

STORMWATER MANAGEMENT DESIGN ASSISTANCE MANUAL

For Minor Land Development Activities



**HIGHLAND TOWNSHIP
ADAMS COUNTY, PA**

**Accepted by Highland Township Board of Supervisors: February 14, 2008
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Introduction

Stormwater is the runoff produced by precipitation, snow melt, or ice melt. In recent years, Federal and State regulations have mandated stricter and more comprehensive procedures for managing on-site stormwater runoff resulting from construction and/or earth disturbance activities. These procedures are an effort to minimize stormwater runoff volume and rate, as well as curtail the resulting erosion, while promoting water quality and retention. Regardless of the nature of previously-existing stormwater ordinances, Pennsylvania municipalities have been directed to align their laws to reflect substantially more rigorous stormwater management practices. Highland Township's current Stormwater Management Ordinance was adopted on July 10, 2012.

The objective of stormwater management is to prevent or mitigate the adverse impacts of the increase in rate and volume of stormwater runoff, while also protecting health, safety, and property. Stormwater Best Management Practices (BMPs) aim to maintain water quality, encourage infiltration in appropriate areas, promote groundwater recharge, maintain the natural drainage characteristics of the site to the maximum extent practicable, and protect stream banks and beds.

Because the interpretation and implementation of stormwater management provisions can be challenging, especially for the typical property owner, Highland Township has compiled this Design Assistance Manual. The objective of the Manual is to: (1) enable each resident to understand the essence of the stormwater management requirements without confronting the technicalities of the Ordinance itself, and (2) help property owners personally determine which stormwater management facilities are best suited to their individual property, project, budget, and preferences. While the Manual summarizes and streamlines the stormwater management process, it is still likely that residents will need to consult with their building contractor and engineer. Furthermore, the Manual is not a comprehensive inventory of all options and residents should contact the Township to discuss alternative solutions for site-specific applications. All projects require some level of documentation, with increasing levels of documentation associated with progressively larger projects.

The Manual is intended as an aid in designing on-site stormwater management facilities ONLY for new, single-family residence and accessory structure projects with impervious areas less than 10,000 square feet (primarily the area under roof, plus driveway, patio, deck, etc.) and earth disturbances of less than one (1) acre. Use of the Manual for commercial projects, industrial projects, or residential projects of multiple single-family homes or individual single-family homes with greater than one (1) acre of earth disturbance and/or 10,000 square feet of impervious area must be approved by the Township. The Manual is not intended to be used with large-scale subdivision/land development or activities that include infrastructure such as roadways.

Design Considerations

- The building site shall not have any pre-existing stormwater drainage-related problems (as determined by the Township).
- If rock is encountered during excavation activities associated with the stormwater management facilities, the Township shall be contacted; relocation may be required. It is strongly recommended that a few shallow test pits be dug to determine soil conditions for suitability for stormwater management facilities.
- Areas proposed for infiltration BMPs shall be protected from sedimentation and compaction during and after the construction phase, so as to maintain the maximum infiltration capacity.
- Infiltration BMPs shall not be constructed nor receive runoff until the entire contributory drainage area has received final stabilization.
- Infiltration facilities should dewater within 48 hours of cessation of rainfall, as a general consideration for issues associated with standing water. The property owner is not required to perform infiltration testing to verify this, but it may be useful for determining the suitability of infiltration facilities on the property, and the best location of an infiltration facility. Additionally, a favorable infiltration rate may allow the property owner to reduce the size of proposed infiltration facilities. Percolation testing results from septic design may be used instead, if determined to be in close enough proximity and similar soil conditions, and when converted appropriately to infiltration rates. If the property owner chooses to utilize infiltration rates in the design of their facilities, they should consult with an engineer. Any engineering consultation and infiltration testing would be done at the owner's expense.
- In addition to stormwater control, temporary erosion and sediment controls, (such as silt fencing or soxx), shall be provided downslope of all proposed earth disturbance activities.
- If more than 5,000 square feet of land is proposed to be disturbed, an erosion and sedimentation control plan meeting the requirements of Chapter 102 must be submitted for review.
- Extreme caution shall be exercised where infiltration is proposed in geologically sensitive areas such as strip mines and karst topography. Problems like groundwater pollution and sinkholes may arise from improperly managed infiltration in these areas. Extreme caution shall also be exercised where salt or chloride would be a pollutant (i.e., road salt, de-icer), since soils do little to filter this pollutant and it may contaminate the groundwater. It is also extremely important that the applicant's consulting Engineer evaluate the possibility of groundwater contamination from the proposed infiltration facility and provide a hydrogeologic justification study (if necessary). The infiltration requirement in high quality / exceptional value

watersheds shall be subject to DEP's Chapter 93 and anti-degradation regulations. The Township may require the developer to provide safeguards against groundwater contamination for uses that may cause groundwater contamination, should there be a mishap.

Definitions / Terms

Best Management Practice (BMP) - Activities, facilities, designs, measures, or procedures used to manage stormwater impacts from regulated activities, to meet state water quality requirements, to promote groundwater recharge, and to otherwise meet the purposes of this Ordinance.

Disconnected Impervious Area (DIA) - An impervious or impermeable surface that is disconnected from any stormwater drainage or conveyance system and is redirected or directed to a pervious area, which allows for infiltration, filtration, and increased time of concentration.

Disturbed Area – An unstabilized land area where an earth disturbance activity is occurring or has occurred.

Flow Path – The path that stormwater flows from the discharge point to the nearest property line or channelized flow (ie: stream, drainage ditch, etc.). The length of the path is measured along the ground slope.

Formal Stormwater Management Plan – A stormwater management plan meeting the requirements of the Stormwater Management Ordinance, requiring review by the Township Engineer and approval by the Township Board of Supervisors.

Impervious Surface (Impervious Area) - A surface that prevents the infiltration of water into the ground. Impervious surfaces and areas include, but are not limited to, roofs, patios and decks, garages, storage sheds and similar structures, streets, driveways, access drives, parking areas, and sidewalks. Any areas designed to be covered by loose surfacing materials such as gravel, stone and/or crushed stone, and intended for storage of and/or travel by vehicles or pedestrians shall be considered impervious. The measurement of impervious areas shall be from the footprint on the ground, including any overhang areas, where applicable (i.e., roof eaves, decks). Surfaces or areas adequately designed, constructed and maintained to permit infiltration may be considered pervious.

Karst – A type of topography or landscape characterized by surface depressions, sinkholes, rock pinnacles/uneven bedrock surface, underground drainage, and caves. Karst is formed on carbonate rocks, such as limestone or dolomite.

Minor Stormwater Site Plan – A site plan prepared and submitted to the Township for proposed projects which may qualify to use the Design Assistance Manual. The plan depicts existing conditions on the property, proposed impervious areas, and, if required, the location of proposed BMPs.

Pennsylvania Stormwater Best Management Practices Manual – Pennsylvania DEP manual for use as a guide to design and install stormwater BMPs.

Regulated Activity – Any earth disturbing activity or any activity that involves the alteration or development of land in a manner that may affect stormwater runoff.

Runoff – Any part of precipitation that flows over the land.

Sketch Plan – An informal plan, not necessarily to exact scale, indicating existing features of a tract, its surroundings, and the general layout of a proposed stormwater plan.

Determining What Type of Stormwater Management Plan is Required

The chart below provides a guide to determine what type of stormwater plan is needed. Some projects will be exempt from preparing a stormwater management plan, but documentation of the project must still be filed with the Township. Completion of the **Municipal Stormwater Management Worksheets A&B** will determine what type of documentation is required for each project.

Impervious Area	Disturbed Area	Steps
Up to 1,000 ft ² - must be proven to not directly impact neighboring properties	Less than 1 acre	May be exempt. Submit Worksheet A and Sketch Plan.
1,000 to ≤ 10,000 ft ² , If shown to be 100% disconnected from impervious areas	Less than 1 acre	Submit Worksheet A & B and Minor Stormwater Site Plan. May be exempt.
1,000 ft ² to ≤ 5,000 ft ² IF connected to impervious areas	Less than 1 acre	Submit Worksheet A & B, Minor Stormwater Site Plan showing BMP facilities and O&M Agreement.
Greater than 5,000 ft ² IF connected to impervious areas	Greater than 1 acre	Consult an Engineer A formal SWM Plan submission is required.

NOTE: A Drainage Plan Application and associated fee is required to be submitted with all applications (see Attachments).

Using Municipal Stormwater Management Worksheets

Determining the impervious area of a proposed project is the first step in using this Manual. Worksheets A&B will assist the property owner, or applicant, and Township to determine the impervious area of a proposed project as well as provide guidance through the next steps.

Step 1 – If the proposed new impervious surface area is 1,000 square feet or less, the project may be exempt from the requirements in this guide. The applicant must, however, complete and submit Worksheet A and a Sketch Plan and file it with the Township for review. If the project is considered exempt, the application is complete and the applicant will be notified. *If the project is not exempt, go to Step 2.*

Step 2 – If the proposed impervious area is over 1,000 square feet but not more than 10,000 square feet or not deemed exempt in Step 1, the applicant must complete and submit Worksheets A&B and a Minor Stormwater Site Plan for Township review. If DIA requirements (100% disconnection) can be met, projects of this size may be exempt from the requirement to install BMPs. If the project is determined not to be exempt, *Go to Step 3.*

Step 3 – Prepare Minor Stormwater Site Plan showing the proposed location and size of BMPs on the property. These BMPs shall be sized in accordance with the guidance provided in Worksheet B. The Minor Stormwater Site Plan, Worksheets A&B and an executed and recorded Stormwater Management Operations and Maintenance Agreement should be filed with the Township for review.

A Stormwater Management Operations & Maintenance (O&M) Agreement will be required for any project which involves installation of stormwater management facilities (BMPs).

Plan Requirements

Sketch Plan Requirements (to be filed with Worksheet A; ≤ 1,000 SF impervious area)

1. Property address and name of applicant
2. Date
3. Property boundary.
4. North Arrow.
5. Location of all existing and proposed structures (house, shed, addition, etc.) and any proposed downspouts with approximate distance to property lines or other permanent fixtures. Include the dimensions of all proposed structures.
6. Site conditions (grassed areas, agricultural fields, direction of slope and stormwater flow on the property).
7. All existing and proposed driveways and impervious areas (stone and gravel driveways are considered impervious).
8. Utility lines, water service, sewer service, wells and on-site septic systems.
9. Any other pertinent information that may be significant to the project site [existing drainage ways, steep slopes (slopes greater than 15%), etc.].

Minor Stormwater Site Plan Requirements

A Minor Stormwater Site Plan depicts the existing conditions of a property and the location of proposed impervious surfaces. The Plan must be drawn to scale and portray the relationship between the proposed impervious areas and distances to features such as property lines, streams, roadways and vegetated areas. This will help determine if the stormwater runoff created by the proposed project can be managed naturally within the property, or if additional best management practices (BMPs) are needed to accommodate the stormwater runoff.

If a project qualifies for use of a Minor Stormwater Site Plan, the applicant must also prepare and submit to the Township a Minor Stormwater Site Plan and the Municipal Stormwater Management Worksheets A&B. The Adams County GIS Office may also provide assistance to applicants to obtain property maps of existing features. The Plan must reveal the following and may be submitted in conjunction with site grading plan so as to not duplicate effort.

1. Property address and name of applicant
2. Date
3. Property boundary and building setbacks.
4. North arrow and plan scale.
5. Aerial map of property.
6. Topography. Contours at two-foot intervals.
7. Location and dimensions of all existing and proposed structures (house, shed, addition, etc.) and any proposed downspouts.
8. Site conditions (grassed areas, agricultural fields, direction of slope and stormwater flow on the property).
9. Downslope distance from proposed downspouts to property line.
10. All existing and proposed driveways and impervious areas (stone and gravel driveways are considered impervious).
11. Natural features such as streams, wetlands, tree lines, drainage ways and other vegetation on the property and within 50 feet of the property line for lots smaller than 5 acres.
12. Distance from proposed structures or downspouts along the stormwater flow path to any stream or concentrated discharge point.
13. Any other pertinent information that may be significant to the project site (steep slopes (greater than 15% slope), etc.).
14. Utility lines, water service, sewer service, wells and on-site septic systems.
15. Soil boundaries and types.

If BMP's are required, the following information must also be shown on the plan:

16. Location, size and depth of proposed stormwater BMPs.
17. Proposed materials to be used in construction of the BMPs.

Other Considerations for Minor Plans:

- While soil testing is not mandatory for the Design Assistance Manual, soil testing is highly recommended to select and apply the appropriate stormwater BMPs. The use of soil maps, infiltration tests, and/or percolation tests may provide the applicant basic information about soil characteristics.
- Proposed stormwater management facilities must be designed to handle flows from the contributing area.
- The site shall not have any pre-existing stormwater drainage-related problems (as verified by the Township), at the discretion of the Township.
- Water quality shall be protected per Chapter 93 of PA Code.
- The Township may inspect all BMPs during and after construction/installation.

- Infiltration BMPs should not be constructed nor receive runoff until the entire contributory drainage area has achieved final stabilization.
- Ensure that infiltration in geologically susceptible areas such as, but not limited to, carbonate geology/karst topography do not cause adverse effects. The Minor Stormwater Site Plan should incorporate steps to ensure that salt or chloride will not contaminate the groundwater.
- Selected BMPs shall be designed, constructed, and maintained in accordance with the manufacturer's recommendation, the PA Stormwater BMP Manual, or other written guidance acceptable to the Township.
- Proposed sump pumps should discharge to infiltration or vegetative BMPs to the maximum extent practicable.

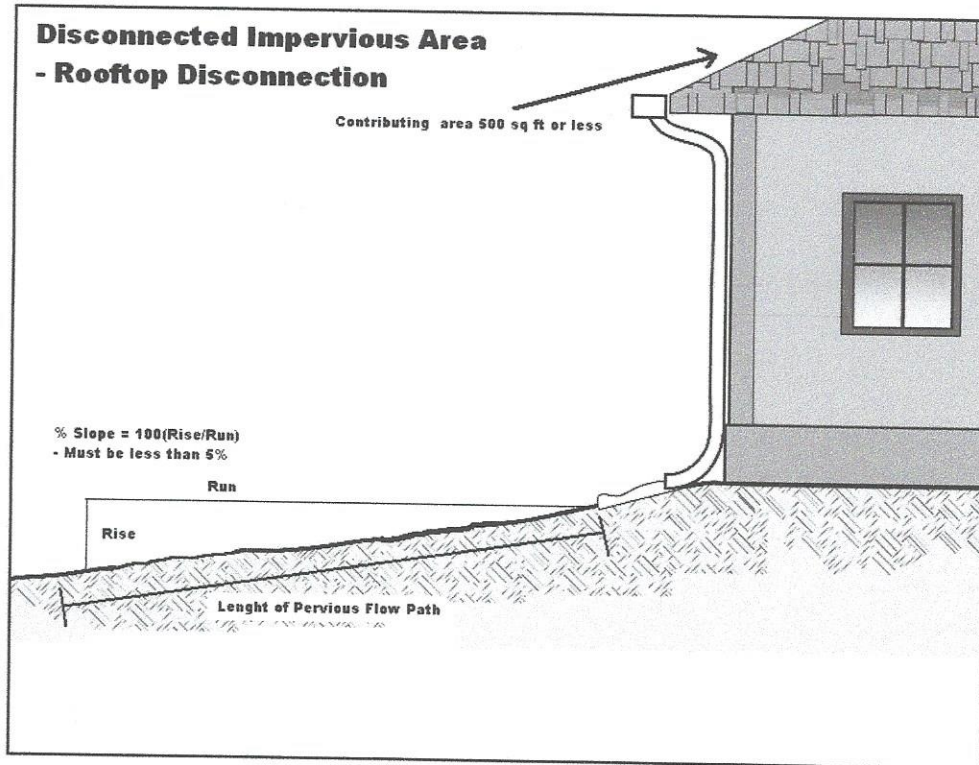
Disconnected Impervious Area (DIA)

When impervious surface areas such as rooftops and paved areas are directed to a sufficiently sized and located pervious area such as lawn or grassed areas that allow for infiltration, filtration, and increased time of concentration, the impervious surface areas may qualify to be treated as Disconnected Impervious Area (DIA).

Impervious Area – A surface that prevents the infiltration of water into the ground. Impervious surfaces and areas shall include roofs, patios and decks, garages, storage sheds and similar structures, driveways, access drives, parking areas, walkways and sidewalks. Any areas designed to be covered by loose surfacing materials such as gravel, stone and/or crushed stone, and intended for storage of and/or travel by vehicles or pedestrians shall be considered impervious. The measurement of impervious areas shall be from the footprint on the ground, including any overhang areas, where applicable (i.e., roof eaves, decks). Surfaces or areas adequately designed, constructed and maintained to permit infiltration may be considered pervious.

Rooftop Disconnection – A rooftop is considered to be completely disconnected if it meets the requirements listed below:

1. The contributing area of rooftop to each disconnected discharge (downspout) is 500 square feet or less.
2. The length of the overland flow path is greater than 75 feet.
3. The overland flow path from roof runoff discharge point has a positive (i.e., downhill) slope of five percent (5%) or less (0.6 inch fall per one foot, or five foot fall over 100 feet).
4. Soils along the overland flow path are not classified as hydrologic group "D" (from Adams County GIS mapping or soil testing results).
5. The minimum required receiving pervious area shall not include property not owned by the applicant unless written permission has been obtained from the affected property owner.



Note: Downspout not required.

Determining Status of DIA

Step 1: Determine contributing area of the roof to each disconnected discharge (downspout). If it's 500 ft² or less, continue to step 2. If it's greater than 500 ft², the area does not qualify as DIA.

Step 2: Determine the length of down slope pervious flow path available for each disconnected discharge.

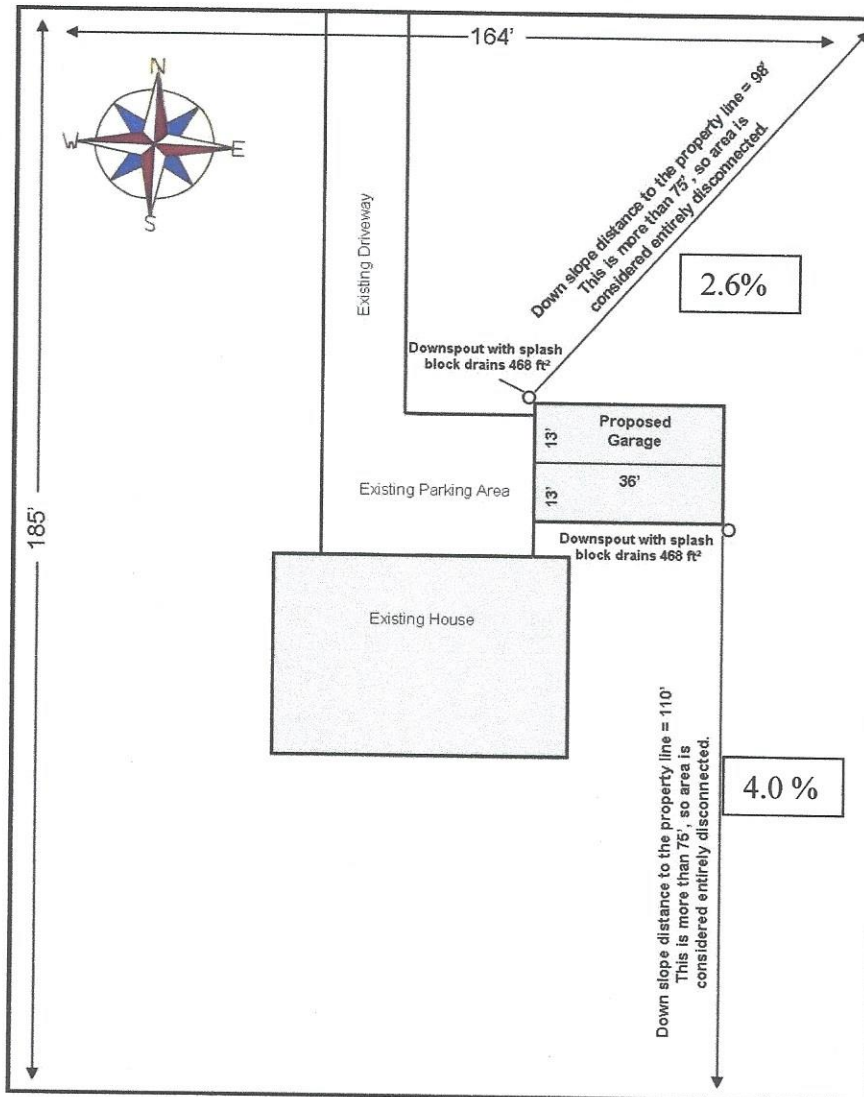
Step 3: Determine the % slope of the pervious flow path, $\% \text{ slope} = (\text{rise}/ \text{run}) \times 100$. Must be 5% or less (0.6 inch fall per foot).

Step 4: See the table on the next page to determine the percentage of the area that can be treated as disconnected. If the available length of the flow path is equal to or greater than 75 ft, the discharge qualifies as entirely disconnected.

Paved Disconnection – When runoff from paved surfaces is directed to a pervious area that allows for infiltration, filtration, and increased time of concentration, the contributing pavement area may qualify as disconnected. This applies generally to only small or narrow pavement structures such as driveways and walkways. Paved surfaces can be considered disconnected if they, or the adjacent areas, meet the following requirements:

- The length of overland flow is greater than or equal to the maximum length of flow over the impervious area
- The slope of the contributing impervious area is five percent (5%) or less
- The length of the overland flow path is greater than 75 feet.
- The slope of the overland flow path is five percent (5%) or less
- If discharge is concentrated at one or more discrete points, no more than 1,000 ft² may discharge to any one point. In addition, a gravel strip or other spreading device is required for concentrated discharges. For non-concentrated discharges along the entire edge of paved surface, a level spreader is not required; however, there must be provisions for the establishment of vegetation along the paved edge and temporary stabilization of the area until the vegetation is established.

The following example determines the status of DIA for a proposed 936 ft² garage. This example meets the criteria to use the Design Assistance Manual.



Step 1: Determine the area to each disconnected discharge. The area draining to each downspout is 468 ft². This is less than 500 ft², proceed to step 2.

Step 2: The discharge on the north side of the garage has a 98 ft pervious flow path available. The south discharge has 110 ft pervious flow path available.

Step 3: The rise of the north discharge is 2 ft and the run is 75 ft for a slope of 2.7%. This is 5% or less so it qualifies. For the south discharge the rise is 4 ft and the run is 100 ft equaling a slope of 4%. This is 5% or less, so it qualifies.

Step 4: Both of these discharges have pervious flow paths greater than 75 ft, so they qualify as entirely disconnected.

Selecting BMPs

If BMPs are required, the Owner / Designer should review the information in the *PA Stormwater BMP Manual*. These documents identify stormwater BMPs that have been deemed to be of a nature and cost that will accomplish the goals of the Adams County Act 167 Plan, while not unduly burdening the residents. It will then be the Owner's responsibility to select a facility, determine the appropriate size, and agree to construct and maintain that facility or facilities.

**Drainage Plan Application
And Fee Schedule**

VII. APPLICATION AND FEE SCHEDULE

DRAINAGE PLAN APPLICATION

Application is hereby made for review of the Stormwater Management Plan and related data as submitted herewith in accordance with The Highland Township Stormwater Management Ordinance.

Date of submission _____ New ___ Revised Submission No. _____

1. Name of Subdivision or Development (where applicable) _____

2. Name of Landowner _____ Telephone No. _____

3. Name of Builder / Developer _____ Telephone No. _____

Address _____

_____ zip code _____

Builder / Developer's interest in subdivision or development _____

4. Lineal feet of new street or driveway proposed? _____ l.f.

5. Square footage of parking area or turn around? _____ s.f.

6. Area of proposed and existing impervious area on entire tract.

a. Total area of entire parcel _____ acres

b. Existing impervious area (to remain) _____ s.f. _____ % of property

c. Proposed impervious area (created) _____ s.f. _____ % of property

7. Erosion and sediment pollution control (E&S)

a. Has the stormwater management design and/or erosion control plans (with supporting documentation and narrative) been submitted to the Adams County Conservation District?
_____ yes _____ no

b. Total area of earth disturbance _____ s.f. for all phases of construction.

**Stormwater
Management Worksheets**

Highland Township Municipal Stormwater Management Simplified Design Approach Worksheet A

Property Owner's Name _____

Owner's Address _____

Phone Number _____

Email Address _____

Property Address _____

Tax Map Parcel ID # _____

Parcel Size (approx) _____

A Sketch Plan must be included and show the following:

Total existing impervious area on the property _____

New impervious area proposed _____

Total impervious area on the property after project completion _____

Are there any known existing drainage problems or the potential for the proposed project to create drainage problems? (if yes, please explain)

Acknowledgement – I declare that I am the property owner, or representative of the owner, and that the information provided is accurate to the best of my knowledge. I understand that stormwater may not adversely affect adjacent properties or be directed onto another property without written permission of the affected owner(s). I also understand that false information may result in a stop work order or revocation of permits. Municipal representatives are also granted access to the property for review and/or inspection of this project if necessary.

Applicant Signature _____ Date: _____

Notary: _____ Date: _____

My Commission expires _____

To be completed by authorized municipal official

Type of Stormwater Management Required:*

- Exempt from stormwater management plan preparation (Worksheet A and Sketch Plan) _____
- Minor stormwater management site plan preparation (Complete Worksheets A&B to determine necessary BMP's) _____
- Formal stormwater management plan preparation (Consult a professional) _____

Determined by: _____ Date: _____

* Based on information provided on this Worksheet and a Sketch Plan received on _____.

Highland Township Municipal Stormwater Management Simplified Design Approach Worksheet B

Step 1: Determine the amount of impervious area created by the proposed projects. This includes any new surface area that inhibits the infiltration of stormwater into the ground. New stone and gravel areas are considered impervious. The measurement of impervious areas shall be from the footprint on the ground, including any overhang areas, where applicable (i.e., roof eaves, decks). Existing impervious areas are not included in this calculation.

Table # 1

Surface	Length	x	Width =	Total Impervious Area (SF)
Buildings				
Buildings				
Driveways				
Parking Areas				
Patios/Walkways				
Decks				
Other				
			Total Proposed Impervious Area =	

Step 2: Determine the Disconnect Impervious Area (DIA). All or parts of proposed impervious surfaces may qualify as Disconnected Impervious Area if runoff is directed to a pervious area that allows for infiltration, filtration and increased time of concentration. The volume of stormwater that needs to be managed could be reduced through DIA. Prepare a Minor Stormwater Management Site Plan to determine DIA.

Determining Status of DIA

- a) Determine contributing area of the roof/driveway to each disconnected discharge. If it's 500 ft² or less (for a roof) or 1,000 ft² or less (for a driveway), continue to "b". If it's greater than these amounts, the area does not qualify as a DIA.
- b) Determine the length of down slope pervious flow path available for each disconnected discharge.
- c) Determine the % slope of the pervious flow path, % slope = (rise/ run) x 100. Must be 5% or less.
- d) If the available length of the flow path is equal to or greater than 75 ft, the discharge qualifies as entirely disconnected.

**Stormwater
Maintenance Agreement**

**Stormwater
Management Worksheets**

APPENDIX A
OPERATION AND MAINTENANCE (O&M) AGREEMENT
STORMWATER MANAGEMENT BEST MANAGEMENT
PRACTICES (SWM BMPs)

THIS AGREEMENT, made and entered into this _____ day of _____, 20_____, by and between _____, (hereinafter the "Landowner"), and Highland Township, Adams County, Pennsylvania, (hereinafter "Municipality");

WITNESSETH

WHEREAS, the Landowner is the legal or equitable owner of certain real property as recorded by deed in the land records of Adams County, Pennsylvania, Deed Book _____ at page __, (hereinafter "Property").

WHEREAS, the Landowner is proceeding to build and develop the Property; and

WHEREAS, the SWM BMP Operation and Maintenance (O&M) Plan approved by the Municipality (hereinafter referred to as the "O&M Plan") for the property identified herein, which is attached hereto as Appendix A and made part hereof, as approved by the Municipality, provides for management of stormwater within the confines of the Property through the use of BMPs; and

WHEREAS, the Municipality, and the Landowner, his successors and assigns, agree that the health, safety, and welfare of the residents of the Municipality and the protection and maintenance of water quality require that on-site SWM BMPs be constructed and maintained on the Property; and

WHEREAS, the Municipality requires, through the implementation of the SWM Site Plan, that SWM BMPs as required by said SWM Site Plan and the Municipal Stormwater Management Ordinance be constructed and adequately operated and maintained by the Landowner, successors, and assigns.

NOW, THEREFORE, in consideration of the foregoing promises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

1. The Landowner shall construct, or cause the construction of, the BMPs in accordance with the plans and specifications identified in the SWM Site Plan.

2. The Landowner shall operate and maintain the BMPs as shown on the SWM Plan in good working order in accordance with the specific operation and maintenance requirements noted on the approved O&M Plan.
3. The Landowner hereby grants permission to the Municipality, its authorized agents and employees, to enter upon the property, at reasonable times and upon presentation of proper credentials, to inspect the BMPs whenever the Municipality deems it appropriate. Whenever possible, the Municipality shall notify the Landowner prior to entering the property.
4. In the event the Landowner fails to operate and maintain the BMPs as provided in the O&M Plan, the Municipality or its representatives may enter upon the Property and take whatever action is deemed necessary to maintain said BMP(s). It is expressly understood and agreed that the Municipality is under no obligation to maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation on the Municipality.
5. In the event the Municipality, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials, and the like, the Landowner shall reimburse the Municipality for all expenses (direct and indirect) incurred within ten (10) days of receipt of invoice from the Municipality.
6. The intent and purpose of this Agreement is to ensure the proper maintenance of the onsite BMPs by the Landowner; provided, however, that this Agreement shall not be deemed to create or affect any additional liability of any party for damage alleged to result from or be caused by stormwater runoff.
7. The Landowner, its executors, administrators, assigns, and other successors in interests, shall release the Municipality from all damages, accidents, casualties, occurrences, or claims which might arise or be asserted against said employees and representatives from the construction, presence, existence, or maintenance of the BMP(s) by the Landowner or Municipality.
8. The Municipality intends to inspect the BMPs at a minimum of once every three (3) years to ensure their continued functioning.

This Agreement shall be recorded at the Office of the Recorder of Deeds of Adams County, Pennsylvania, and shall constitute a covenant running with the Property and/or equitable servitude, and shall be binding on the Landowner, his administrators, executors, assigns, heirs, and any other successors in interests, in perpetuity.

ATTEST:

WITNESS the following signatures and seals:

(SEAL) For the Municipality:

For the Landowner:

ATTEST:

_____(City, Borough, Township)

County of Adams, Pennsylvania

I, _____, a Notary Public in and for the county and state aforesaid, whose commission expires on the _____ day of _____, 20____, do hereby certify that

_____ whose name(s) is/are signed to the foregoing Agreement bearing date of the _____ day of _____, 20____ has acknowledged the same before me in my said county and state.

GIVEN UNDER MY HAND THIS _____ day of _____, 20

NOTARY PUBLIC

(SEAL)

VII. APPLICATION AND FEE SCHEDULE

DRAINAGE PLAN REVIEW FEE SCHEDULE

Highland Township has established a Stormwater Management Fee Schedule based upon the hourly effort calculated or directly reported to conduct the duties and responsibilities of Highland Township under the Stormwater Management Ordinance. Further, this fee is assessed based upon Highland Township's costs for reviewing all aspects of this design package.

The fees required shall, at a minimum, cover:

- A. Administrative/Clerical Costs.
- B. The review of the plan and narrative by Highland Township, the Highland Township Engineer, and the Highland Township Solicitor, as may be applicable.
- C. The site inspections including, but not limited to, pre-construction meetings, inspections during construction of stormwater facilities and appurtenances, final inspection upon completion of the stormwater facilities and drainage improvements and inspections performed to ensure compliance with listed items.
- D. Any additional work required to enforce any permit provisions regulated by this Ordinance, inspect, correct violations, and assure proper completion of stipulated remedial actions may result in the necessity for additional fees to be paid by the owner. If there are monies left over, following complete adherence to this document, they shall be returned to the owner.
- E. Please refer to the Design Assistant Manual page #7 for details. Tier #1 would go with Level 1, Tier #2 would go with Levels 2 & 3, and Tier #3 would go with Level 4. These fees do NOT apply to commercial development.

FEES

The Township application fee is \$150.00 for all Tiers.

Stormwater Management Option	Application/Escrow Fee
Tier 1	\$250.00 Escrow (Exempt)
Tiers 2&3	\$500.00 Escrow (Minor Stormwater Site Plan)
Tier 4	\$1,000.00 Escrow (Formal Stormwater Plan)