest	Areas dominated by trees. Woods are protected from grazing and litter and brush adequately cover the soil.
Brush	Brush, weeds, grass mixture where brush is the major element and more than 75% of the ground is covered.
Meadow	Continuous grass, protected from grazing, generally mowed for hay.
Managed Wood	Orchards, tree farms, and other areas planted or maintained for the production of fruits, nuts, berries, or ornamentals.
Pasture	Pasture, grassland, or range where at least 50% of the ground is covered and the area is not heavily grazed.
Row Crop	Areas used to produce crops, such as corn, soybeans, vegetables, tobacco, and cotton.
Urban Grasses	Vegetation (primarily grasses) planted in developed settings for recreation, erosion control, or aesthetic purposes. Examples include parks, lawns, golf courses, airport grasses, and industrial site grasses.
Residential	Areas with a mixture of constructed materials and vegetation; the average % imperviousness and number of dwelling units per acre to determine the appropriate density is specified.
Commercial	Includes infrastructure (e.g. roads, railroads, etc.) and all highly developed areas not classified as High Intensity Residential.

- ii. The pre-development ground water recharge volume shall be calculated by determining the area of each land use-soil type pairing on the site of interest. The recharge associated with each such pairing multiplied by the area will give the pre-development volume of total groundwater

recharge. The same shall be done for the post-development land use-soil type pairings.

Any activity that is expected to produce storm water runoff with elevated concentrations of carcinogens, hydrocarbons, metals, or toxics is prohibited from infiltrating untreated storm water from the area affected by the activity. The groundwater recharge mitigation requirement for areas affected by such activities must be met by methods which do not present a risk of groundwater contamination. The following land uses and activities are typically deemed storm water hotspots:

Vehicle salvage yards and recycling facilities

- vehicle service and maintenance facilities (i.e. truck stops, gas stations)
- fleet storage areas (i.e. bus, truck)
- industrial sites subject to industrial storm water permitting requirements
- bulk terminals
- marinas
- facilities that generate or store hazardous materials
- other land uses and activities as designated by individual review

The following land uses and activities are not normally considered hotspots:

- residential streets and rural highways
- residential development
- institutional development
- commercial and office developments
- non-industrial rooftops
- pervious areas, except golf courses and nurseries

The applicant may use structural BMPs within drinking water source protection areas for community public water systems only to the extent that the structural BMP(s) does not cause contaminants in the recharge waters to impact the ground water quality at levels that would cause an exceedance of the drinking water Maximum Contaminant Levels (OAC Section 3745-81 and 3745-82). To obtain a map of drinking water source protection areas for community public water systems contact Ohio EPA's Division of Drinking and Ground Waters at (614) 644-2752.

Linear transportation projects which are caused solely by correcting safety related issues, mandates of modern design requirements and/or resulting from other mitigation activities are exempt from Groundwater Recharge Mitigation (Appendix B, A.7) if less than one acre of total new right-of-way is associated with the project.

Protection of open space (infiltration areas) shall be by binding conservation easements that identify a third-party management agency, such as a homeowners' association/condominium association, political jurisdiction or third-party land trust.

A.7 Groundwater Recharge Mitigation.

If the post-development recharge volume is less than the pre-development recharge volume, then mitigation will be required. Two options are available for most applications:

- i. The preferred method is to convert additional land to land use with higher recharge potential. The difference in groundwater recharge between the existing and converted land use recharge is the amount which can be used as recharge credit. Off-site Groundwater Recharge Mitigation shall occur within the same Watershed Assessment Unit (12-digit HUC scale) as the permitted site and preferably up-gradient and within a 2-mile radius.

Mitigation shall be protected in perpetuity by binding conservation easements or environmental covenants which must be recorded within 6 months of receiving permit authorization. Granting of binding conservation easements or environmental covenants protected in perpetuity for land outside of the disturbed area, but within a required riparian setback counts towards required mitigation.

Mitigation may also be satisfied by approved pooled mitigation areas and in-lieu fee sponsored mitigation areas.

- ii. On-site structural and non-structural practices may also be used to achieve groundwater mitigation requirements by retaining and infiltrating on-site a minimum volume of storm water runoff based on the area and hydrologic soil groups of disturbed soils. If these infiltrating practices are incorporated upstream of the water quality volume treatment practice, the volume of groundwater being infiltrated may be subtracted from the water quality volume for the purpose of meeting post-construction requirements. The on-site retention requirement is determined by the following formula:

$$V_{\text{retention}} = A_{\text{HSG-A}} * 0.90 \text{ in} + A_{\text{HSG-B}} * 0.75 \text{ in} + A_{\text{HSG-C}} * 0.50 \text{ in} + A_{\text{HSG-D}} * 0.25 \text{ in}$$

(Equation 3, Appendix A)

Where,

$V_{\text{retention}}$ = volume of runoff retained onsite using an approved infiltration practice

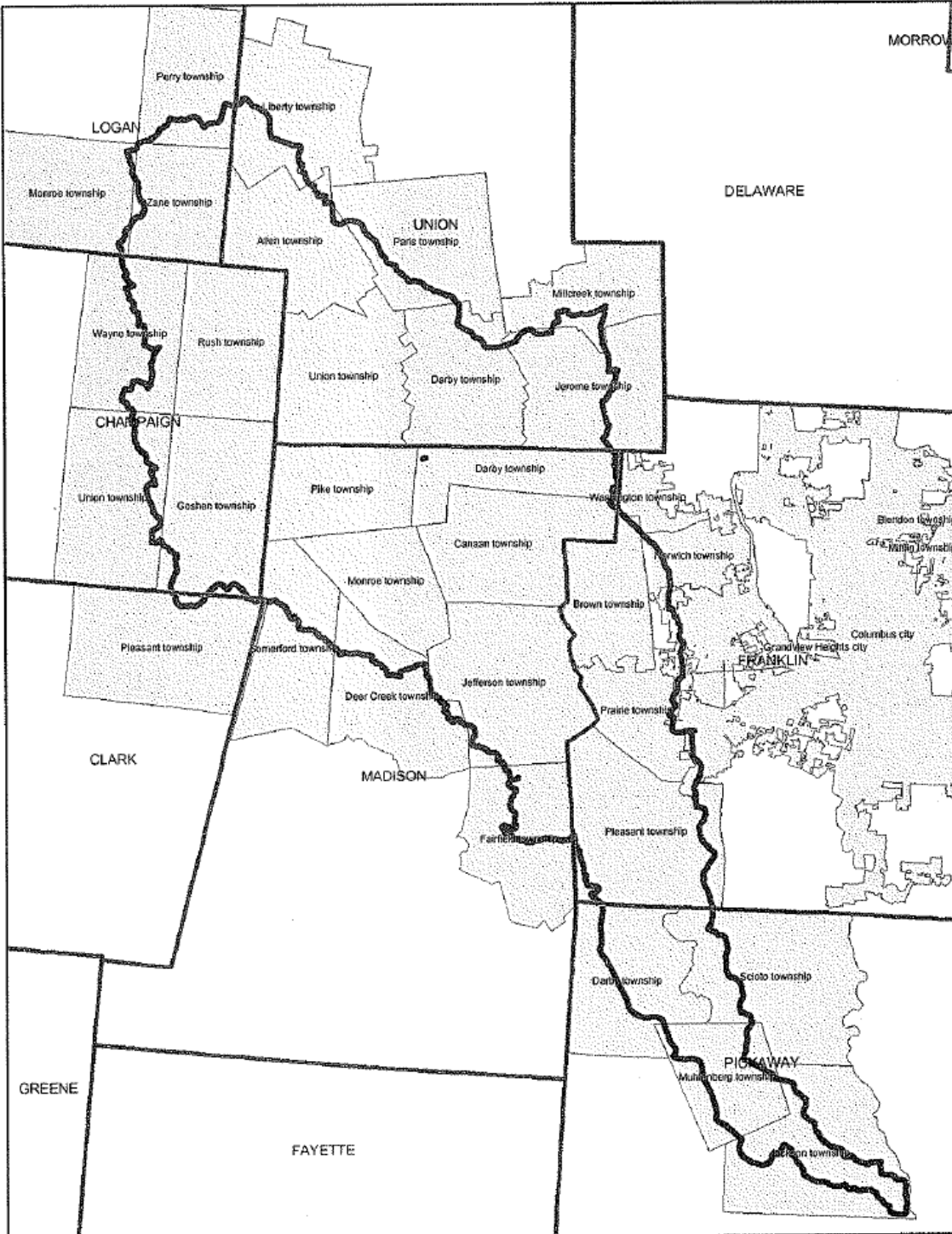
$A_{\text{HSG-x}}$ = area of each hydrologic soil group within the disturbed area

Table A-4: Hydrologic Soil Groups and On-site Retention Depth per Acre

Hydrologic Soil Group	HSG A	HSG B	HSG C	HSG D
Retention Depth (inches)	0.90	0.75	0.50	0.25

Retention volume ($V_{\text{retention}}$) provided by selected practices shall be determined using the runoff reduction method criteria as outlined in Part III.G.2.e, Ohio EPA's Runoff Reduction spreadsheet and supporting documentation in the Rainwater and Land Development manual. Hydrologic soil group (HSG) areas are to be determined by using the current version of SURRGO or Web Soil Survey soils information.

Appendix A Attachment A: Big Darby Creek Watershed



A more detailed map can be viewed at:
http://www.epa.state.oh.us/dsw/permits/GP_ConstructionSiteStormWater_Darby.aspx

Appendix A Attachment B

Part 1 Stream Assessment

This assessment will determine if a stream is considered a previously channelized, low-gradient headwater stream (a drainage ditch) which would be applicable for stream restoration in lieu of protecting a setback as per Appendix A. A.4.i and ii.

In the event the assessment of the stream, meets all the criteria listed below, restoration (provided 401/404 permits are authorized) as depicted in Part 2 of this attachment, may be a means of reducing the setback distance required by A.4.i. (Appendix A).

Previously Channelized Low-Gradient Headwater Streams (drainage ditches) shall for the purposes of this permit be defined as having all of the following characteristics:

- Less than 10 square miles of drainage area
- Low gradient and low stream power such that despite their straightened and entrenched condition incision (down-cutting) is not evident
- Entrenched, entrenchment ratio < 2.2
- Straight, sinuosity of the bankfull channel < 1.02

Part 2 Restoration

Restoration shall be accomplished by any natural channel design approach that will lead to a self-maintaining reach able to provide both local habitat and watershed services (e.g. self-purification and valley floodwater storage).

- a. Construction of a floodplain, channel and habitat via natural channel design;
- b. Floodplain excavation necessary to promote interaction between stream and floodplain;
- c. Include a water quality setback of 100 feet from top of the streambank on each side.

The primary target regardless of design approach shall be the frequently flooded width, which shall be maximized, at 10 times the channel's self-forming width. Five times the self-forming channel width may still be acceptable particularly on portions of the site if greater widths are achieved elsewhere.

Appendix B Olentangy River Watershed

CONTENTS OF THIS APPENDIX

- B.1 Permit Area
- B.2 TMDL Conditions
- B.3 Riparian Setback Requirements
- B.4 Riparian Setback Mitigation

Attachment B-A: Area of Applicability for the Olentangy Watershed (Map)

Attachment B-B: Stream Assessment and Restoration

B.1 Permit Area.

This appendix to Permit OHC00005 applies to specific portions of the Olentangy River Watershed located within the State of Ohio. The permit area includes the following 12-digit Hydrologic Unit Codes (HUC-12) within the Olentangy River Watershed:

12-Digit Hydrologic Unit Codes

12-Digit Hydrologic Unit Codes (HUC)	Narrative Description of Sub-Watershed
05060001 09 01	Shaw Creek
05060001 09 02	Headwaters Whetstone Creek
05060001 09 03	Claypool Run-Whetstone Creek
05060001 10 07	Delaware Run-Olentangy River
05060001 11 01	Deep Run-Olentangy River
05060001 11 02 (Only portion as depicted in Attachment A)	Rush Run-Olentangy River

Please see Attachment A (Appendix B) for permit area boundaries. An electronic version of Attachment A can be viewed at

http://epa.ohio.gov/dsw/permits/GP_ConstructionSiteStormWater_Olentangy.aspx

B.2 TMDL Conditions.

This general permit requires control measures/BMPs for construction sites that reflect recommendations set forth in the U.S. EPA approved Olentangy TMDL.

B.3 Riparian Setback Requirements.

The permittee shall comply with the riparian setback requirements of this permit or alternative riparian setback requirements established by a regulated MS4 and approved by Ohio EPA. The SWP3 shall clearly delineate the boundary of required stream setback distances. The stream setback shall consist of a streamside buffer and an outer buffer. No construction activity shall occur, without appropriate mitigation, within the streamside buffer except activities associated with storm water conveyances from permanent treatment practices, approvable utility crossings and restoration or recovery of floodplain and channel form characteristics as described in Attachment B. Storm water conveyances must be designed to minimize the width of disturbance.

Construction activities requiring mitigation for intrusions within the outer buffer for the Olentangy River mainstem and perennial streams are described in Appendix B.4.

If intrusion within the delineated setback boundary is necessary to accomplish the purposes of a project, then mitigation shall be required in accordance with Appendix B.3. of this permit. Streams requiring protection under this section have a defined bed and bank or channel and are defined as follows:

- The Olentangy River mainstem;
- Perennial streams have continuous flow on either the surface of the stream bed or under the surface of the stream bed;
- Intermittent streams flow for extended periods of time seasonally of a typical climate year; and
- Ephemeral streams are normally dry and only flow during and after precipitation runoff (episodic flow).

National Resources Conservation Service (NRCS) soil survey maps should be used as one reference and the presence of a stream requiring protection should also be confirmed in the field. Any required setback distances shall be clearly displayed in the field prior to any construction related activity.

Riparian setbacks shall be delineated based upon one of the following two methods:

- i. The required setback distances shall vary with stream type as follows:
 - a. The setback distances associated with the mainstem of the Olentangy River shall consist of:
 - (1) A streamside buffer width of 100 feet as measured horizontally from the ordinary high water mark per side; and
 - (2) An outer buffer width sized to the regulatory 100-year floodplain based on FEMA mapping. No impervious surfaces shall be constructed without appropriate mitigation and moderate to substantial fill activities with no impervious surface may require appropriate mitigation pending an individual approval by Ohio EPA.
 - b. The setback distance associated with perennial streams, other than the Olentangy mainstem, shall consist of:
 - (1) A streamside buffer width of 80 feet per side measured horizontally from the ordinary high water mark; and
 - (2) An outer buffer width sized to the regulatory 100-year floodplain based on FEMA mapping. In the event the regulatory 100-year floodplain is not established, the outer buffer width shall be calculated using the following equation and measured horizontally from the ordinary high water mark. No impervious surfaces, structure, fill, or activity that would impair the floodplain or stream stabilizing ability of the outer buffer shall occur without appropriate mitigation:

$$W = 143DA^{0.41} \quad (\text{Equation 1 Appendix B})$$

where:

DA = drainage area (mi²)

W = total width of riparian setback (ft)

W shall be centered over the meander pattern of the stream such that a line representing the setback width would evenly intersect equal elevation lines on either side of the stream.

If the DA remains relatively constant throughout the stretch of interest, then the DA of the downstream edge of the stretch should be used. Where there is a significant increase in the DA from the upstream edge to the downstream edge of the area of interest, the setback width shall increase accordingly.

c. The setback distance associated with intermittent streams and ephemeral streams shall be a streamside buffer width of 30 feet per side measured horizontally from the centerline of the stream. No outer buffer is required for intermittent and ephemeral streams.

- ii. Stream Restoration with 100 feet (each side) Riparian Setback. Each stream segment within the proposed site boundaries can be assessed in accordance with Attachment B. In the event the stream segment is classified as a "Previously Modified Low Gradient Headwater Stream", the permittee has the option to restore the stream segment in accordance with Attachment B and include a 100 feet water quality setback distance from the top of the streambank on each side. In the event the stream segment exceeds the minimum criteria in Attachment B to be classified as a "Previously Modified Low Gradient Headwater Stream", this may be considered on a case-by-case basis.

No structural sediment controls (e.g., the installation of sediment barriers or a sediment settling pond) or structural post-construction controls shall be used in a stream or the streamside buffer. Activities and controls that would not impair the floodplain or stream stabilizing ability of the outer buffer can be considered.

Redevelopment projects (i.e., developments on previously developed property) located within the delineated setback boundary is exempt from Riparian Setback Mitigation (B.3) provided the proposed project does not further intrude the delineated setback boundary.

B.4 Riparian Setback Mitigation.

The mitigation required for intrusion into the riparian setback of the **Olentangy River mainstem or perennial streams** shall be determined by the horizontal distance the intrusion is from the stream. Up to three zones will be used in determining the required mitigation. Zone 1 extends from 0 to 30 feet from the stream edge. Zone 2 extends

from 30 feet to the outer edge of the streamside buffer. Zone 3 extends from the outer edge of the streamside buffer to the outer edge of the outer buffer. Intrusion into these zones will require the following mitigation within the same Watershed Assessment Unit (12-digit HUC scale). Alternative mitigation, within the permit area, may be considered on a case-by-case basis:

1. Four (4) times the total area disturbed in the stream within Zone 1 of the site being developed shall be mitigated; or, two (2) times the total area disturbed in the stream within Zone 1 shall be mitigated within the watershed of the immediate receiving stream, and the entire required setback of the site shall be protected by binding conservation easements or environmental covenants.
2. Three (3) times the area disturbed within Zone 2 of the site being developed shall be mitigated within Zones 1 and/or 2 of the mitigation location; or, one and one-half (1.5) times the total area disturbed within Zone 2 shall be mitigated within the watershed of the immediate receiving stream, and the entire required setback of the site shall be protected in perpetuity by binding conservation easements or environmental covenants.
3. Two (2) times the area to be mitigated within Zone 3 of the site being developed shall be mitigated within any Zone of the mitigation location; or, one (1) times the total area to be mitigated within any zone shall be mitigated within the watershed of the immediate receiving stream, and the entire required setback of the site shall be protected in perpetuity by binding conservation easements or environmental covenants.

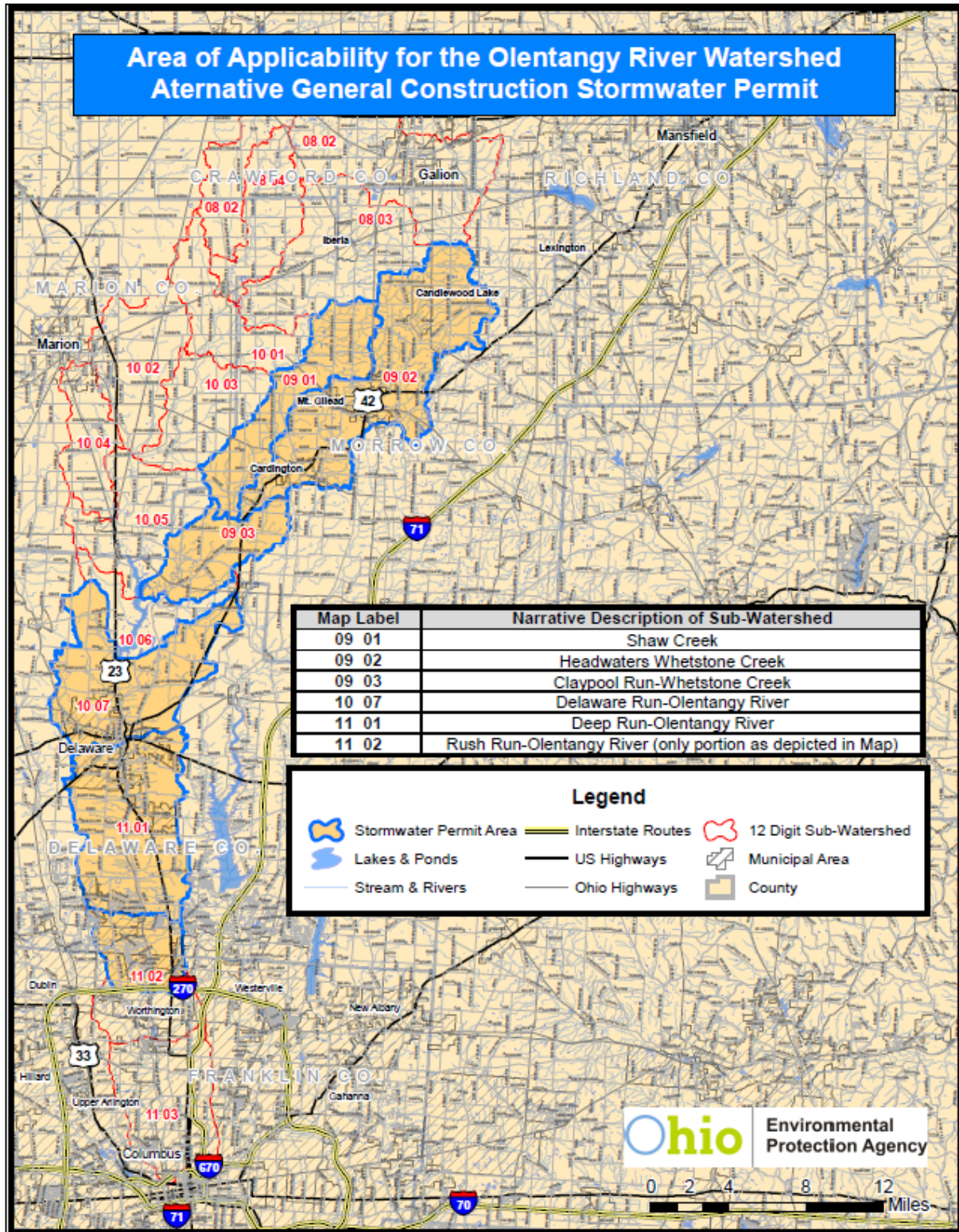
The mitigation required for intrusion into the riparian setback of an **intermittent stream** shall be four (4) times the total area disturbed within the riparian setback of the site being developed shall be mitigated; or two (2) times the total area disturbed within the riparian setback shall be mitigated within the watershed of the immediate receiving stream, and the entire required setback of the site shall be protected in perpetuity by binding conservation easements or environmental covenants.

The mitigation required for intrusion into the streamside buffer of an **ephemeral stream** shall be two (2) times the total area disturbed within the riparian setback of the site being developed shall be mitigated; or one (1) times the total area disturbed within the riparian setback shall be mitigated within the watershed of the immediate receiving stream, and the entire required setback of the site shall be protected in perpetuity by binding conservation easements or environmental covenants.

All mitigation shall, at a minimum, include conserved or restored setback zone, and should be designed to maximize the ecological function of the mitigation. Including mitigation at the stream edge along with associated setback areas is one way to maximize ecological function. Mitigation shall be protected in perpetuity by binding conservation easements or environmental covenants which must be recorded within 6 months of permit authorization. Granting of binding conservation easements or environmental covenants protected for land outside of disturbed area, but within a required riparian setback counts towards required mitigation.

Mitigation may also be satisfied by approved pooled mitigation areas and in-lieu fee sponsored mitigation areas. Mitigation resulting from State or Federal environmental regulations may be adjusted in recognition of these requirements.

Appendix B Attachment A Applicable Portions of the Olentangy Watershed



A more detailed map can be viewed at:
http://epa.ohio.gov/dsw/permits/GP_ConstructionSiteStormWater_Olentangy.aspx

Appendix B Attachment B

Part 1 Stream Assessment

This assessment will determine if a stream is considered a previously channelized, low-gradient headwater stream (a drainage ditch) which would be applicable for stream restoration in lieu of protecting an outer 'no build' setback as per Appendix B B.2i. and ii.

In the event the assessment of the stream meets all the criteria listed below, restoration as depicted in Part 2 of this attachment or natural channel design could be performed, provided 401/404 permits are authorized, and may be a means of reducing the setback distance required by B.2.i. (Appendix B).

Previously Modified, Low-Gradient Headwater Streams shall, for the purposes of this permit, be defined as having all of the following characteristics:

- Less than 10 square miles of drainage area;
- Low gradient and low stream power such that incision (down-cutting) is not evident;
- Entrenched such that the ratio of the frequently flooded width to the bankfull width is less than 2.2; and
- Straight with little or no sinuosity present such that the ratio of the bankfull channel length to the straight-line distance between two points is less than 1.02.

Part 2 Restoration

Restoration shall be accomplished by any natural channel design approach that will lead to a self-maintaining reach able to provide both local habitat and watershed services (e.g. self-purification and valley floodwater storage).

- a. Construction of a floodplain, channel and habitat via natural channel design;
- b. Floodplain excavation necessary to promote interaction between stream and floodplain;
- c. Include a water quality setback of 100 feet from top of the streambank on each side.

The primary target shall be a frequently flooded width of 10 times the channel's self-forming width. Five times the self-forming channel width may be acceptable if sufficient elements of natural channel design are included in the restoration project.

Appendix C Rainfall Intensity for Calculation of Water Quality Flow (WQF)

DURATION t_c (minutes)	WATER QUALITY INTENSITY [i_{wq}] (inches/hour)
5	2.37
6	2.26
7	2.15
8	2.04
9	1.94
10	1.85
11	1.76
12	1.68
13	1.62
14	1.56
15	1.51
16	1.46
17	1.41
18	1.37
19	1.33
20	1.29
21	1.26
22	1.22
23	1.19
24	1.16
25	1.13
26	1.10
27	1.07
28	1.05
29	1.03
30	1.01
31	0.99
32	0.97

DURATION t_c (minutes)	WATER QUALITY INTENSITY [i_{wq}] (inches/hour)
33	0.95
34	0.93
35	0.92
36	0.90
37	0.88
38	0.86
39	0.85
40	0.83
41	0.82
42	0.80
43	0.78
44	0.77
45	0.76
46	0.75
47	0.74
48	0.73
49	0.72
50	0.71
51	0.69
52	0.68
53	0.67
54	0.66
55	0.66
56	0.65
57	0.64
58	0.64
59	0.63
60	0.62

Note: For $t_c < 5$ minutes, use $i = 2.37$ in/hr; for $t_c > 60$ minutes, use $i = 0.62$ in/hr. For all other t_c , use the appropriate value from this table.