

SMALL PROJECT APPLICATION AND STORMWATER MANAGEMENT DESIGN ASSISTANCE MANUAL

FOR SMALL PROJECTS

**(More than 1000 sq. ft., but less than 5000 sq. ft. of impervious cover and total
area of earth disturbance of less than 1 acre)**

MIFFLIN TOWNSHIP

DAUPHIN COUNTY, PENNSYLVANIA

SMALL PROJECTS SIMPLIFIED APPROACH

**Application Fee - \$500.00
(Made payable to Mifflin Township)**

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Small Projects Stormwater Control Application

An Application is hereby made to Mifflin Township for the issuance of a Storm Water Management Plan approval for Land Disturbance, as defined in the Mifflin Township Storm Water Management Ordinance, adopted on December 29th, 2010, and that shall be a starting point from which the impervious or disturbed areas for small project activity shall be cumulatively considered.

General Information from the Applicant

Name of Owner: _____ Date: _____
Address of Owner: _____
Name of Applicant (if different than owners): _____
Address of Applicant: _____
Contact Phone Number: _____ Email Address: _____
Address of Project: _____
Brief Description of Project: _____

Did the Applicant meet with the Township Staff concerning this project?
Yes No When? _____

Distance from the proposed project to the nearest water feature (stream, pond, lake, wetlands). Check one: 50 feet or less More than 50 feet

The amount of impervious cover (sq. ft.) _____
Area of earth to be disturbed with this project including storm water management facilities (sq. ft.)

Is the applicant proposing to use a stone lined trench or dry well to control stormwater from the proposed impervious areas? Yes No

Has the applicant dug any test pits in the areas where the stone lined trench or dry well are proposed to be used in order to see if there is shallow bedrock, an elevated water table or other limiting zone limitations that would make the use of these storm water control BMPs infeasible? Yes No

Is the applicant proposing to use a cistern/tank to control storm water from the proposed impervious areas? Yes No

If Yes, how will the cistern be emptied? _____

What will be the use of the cistern water? _____

How much water will be used per day? _____ gal. Per week? _____ gal.

Simplified SWM Site Plan

Attach a Simplified SWM Site plan (i.e. sketch plan); an example is shown on the next page.

This sketch plan should include:

1. The approximate location of the property lines.
2. Existing sidewalks, buildings, driveways, or other impervious areas with dimensions in feet and areas in square feet.
3. The location where the proposed impervious area is going to be located with dimensions in feet and areas in square feet.
4. Dimensions from the property line to the proposed impervious areas.
5. Arrows showing the general stormwater flow direction across the project area.
6. The location of the proposed stormwater control facilities with dimensions and distances from the existing/proposed structures.
7. The location of existing utilities (water, sewer, gas, etc.).
8. Pa 1 Call number.
9. The area of disturbance delineated on the plan showing the area in square feet.

I acknowledge the Township’s right to review the provided information, at my expense, and to deny this application or to revoke this permit application if any of the above statements are found to be false.

The Applicant assumes all risk and responsibilities for the design submitted. The manual is provided as a guide. However, it provides no specific design for any project.

I acknowledge that during each phase of construction of any required improvements, the applicant is responsible to notify the Township Engineer that the site work is ready for inspection to verify that all work has been done in accordance with the approved plans. The applicant shall not proceed to the next phase of construction without prior authorization of the Township Engineer.

The undersigned hereby represents that, to the best of his knowledge and belief, all information listed above and on the storm water management plan herewith submitted is true, correct, and complete.

Date

Applicant

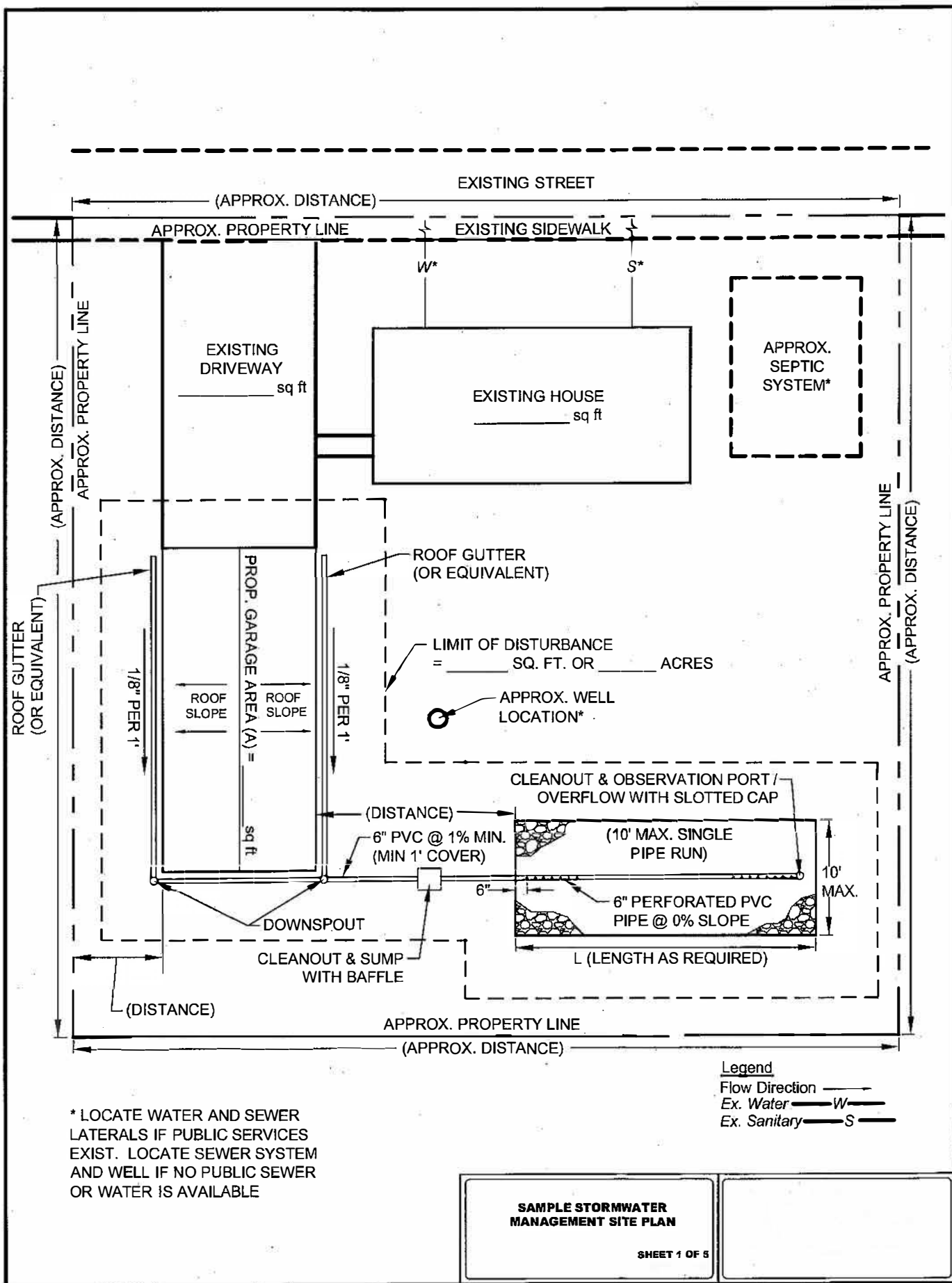
OFFICE USE

Date Received _____ Township File # _____

Property Account # _____

Submission Fee _____

Date of Application Approval _____



* LOCATE WATER AND SEWER LATERALS IF PUBLIC SERVICES EXIST. LOCATE SEWER SYSTEM AND WELL IF NO PUBLIC SEWER OR WATER IS AVAILABLE

Legend
 Flow Direction ———→
 Ex. Water ———W———
 Ex. Sanitary ———S———

SAMPLE STORMWATER MANAGEMENT SITE PLAN

SHEET 1 OF 5



SAMPLE WORKSHEET

Proposed Impervious and disturbed areas and Stormwater Control Volume Estimates:

1. What is the total proposed impervious area (A) in square feet? _____
2. What is the total earth disturbance area in square feet? _____
3. Take the total proposed impervious area (A) and determine the required stormwater runoff volume and BMP adjustments as required in the table below.

Stormwater Volume Estimates and Volume Adjustments by BMP (2 inch of rain)		
Proposed Impervious Area (A*) =	sq ft	
Stormwater Runoff Volume (B) =	(A)/6 =	(B) = cu ft
Stormwater BMP	Stormwater Volume Adjustment	Adjusted Stormwater Volume cu ft (C)
Cistern	B(cu ft) x 1.25**x7.50****	Adjusted Volume in Gallons
Rain Gardens/Bioretenion Areas/Non-Stone lined dry wells	No Volume Adjustment needed	cu ft
Stone Lined Infiltration Trench or Dry Well	B(cu ft) x 2.5***	cu ft

* From Question 1 above. (Also see Sample Site Plan)

** Conversion factor assuming Cistern is 25% full.

*** Conversion factor assuming volume of voids = 40% i.e. dividing the volume by 0.4 is equivalent to multiplying the volume by 2.5

****1 Cubic ft = 7.5 Gallons

Example: 30'x50' Pole Building

Proposed Impervious Area = 1,500 sq ft

Stormwater Volume Estimates and Volume Adjustments by BMP		
Proposed Impervious Area (A) =	1,500 sq ft	
Stormwater Runoff Volume (B) cu ft =	(A)/6 = 1,500/6 =	(B) = 250 cu ft
Stormwater BMP	Stormwater Volume Adjustment	Adjusted Stormwater Volume cu ft (C)
Cistern	250 x 1.25 x 7.50	312.5 cuft or 2,343.75 Gal
Rain Gardens/Bioretenion Areas/Non-Stone lined dry wells	No Volume Adjustment Needed	250 cu ft
Stone Lined Infiltration Trench or Dry Well	250 cu ft x 2.5 =	625 cu ft

Conclusion:

1. A cistern for water re-use of at least 2,344 gallons could be used to collect the runoff from the new impervious cover.
2. A rain garden/bioretenion area for surface water absorption of at least 10' wide x 21' long x 1' deep x SSF***** (10x21x1x1.20=252 cu ft) could be used.
*****: SSF = Side Slope Factor; Factor is 1.10 for 0.5' deep, 1.20 for 1.0' deep rain gardens
3. An underground infiltration stone lined trench of 10' wide x 32' long by 2' deep (10'x32'x2'=640 cu ft) could be used.

APPLICANT'S WORKSHEET

<u>Stormwater Volume Estimates and Volume Adjustments by BMP</u>		
Proposed Impervious Area (A) =	_____ sq ft	
Stormwater Runoff Volume (B) =	(A)/6 = _____ cu ft	(B) = _____ cu ft
Stormwater BMP	Stormwater Volume Adjustment	Adjusted Stormwater Volume cu ft (C)
Cistern	(B) _____ (cu ft) x 1.25 x 7.50	
Rain Gardens/Bioretenion Areas/Non-Stone lined dry wells	No Volume Adjustment Needed	(B) _____
Stone Lined Infiltration Trench or Dry Well	(B) _____ (cu ft) x 2.5 =	_____ cu ft

I propose to use a _____ of _____ (size)
 for the stormwater control of my small project.

APPENDICES



APPENDIX - A
Stormwater Control BMPs

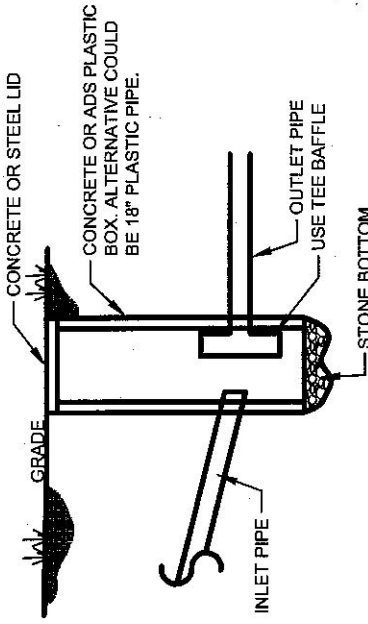
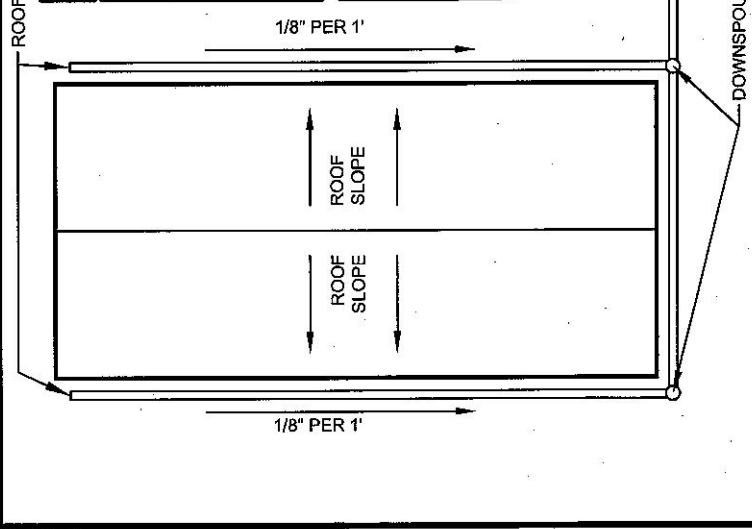
STONE LINED INFILTRATION TRENCH SIZING CALCULATIONS

EXAMPLE:
 STORMWATER RUNOFF VOLUME (B)* = 250 cu ft
 ADJUSTED STORMWATER VOLUME (C)* = (B) X 2.5 = 250 cu ft X 2.5 = 625 cu ft
 W X L X D ≥ C

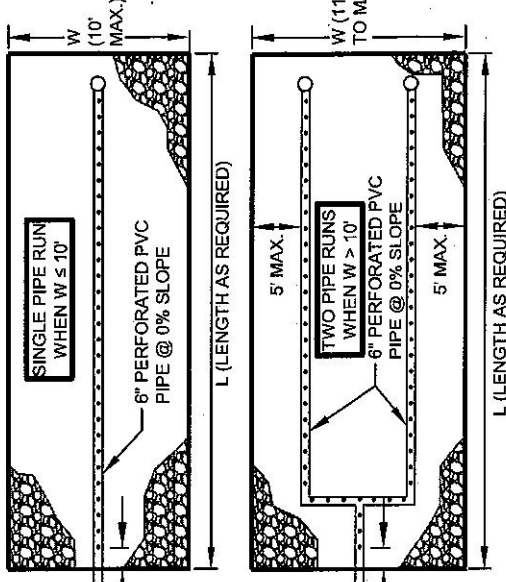
USER COULD PROVIDE W = 10', L = 32', D = 2'
 W X L X D = 10' X 32' X 2' = 640 cu ft ≥ 625 cu ft

STORMWATER RUNOFF VOLUME (B)* = _____ cu ft
 ADJUSTED STORMWATER VOLUME (C)* = (B) X 2.5 = _____ cu ft
 W = _____ ft L = _____ ft D = _____ ft
 W X L X D = _____ cu ft ≥ (C)

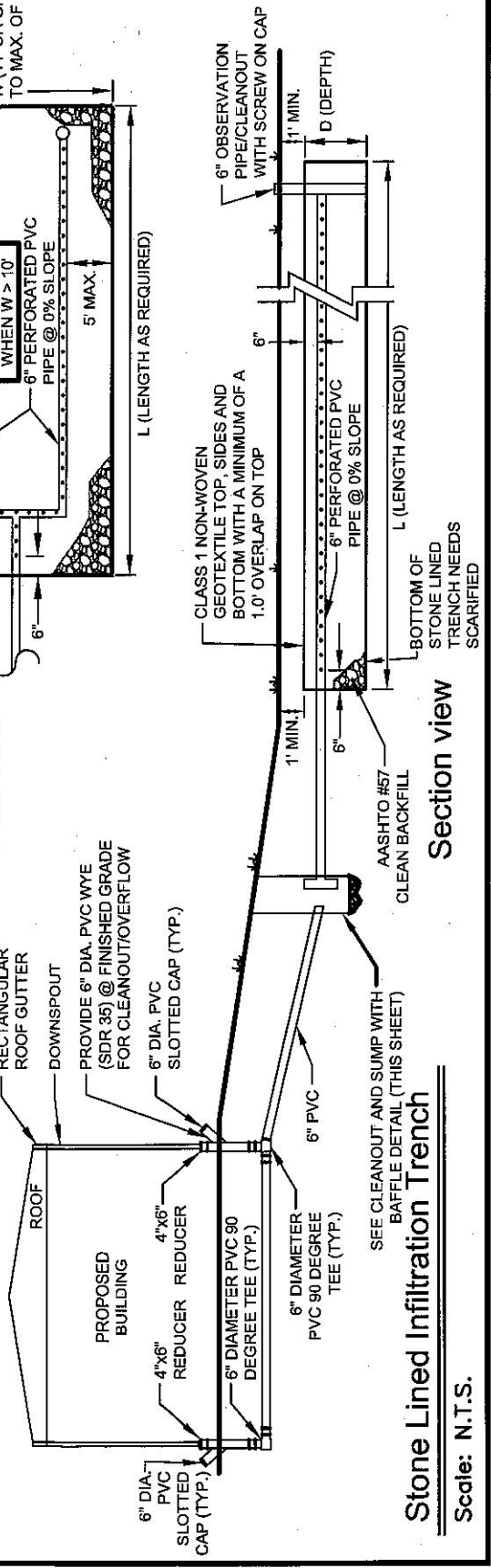
* From page 6 of the Small Project Application



Cleanout and Sump with Baffle Detail



Plan view



Section view

Stone Lined Infiltration Trench
 Scale: N.T.S.

**STONE LINED INFILTRATION TRENCH
SIZING CALCULATIONS**

EXAMPLE:

STORMWATER RUNOFF VOLUME (B)* = 250 cu ft

ADJUSTED STORMWATER VOLUME (C)*

= (B) X 2.5 = 250 cu ft X 2.5 = 625 cu ft

W X L X D ≥ C

USER COULD PROVIDE W = 10', L = 32', D = 2'

W X L X D = 10' X 32' X 2' = 640 cu ft ≥ 625 cu ft

STORMWATER RUNOFF VOLUME (B)* = _____ cu ft

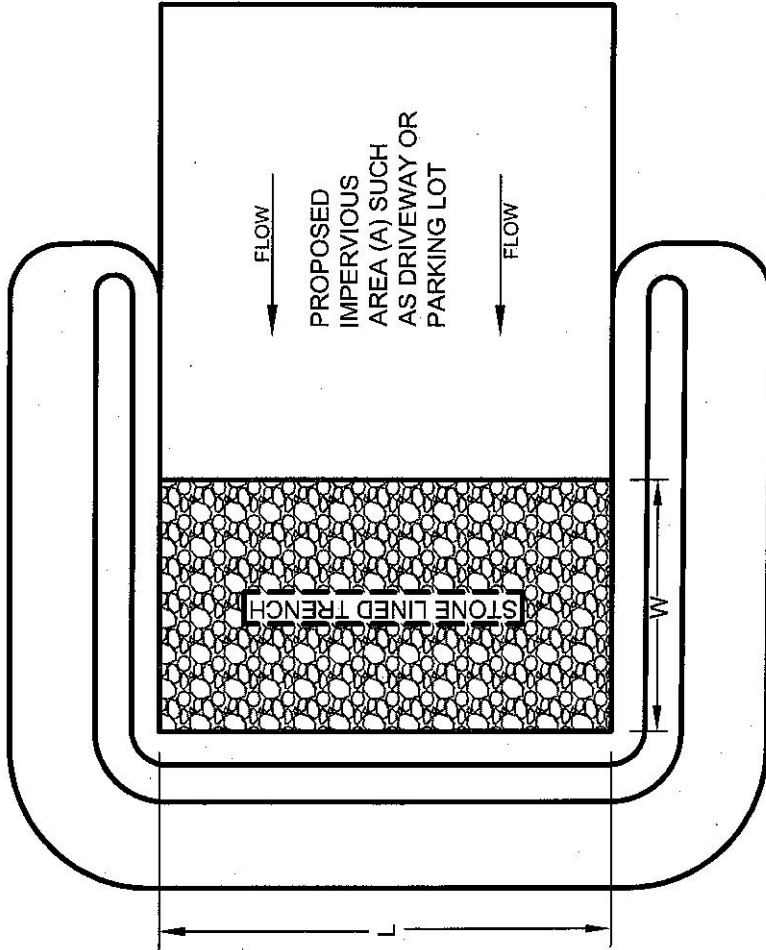
ADJUSTED STORMWATER VOLUME (C)* = (B) X 2.5 =

= _____ cu ft

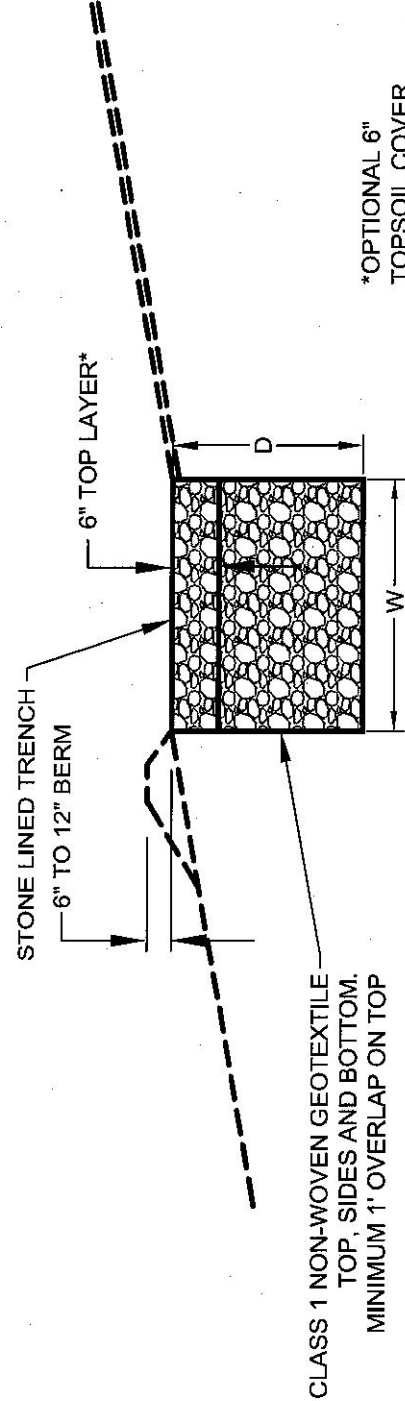
W = _____ ft L = _____ ft D = _____ ft

W X L X D = _____ cu ft ≥ _____ (C)

* From page 6 of the Small Project Application



Plan view



Section view (Scale: N.T.S)

**RAIN GARDEN / BIORETENTION AREA
SIZING CALCULATIONS**

EXAMPLE:

STORMWATER RUNOFF VOLUME (B)* = 250 cu ft
(NO VOLUME ADJUSTMENT NEEDED)

W X L X D X SSF ≥ B

USER COULD PROVIDE W = 10', L = 21', D = 1'

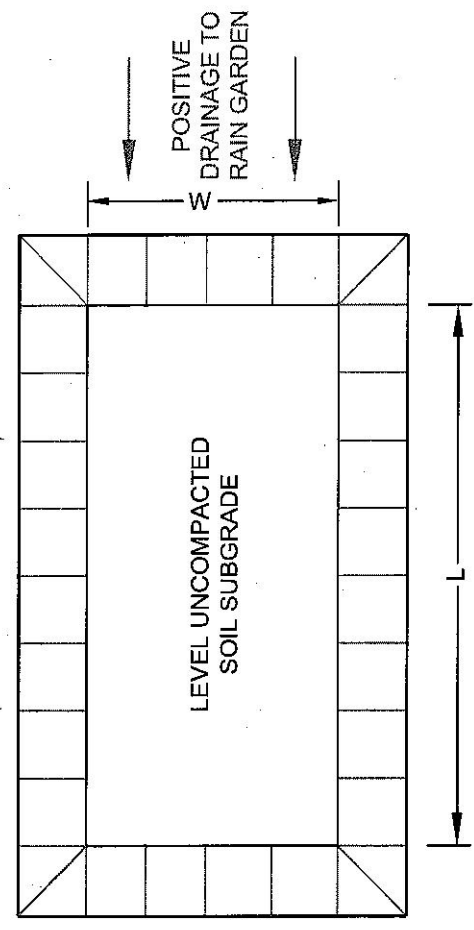
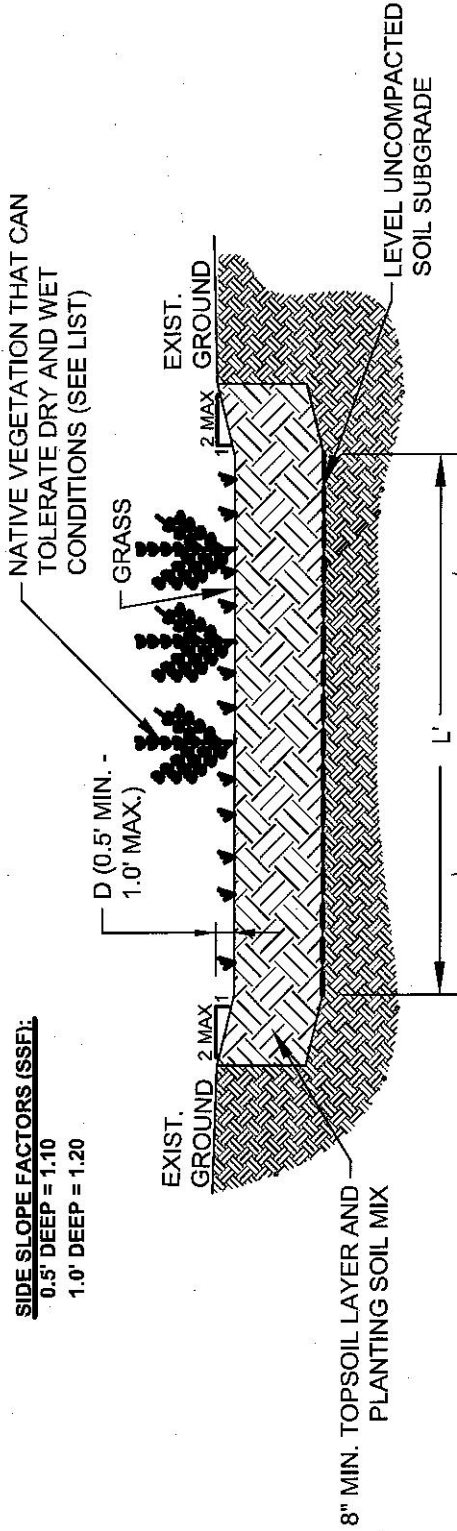
W X L X D X SSF = 10' X 21' X 1' X 1.20 = 252 cu ft ≥ 250 cu ft

SIDE SLOPE FACTORS (SSF):

0.5' DEEP = 1.10

1.0' DEEP = 1.20

STORMWATER RUNOFF VOLUME (B)* = _____ cu ft
W = _____ ft L = _____ ft D = _____ ft SSF = _____
W X L X D X SSF = _____ cu ft ≥ _____ (B)



NOTE
LINE CREST AND SIDE SLOPES OF
SPILLWAY W/ NORTH AMERICAN
GREEN TYPE S75 EROSION CONTROL
BLANKET (OR EQUAL).

Rain Garden/Bioretention Area

Scale: N.T.S.

Rain Garden/Bioretenention Areas

A Rain Garden (Bioretention Area) is an excavated depression area on the surface of the land in which native vegetation is planted to filter and use stormwater runoff. Runoff ponds on top of the surface of the rain garden and then infiltrates into an enhanced soil/planting mix below the surface where plants can use the water to grow. Bioretention also improves water quality, vegetation filters the water, and the root systems encourage or promote infiltration. Key elements of a rain garden include:

- Ponding depths recommended to **1 foot** or less.
- Native vegetation that can tolerate dry and wet weather.
- An overflow area where, if the bioretention area were to overflow, the overflow would flow over pervious area (i.e. grass, meadow), and would not cause harm to property, or;
- An overflow such as a domed riser to allow excess flow from large storms to travel to other substantial infiltration areas or pervious areas.
- For most areas, maximum 3:1 slopes are recommended, however, where space is limited, 2:1 side slopes may be acceptable with approval from the municipal engineer.
- The soil/planting mix depth should be between 1.5 feet to 6 feet deep.

Rain Garden Native Planting List

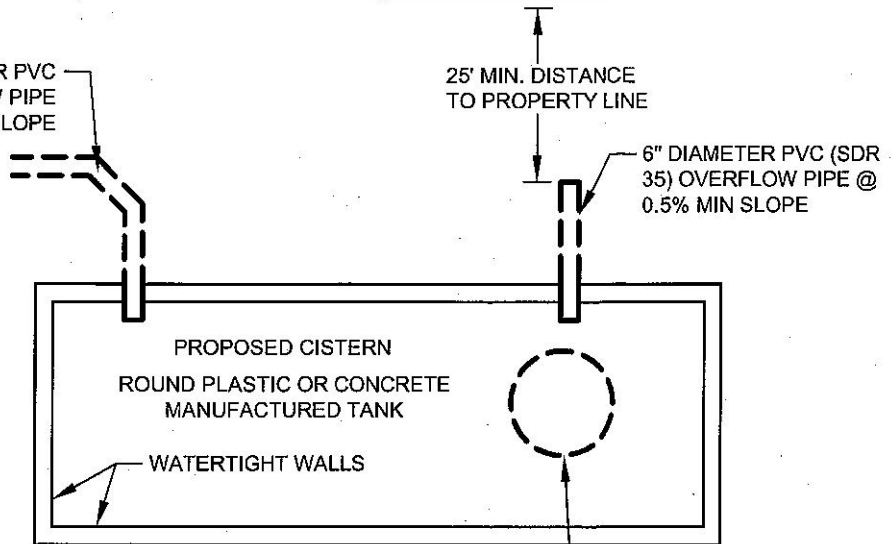
Perennials and Ferns:

Blue false indigo (*Baptisia australis*)
Blue flag iris (*Iris versicolor*)
Blue star (*Amsonia tabernaemontana*)
Blue vervain (*Verbena hastata*)
Boltonia (*Boltonia asteroides*)
Boneset (*Eupatorium perfoliatum*)
Bottlebrush grass (*Hystrix patula*)
Broomsedge (*Andropogon virginicus*)
Cardinal flower (*Lobelia cardinalis*)
Cinnamon fern (*Osmunda cinnamomea*)
Culvers root (*Veronicastrum virginicum*)
Golden ragwort (*Senecio aureus*)
Goldenrod (*Solidago patula*, *S. rugosa*)
Great blue lobelia (*Lobelia siphilitica*)
Green bullrush (*Scirpus atrovirens*)
Horsetail (*Equisetum* species)
Marsh marigold (*Caltha palustris*)
Mistflower (*Eupatorium colestinum*)
Monkey flower (*Mimulus ringens*)
New England aster (*Aster novae-anglia*)
New York aster (*Aster novi-belgii*)
Obedient plant (*Physotegia virginiana*)
Royal fern (*Osmunda regalis*)
Seedbox (*Ludwigia alternifolia*)
Sensitive fern (*Onoclea sensibilis*)
Sneezeweed (*Helenium autumnale*)
Soft rush (*Juncus effusus*)
Swamp milkweed (*Asclepias incarnata*)
Swamp rose mallow (*Hibiscus moscheutos*)
Swamp sunflower (*Helianthus angustifolius*)
Switchgrass (*Panicum virgatum*)
Threadleaf coreopsis (*Coreopsis verticillata*)
Tussock sedge (*Carex stricta*)
White turtlehead (*Chelone glabra*)
Woolgrass (*Scirpus cyperinus*)

Shrubs:

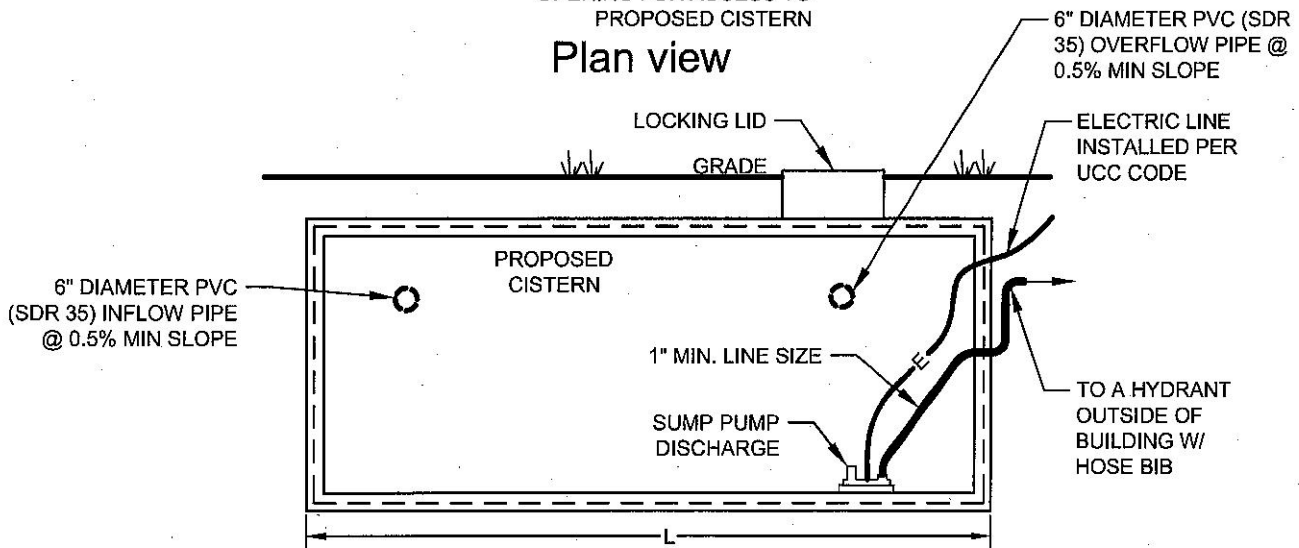
American beautyberry (*Callicarpa americana*)
Arrowwood (*Viburnum dentatum*)
Black chokeberry (*Aronia melanocarpa*)
Broad-leaved meadowsweet (*Spiraea latifolia*)
Buttonbush (*Cephalanthus occidentalis*)
Elderberry (*Sambucus canadensis*)
Inkberry (*Ilex glabra*)
Narrow-leaved meadowsweet (*Spiraea alba*)
Ninebark (*Physocarpus opulifolius*)
Possumhaw (*Viburnum nudum*)
Red-osier dogwood (*Cornus sericea*)
St. Johnswort (*Hypericum densiflorum*)
Silky dogwood (*Cornus amomum*)
Smooth alder (*Alnus serrulata*)
Spicebush (*Lindera benzoin*)
Swamp azalea (*Rhododendron viscosum*)
Swamp rose (*Rosa palustris*)
Sweet pepperbush (*Clethra alnifolia*)
Wild raisin (*Viburnum cassinoides*)
Winterberry (*Ilex verticillata*)
Virginia sweetspire (*Itea virginica*)

NOTE:
 ACTUAL SIZE AND SHAPE OF CISTERN WILL VARY DEPENDING ON REQUIRED AMOUNT OF STORMWATER STORAGE VOLUME. THIS IS AN EXAMPLE. ACTUAL DESIGN, SIZE AND SHAPE MAY VARY AS LONG AS FUNCTION IS MET. EXTERNAL ACCESS MUST BE PROVIDED WITH A LOCKABLE MECHANISM.



OPENING FOR ACCESS TO PROPOSED CISTERN

Plan view



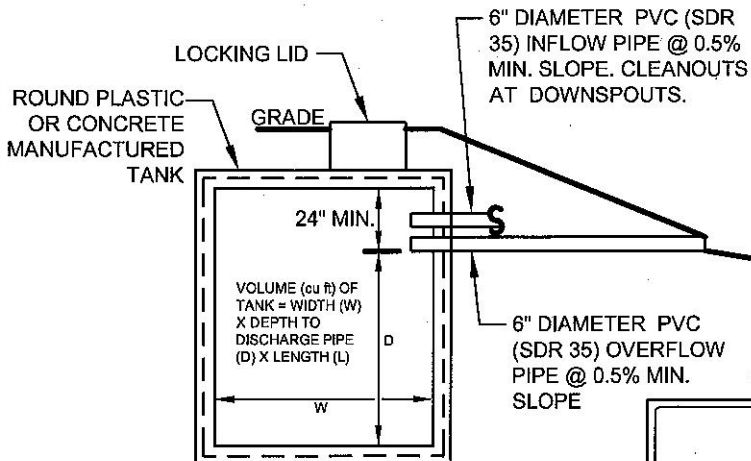
Interior Elevation

CISTERN SIZING CALCULATIONS

EXAMPLE:
 STORMWATER RUNOFF VOLUME (B) = 250 cu ft
 ADJUSTED STORMWATER VOLUME (C)
 = (B) X 1.25 = 250 cu.ft X 1.25 = 312.5 cu ft
 = 312.5 cu ft X 7.5 GAL/cu ft = 2,343.75 GAL.
 W X L X D ≥ C
 USER COULD PROVIDE W = 12', L = 10', D = 3'
 W X L X D = 12' X 10' X 3' = 360 cu ft ≥ 312.5 cu ft (2,343.75 GAL.)

STORMWATER RUNOFF VOLUME (B)* = _____ cu ft
 ADJUSTED STORMWATER VOLUME (C)* = (B) X 1.25 = _____ cu ft X 7.5 GAL/cu ft = _____ GAL.
 W = _____ ft L = _____ ft D = _____ ft
 W X L X D = _____ cu ft ≥ _____ (C) (OR _____ GAL.)

* From page 6 of the Small Project Application



Section View

CISTERN DETAILS

APPENDIX - B

**Stormwater Control BMPs Operation, Maintenance, and
Inspection Plan and Agreement**

Sizing and design considerations for Stormwater Control BMPs

There are several different types of Stormwater Control BMPs the applicant can choose from for their projects needs. A combination of Stormwater Control BMPs may be needed to control stormwater runoff from the proposed impervious areas. The following is only a partial list of more common storm water Control BMPs and does not cover all of the BMPs available.

These BMPs are:

1. Cisterns
2. Rain Garden/Bioretention Areas
3. Stone Lined Trench or Stone Filled Dry Well

Cisterns

Cisterns are large containers that collect drainage from roof leaders and temporarily store water to be released to lawns, gardens, and other landscaped areas after the rainfall event has ended. Cisterns can have volumes of 200 gallons (27 cu ft) or more, and can be placed either on the surface or underground. Figure 1 shows examples of cisterns that could be used to manage stormwater from a project. Cisterns are manufactured in a variety of shapes and sizes. All of these facilities must make provisions for the following items:

- There must be a means to release the water stored in the container between storm events in order for the necessary storage volume to be available for the next storm.
- Stormwater must be kept from entering other potable systems, and pipes and storage units must be clearly marked “Do Not Drink”.
- An overflow outlet should be placed a few inches below the top of the storage container with an overflow pipe to divert flow away from structures once the storage containers are filled.
- Use screens to filter debris, and covers (lids) placed over the containers to prevent insects and debris from entering the storage chamber.
- Make sure cisterns are watertight and do not leak.
- Rain barrels are typically assumed to be 25% full to calculate volume since they are not always emptied before each storm.



Figure 1: Source (for both photographs): Pennsylvania Stormwater BMP Manual (PADEP, 2006)

Stone Lined Infiltration Trench

An infiltration trench is a long, narrow, rock-filled trench with or without a perforated pipe that receives stormwater runoff, and has no outlet. Runoff is stored in the void space between the stones and in the pipe, and infiltrates through the bottom and into the underlying soil matrix. Infiltration trenches perform well for removal of fine sediment and associated pollutants. Infiltration trenches shall incorporate or make provisions for the following elements:

- Perforated pipe is to be set level.
- The width is limited to between 3 to 8 feet, and the depth ranges from 2 to 6 feet.
- Trench should be wrapped in nonwoven geotextile (top, sides, and bottom).
- There should be a positive overflow that allows stormwater that cannot be stored or infiltrated to be discharged into a nearby vegetated area.
- Roof downspouts may be connected to infiltration trenches, but should contain a cleanout to collect sediment and debris before entering the infiltration area.
- Infiltration testing is recommended to ensure soil is capable of infiltrating stormwater.
- It is recommended that there be a 2 foot clearance above the regularly occurring seasonal high water table, and have a minimum depth to bedrock of 2 feet.
- The infiltration trench should be at least 50 feet from individual water supply wells, 100 feet from community or municipal water supply wells, and 50 feet from any septic system component. It should not be located near hotspots (refer to B.2 Definitions) which are areas where land use or activities generate highly contaminated runoff, with concentrations of pollutants that are higher than those that are typically found in stormwater.
- The infiltration trench should be located so that it presents no threat to sub-surface structures such as building foundations and basements.
- Protect infiltration areas from compaction by heavy equipment during and after construction.
- The ratio of the collected area to the footprint of the facility should be as small as possible with a ratio of less than 5:1 preferred.

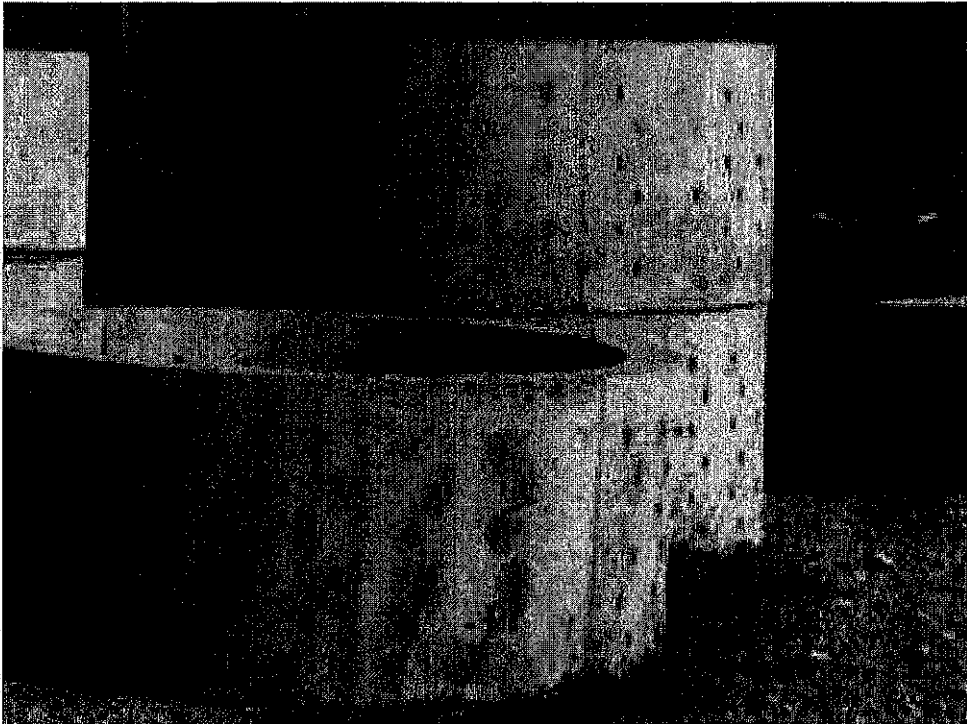
Dry Wells

A dry well, also referred to as a seepage pit, is a subsurface storage facility that temporarily stores and infiltrates runoff from the roofs of buildings or other impervious surfaces. A dry well can be either a structural prefabricated chamber (Dry Well #1) or an excavated pit filled with stone fill (Dry Well #2). Dry Wells discharge the stored runoff via infiltration into the surrounding or underlying soils. Figure 4 shows a typical prefabricated dry well and a typical dry well configuration with stone fill. The following elements shall be incorporated into all dry well designs:

- These facilities should be located a minimum of ten (10) feet from the building foundation to avoid foundation seepage problems, and are not recommended if their installation would create a risk for basement flooding.
- Construction of a dry well should be performed after surface soils in all other areas of the site are stabilized to avoid clogging.
- During construction, compaction of the subgrade soil in the bottom of the dry well should be avoided, and construction should be performed only with light machinery.
- For Dry Well #2 designs, the depth of dry well should be between **1.5 feet to 4 feet**. Gravel fill should consist of stone with an average of one and one half to three (1.5 –

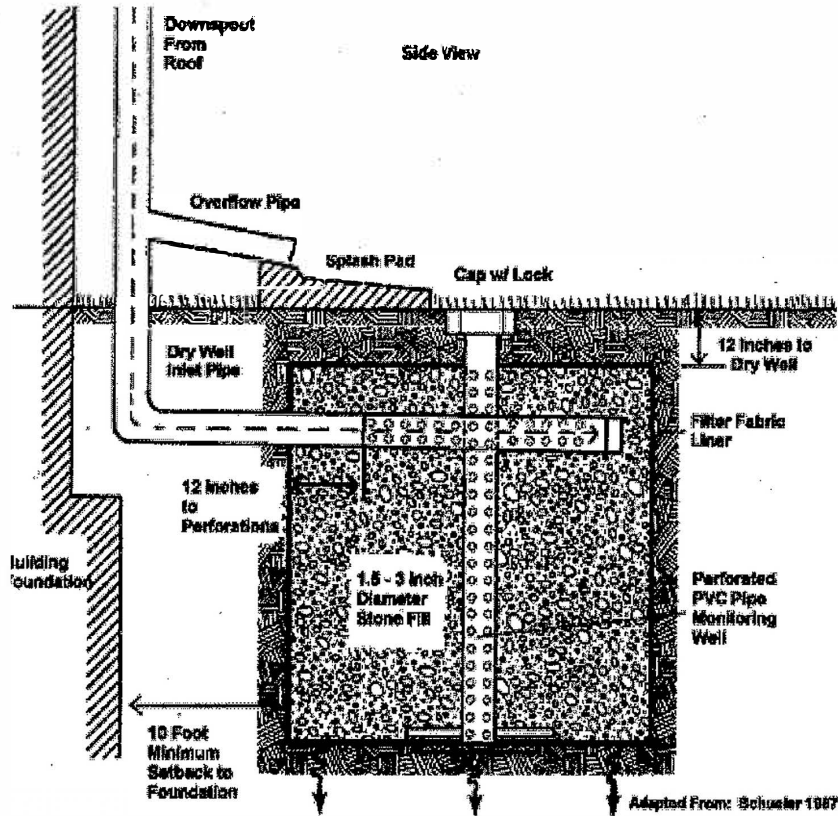
3.0) inches in diameter with the gravel fill wrapped in a nonwoven geotextile that separates the stone fill from the surrounding soil.

- At least 1 foot of soil needs to be placed over the top of the dry well.
- Dry wells should be inspected at least four (4) times annually as well as after large storm events.
- Dry wells should have overflow pipes to allow high volumes of runoff to connect to other on-site substantial infiltration areas or pervious areas.
- Every dry well needs to have at least one monitoring well.
- Infiltration testing is recommended to ensure the underlying soil is capable of infiltrating the needed volume of stormwater.



Dry Well #1

Source (for photograph): <http://www.copelandconcreteinc.net/1800652.html>



Dry Well #2

Source (for photograph): <http://www.seagrant.sunysb.edu/cprocesses/pdfs/BMPsForMarinas.htm>

Figure 4: Typical Dry Well Structural Prefabricated Chamber (Dry Well #1) and Typical Dry Well Configuration filled with Stone Fill (Dry Well #2)

Operation, Maintenance, Inspection Plan, and Agreement

Regardless to which stormwater control BMPs the applicant chooses to use an Operation, Maintenance, and Inspection Plan and Agreement will need to be signed, notarized, and submitted to the Municipality.

Following approval and signature by the Mifflin Township, the landowner must have the agreement recorded at the Dauphin County Office of the Recorder of Deeds, so that the agreement will be applicable to future landowners.

See Ordinance for the Operation, Maintenance, and Inspection Plan and Agreement.

**STORMWATER MANAGEMENT OPERATIONS
AND MAINTENANCE AGREEMENT**

THIS AGREEMENT, made and entered into this _____ day of _____, and between, _____ (hereinafter the “landowner”), and Mifflin Township, Dauphin County, Pennsylvania, (hereinafter “Mifflin”);

WITNESSETH

WHEREAS, the Landowner is the owner of certain real property as recorded by deed in the land records of Dauphin County, Pennsylvania, (hereinafter “Property”) and as described in a certain Plan submitted by Landowner to Mifflin Township on or about _____; and

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

WHEREAS, the stormwater management Best Management Practices Operations and Maintenance Plan approved by the Mifflin (hereinafter referred to as the “Plan”) for the property identified herein, which is attached hereto as Appendix A and made part hereof, as approved by Mifflin, provides for management of stormwater within the confines of the Property through the use of the Best Management Practices (BMP’s); and

WHEREAS, Mifflin and the Landowner, on behalf of itself and its successors and assigns, agree that the health, safety, and welfare of the residents of Mifflin and the protection and maintenance of water quality require that on-site stormwater BMP be constructed and maintained on the Property; and

WHEREAS, for the purpose of this Agreement, the following definitions shall apply;

BMP – “Best Management Practices”; activities, facilities, design, measures or procedures used to manage stormwater impacts from land development, to protect and maintain water quality and groundwater recharge and to otherwise meet the purpose of the Municipal Stormwater Management Ordinance, including but not limited to infiltration trenches, seepage pits, filter strips, bioretention, wet ponds, permeable paving, rain gardens, grassed swales, forested buffers, sand filters and detention basins.

Infiltration Trench – A **BMP** surface structure designed, constructed, and maintained for the purpose of providing infiltration or recharge of stormwater into the soil and/or groundwater aquifer.

Seepage Pit – An underground **BMP** structure designed, constructed, and maintained for the purpose of providing infiltration or recharge of stormwater into the soil and/or ground water aquifer.

Rain Garden – A **BMP** overlain with appropriate mulch and suitable vegetation designed, constructed, and maintained for the purpose of providing infiltration or recharge of stormwater into the soil and/or underground aquifer; and

WHEREAS, Mifflin requires, through the implementation of the Plan, that stormwater management BMP's as required by said Plan and Mifflin Municipal Stormwater Management Ordinance be constructed and adequately operated and maintained by the Landowner, his successor and assigns; and

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

1. The BMP's shall be constructed by the Landowner in accordance with the plans and specifications identified in the Plan.
2. The Landowner shall operate and maintain the BMP(s) as shown on the Plan in good working order acceptable to Mifflin and in accordance with the specific maintenance requirements noted on the Plan.
3. The Landowner hereby grants permission to Mifflin, its authorized agents and employees, to enter upon the property, at reasonable times and upon presentation of property identification, to inspect the BMP(s) whenever it deems necessary. Whenever possible, Mifflin shall notify the Landowner prior to entering the Property.
4. In the event the Landowner fails to operate and maintain the BMP(s) as shown on the Plan in good working order acceptable to Mifflin, Mifflin or its representatives may enter upon the Property and take whatever action is deemed necessary to maintain the BMP(s). This provision shall not be construed to allow Mifflin to erect any permanent structure on the land of the Landowner. It is expressly understood and agreed that Mifflin 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 Mifflin.
5. In the event Mifflin, 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 Mifflin for all expenses (direct and indirect) incurred within 10 days of receipt of invoice from Mifflin, including costs incurred by Mifflin in collecting amounts owed or in enforcing this Agreement.

6. The intent and purpose of this Agreement is to ensure the proper maintenance of the onsite BMP(s) 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 Mifflin employees and designated representatives 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 Mifflin. In the event that a claim is asserted against Mifflin, its designated representatives or employees, Mifflin shall promptly notify the Landowner and the Landowner shall defend, at his own expense, any suit based on the claim. If any judgement or claims against Mifflin employees or designated representatives shall be allowed, the Landowner shall pay all costs and expenses regarding said judgement or claim.
8. Mifflin, from time to time and in its sole discretion, may require the posting of financial security by Landowner for the maintenance of the facilities described in the Plan. Such requirements shall not exceed the estimated cost of maintenance and repair of the Plan facilities for a five year period.
9. The Landowner may assign its responsibilities under this Agreement only with the express written consent of Mifflin, which consent shall not be unreasonably withheld.

This Agreement shall be recorded in the Office of the Recorder of Deeds of Dauphin 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 interest, in perpetuity.

ATTEST: _____ Mifflin Township Board of Supervisors: _____

WITNESS: _____ LANDOWNER: _____

COMMONWEALTH OF PENNSYLVANIA :
: **SS.**
COUNTY OF :

On this _____ day of _____, _____, before me a Notary Public for the Commonwealth of Pennsylvania, personally appeared _____, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within document and acknowledge that he executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

Notary Public

COMMONWEALTH OF PENNSYLVANIA :
: **SS.**
COUNTY OF :

On this _____ day of _____, _____, before me a Notary Public for the Commonwealth of Pennsylvania, personally appeared _____, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within document and acknowledged that she executed the same for the purpose therein contained.

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Notary Public

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