



UPPER ALLEN TOWNSHIP AUTHORITY STORMWATER UTILITY FEE CREDIT MANUAL

Latest Version: November 20, 2019

PREPARED BY:



C.S. Davidson, Inc.

Excellence in Civil Engineering

50 WEST MIDDLE STREET
GETTYSBURG, PA 17325



UPPER ALLEN TOWNSHIP AUTHORITY STORMWATER UTILITY FEE CREDIT OVERVIEW

Upper Allen Township Authority is obligated to reduce the amount of pollution loading in the form of sediment, nitrogen and phosphorus that is tributary to streams within the Township watersheds. The Authority desires to establish a stormwater fee credit program that rewards property owners for their participation in helping to achieve the Authority's overall reduction goal. The Authority has established formal policies and procedures with regard to an individual property owner's ability to apply for credits in an effort to reduce their stormwater fee.

This utility fee credit manual includes an overview of the steps that property owners must follow to apply for a stormwater fee credit(s); the stormwater utility fee credit application; and the stormwater utility fee credit guide that details the types of credit(s) that property owners are eligible to apply for under this credit program.

Please note:

1. Credits are applied directly to the amount of impervious area and not directly to the Utility Fee.
2. Property owners are not eligible to reduce their designated ERUs to a value less than 0.5 ERUs for single-family residential parcels and not less than 1.0 ERUs for non-residential parcels.
3. Each credit may qualify for the maximum per-credit value indicated, but the actual per-credit value applied is at the discretion of the Township Authority, and may not match the maximum amount.
4. To be eligible for a credit, there must not be any outstanding and unpaid Utility Fees, including stormwater fees and fees for the public sanitary sewer system, as well as being in good standing with the on-lot sewage disposal system (OLSDS) program, against the subject property.

A completed stormwater utility fee credit application with required documentation must be submitted to:

**Upper Allen Township Authority
Attn: Stormwater Utility Fee Credit
100 Gettysburg Pike
Mechanicsburg, Pennsylvania 17055**

Applications must be submitted sixty (60) calendar days prior to the start of the first billing quarter to which the credit will be applied by the Township to the property owner.

QUALIFICATION FOR A CREDIT APPLICATION

Property owners may apply for credits in an effort to reduce their stormwater fee if they meet the following terms:

1. They have received a bill of at least one (1) ERUs, and,
2. Whoever is applying for the credit(s) is the rightful land owner.

POTENTIAL OUTCOMES OF APPLYING CREDIT(S) TO THE CALCULATION OF IMPERVIOUS AREA ON THE PARCEL

Each Equivalent Residential Unit (ERU) is 4,206 square feet of impervious area, rounded to the nearest whole number in accordance with the Utility Fee Resolution and Stormwater Utility Fee Credit and Adjustment Policy. Property owners should be aware that there are a number of outcomes that could occur when applying for credits in an effort to reduce the measurement of impervious area on their parcel. Possible outcomes include:

1. The utility credit application is denied, therefore, there is no change in the amount of impervious area; no change in the number of ERUs.
2. The utility credit application is approved, however, there is a minor reduction in the amount of impervious area; no change in ERUs because the impervious area adjustment was too small to change the total number of ERUs.
3. The utility credit application is approved, and the reduction in the amount of impervious area is significant enough to change the total number of ERUs.

Please note that the Township Authority has an inventory of existing Structural BMPs that were constructed as part of previously approved land development plans. The existing Structural BMPs included in this inventory are not eligible to receive the Structural BMP credit as credit was already taken for these facilities through the creation of the Township's Combined Pollutant Reduction Plan.

Property owners with existing Structural BMPs that were not included on the inventory are eligible to receive a ten percent (10%) impervious area reduction credit for area tributary to the existing Structural BMP.

CREDIT APPLICATION AND REVIEW PROCESS

Step One: The property owner reviews the Credit Manual, particularly the Stormwater Utility Fee Credit Guide, to understand the types of credit that they are eligible to apply for under the credit program. It should be noted that property owners will only receive credit(s) for structural improvements implemented within the limits of their property.

Step Two: The property owner submits a completed and signed Credit Application.

Step Three: Upon receipt of a Credit Application, Staff will log the Application for tracking purposes.

Step Four: Within 10 calendar days of receipt, the Township Hearing Officer, who is appointed by the Stormwater Authority Board, shall determine if the Application is complete. If the application is incomplete, the Hearing Officer shall offer to the property owner an additional five (5) calendar days to supply missing information. The 5-day period begins from the date of notification of the incomplete application.

NOTE: If the property owner does not provide the additional information requested within the five (5) days granted by the Hearing Officer, the credit application will be considered closed.

Step Five: Upon determination of a complete application, the Hearing Officer shall complete a review of the Credit Application and documentation. The Hearing Officer shall provide written determination by mail of the outcome of the Credit Application to the property owner within 60 calendar days after receipt of the completed Application.

- *Outcome Reducing the Number of ERU Units:* The adjustment in ERUs will be provided to the appropriate staff of the Township with instructions on changes to the account files, GIS files, and/or the customer's stormwater utility fee. Archived copies of billing and GIS files will be retained for Township records. The bill for the fee still must be paid while the Credit Application is under review by the Hearing Officer. Upon review completion, if an adjustment is needed, the property owner will receive a credit on their account for the adjusted amount. Credits cannot be applied to the previous billing cycle. If the bill for the fee has not been paid, the property owner has 15 calendar days after receipt of the decision of the Hearing Officer to pay the adjusted amount due. If payment has already been made, the property owner will receive a credit on their account for the adjusted amount. Credits cannot be applied to previous billing cycles.

Step Six: If the property owner disagrees with the Hearing Officer's decision, the property owner may appeal to the Stormwater Authority Board within 30 calendar days of receipt of the written decision. The property owner must state in writing the grounds for further appeal and supply additional information as appropriate to support the claim.

Step Seven: The Stormwater Authority Board shall issue a written decision on the credit via certified mail to the property owner within 30 calendar days of receiving documentation of the disputed Hearing Officer's decision and update the tracking log on the appeal. Any person aggrieved by a decision of the Board may appeal to the Court of Common Pleas of Cumberland County within 30 calendar days of receipt of the Board's decision.

Step Eight: The property owner shall pay any required fees within 15 calendar days of the expiration of their right to appeal. The required fees shall be indicated on the property owners' utility bill. If the amount due is different than what is on the utility bill, a letter indicating the due amount will be provided by the Hearing Officer. If payment is not received by that time, the unpaid fee shall be considered delinquent and subject to the provisions under § 200-8.3 and § 200-8.4.



UPPER ALLEN TOWNSHIP AUTHORITY STORMWATER UTILITY FEE CREDIT APPLICATION

This application is for property owners to obtain credits for their stormwater fee. Pertinent sections must be filled out in their entirety. Please submit one application per parcel to:

Upper Allen Township Authority
Attn: Stormwater Utility Fee Credit
100 Gettysburg Pike
Mechanicsburg, Pennsylvania 17055

Applications must be submitted sixty (60) calendar days prior to the start of the first billing quarter to which the credit will be applied by the Township Authority to the property owner.

Date: _____ **Utility Account No.:** _____

Parcel ID No.: 42- _____ **Property Address:** _____

(Parcel ID No. can be found at <https://gis.ccpa.net/PropertyMapper/>)

Property Owner Information:

Name: _____

Mailing Address: _____

Email: _____ **Phone:** _____

Application Checklist: Please include the following documents with this application. Refer to attached Credit Guide for detailed descriptions of available credits.

- ☐ Complete and Signed Application

<u>Credit Being Applied For</u>	<u>Maximum Impervious Area Reduction Credit</u>	<u>Property Eligibility</u>
<input type="checkbox"/> Permeable Surface Systems (Option A)	50%	Township-wide
<input type="checkbox"/> Structural BMP (Option B)	Varies	Township-wide
<input type="checkbox"/> Best Management Practice Easement (Option C)	Varies	Township-wide
<input type="checkbox"/> Low Impact Parcel (Option D)	25%	Township-wide
<input type="checkbox"/> Rain Barrels (Option E)	20%	Residential
<input type="checkbox"/> Adopt-an-Inlet (Option F)	20%	Residential
<input type="checkbox"/> NPDES Stormwater Permit Compliance (Option G)	20%	Commercial/Industrial
<input type="checkbox"/> Conservation Plan (Option H)	75%	Agricultural
<input type="checkbox"/> Innovation Credit (Option I)	Varies	Township-wide

Credit(s) Description: *(Use additional sheets as necessary)*

(CONTINUED ON NEXT PAGE)

Credit(s) Description (con't):

Attach Documentation:

Attach any supporting documentation as separate sheets such as photographs.

Sketch Plan. In addition, please provide a sketch plan that includes the information listed below. Property owners may use the space provided on Page 3 or print a copy of their property utilizing Cumberland County's Property Mapper. Example sketch plans are included in the Credit Guide for each credit option.

Information to provide on the Sketch Plan includes:

- Location(s) and dimension(s) of all existing impervious surfaces, including but not limited to, house, driveways, sidewalks, sheds, etc.,
- Property boundary,
- Approximate direction that water flows on your property, and,
- Downspout locations

Please Note:

1. Credits are applied directly to the amount of impervious area and not directly to the Utility Fee.
2. Property owners are not eligible to reduce their designated ERUs to a value less than 0.5 ERUs for single-family residential parcels and not less than 1.0 ERUs for non-residential parcels.
3. Each credit may qualify for the maximum per-credit value indicated, but the actual per-credit value applied is at the discretion of the Township Authority, and may not match the maximum amount.
4. To be eligible for a credit, there must not be any outstanding and unpaid Utility Fees, including stormwater fees and fees for the public sanitary sewer system, as well as being in good standing with the on-lot sewage disposal system (OLSDS) program, against the subject property.

I attest that the information included in this application is complete and accurate. By signing this Application, I hereby grant permission to the Township Authority, the Township, its authorized agents and employees, to enter the exterior premises of this property, at their own risk, to inspect the information presented in this credit.

Property Owner's Signature _____

FOR TOWNSHIP AUTHORITY USE ONLY

Received By: _____

Date Received: _____

☐ Application Incomplete: Property Owner Notified.

Date: _____

☐ Application Administratively Complete.

Date: _____

Reviewed By: _____

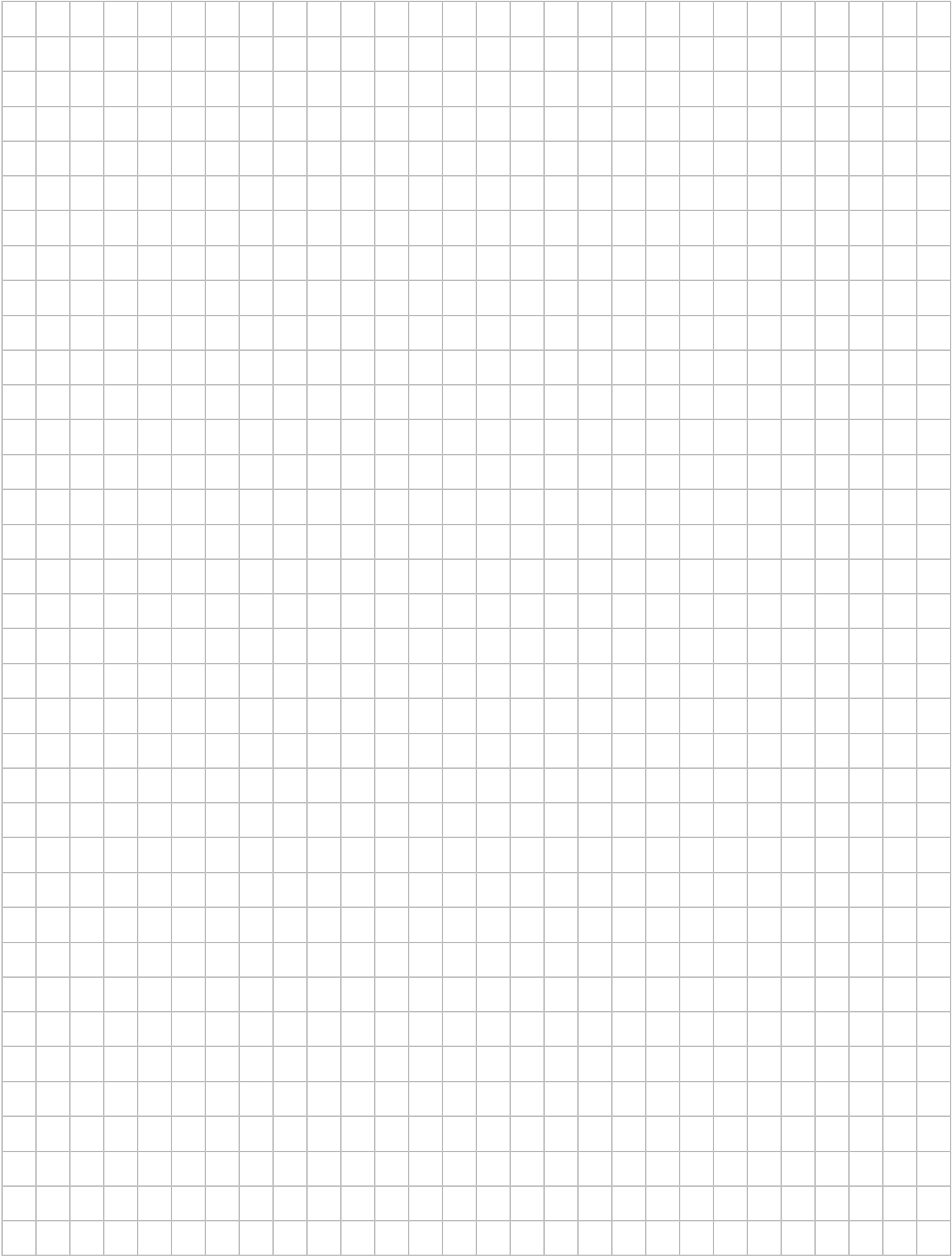
Date Reviewed: _____

☐ Credit Granted

☐ Credit Denied

Description of Adjustment: _____

Sketch Plan





UPPER ALLEN TOWNSHIP AUTHORITY STORMWATER UTILITY FEE CREDIT GUIDE

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(717) 337-3021



UPPER ALLEN TOWNSHIP AUTHORITY STORMWATER UTILITY FEE CREDIT GUIDE

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STATEMENT OF PURPOSE

The purpose of the Upper Allen Township Authority Stormwater Utility Fee Credit Guide is to provide residents with a quick-reference guide that explains all of the types of credits they are eligible to apply for in an effort to reduce their stormwater utility fee.

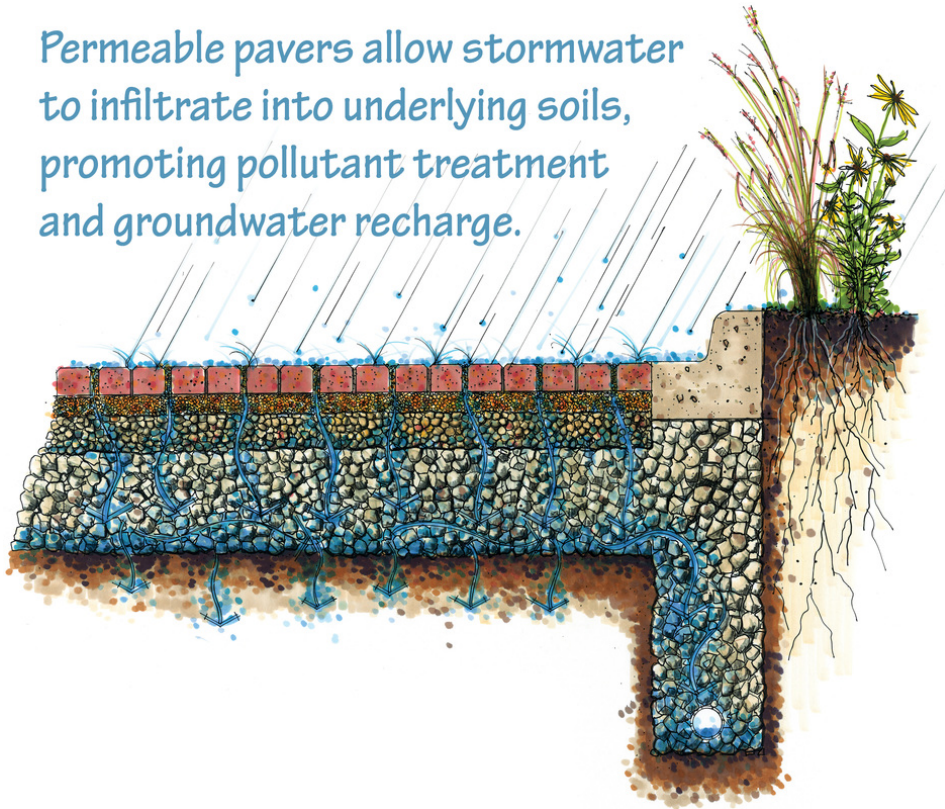


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PERMEABLE SURFACE SYSTEMS (OPTION A)

Permeable surface systems are pavements that are a modification to typical pavement that allow water to drain through the surface rather than run off it. Permeable surface systems include pervious pavements such as porous asphalt or porous concrete which are poured over a gravel bed, or porous pavers on uncompacted soil.¹

Permeable pavers allow stormwater to infiltrate into underlying soils, promoting pollutant treatment and groundwater recharge.



Source: <https://www.watershedcouncil.org/permeable-pavers.html>



Source: USGS Wisconsin Water Science Center

¹ Source: Homeowners Guide to Stormwater BMP Maintenance, 2017, PADEP
Stormwater Utility Fee Credit Guide, 11/20/2019



UPPER ALLEN TOWNSHIP AUTHORITY STORMWATER UTILITY FEE CREDIT GUIDE

PERMEABLE SURFACE SYSTEMS (OPTION A)

Additional Permeable Pavers Examples:



Sources: <https://www.3riverswetweather.org/green/green-solution-porous-pavement>
<http://www.terram.com/products/porous-plastic-pavers/truckpave-porous-paving.html>

Property owners installing permeable surface systems will only be assessed for fifty percent (50%) of their total permeable surface area. In order to be eligible for this credit, a property owner must convert existing impervious surfaces to permeable surfaces. In addition, a property owner may attempt to maintain their Utility Fee at its current rate by constructing new parking areas, patios, driveways, etc. with permeable systems.

Property owners that elect to remove existing impervious area in its entirety and convert that area to grass are eligible to receive a one hundred percent (100%) credit reduction for the total amount of existing impervious area removed.

Instructions:

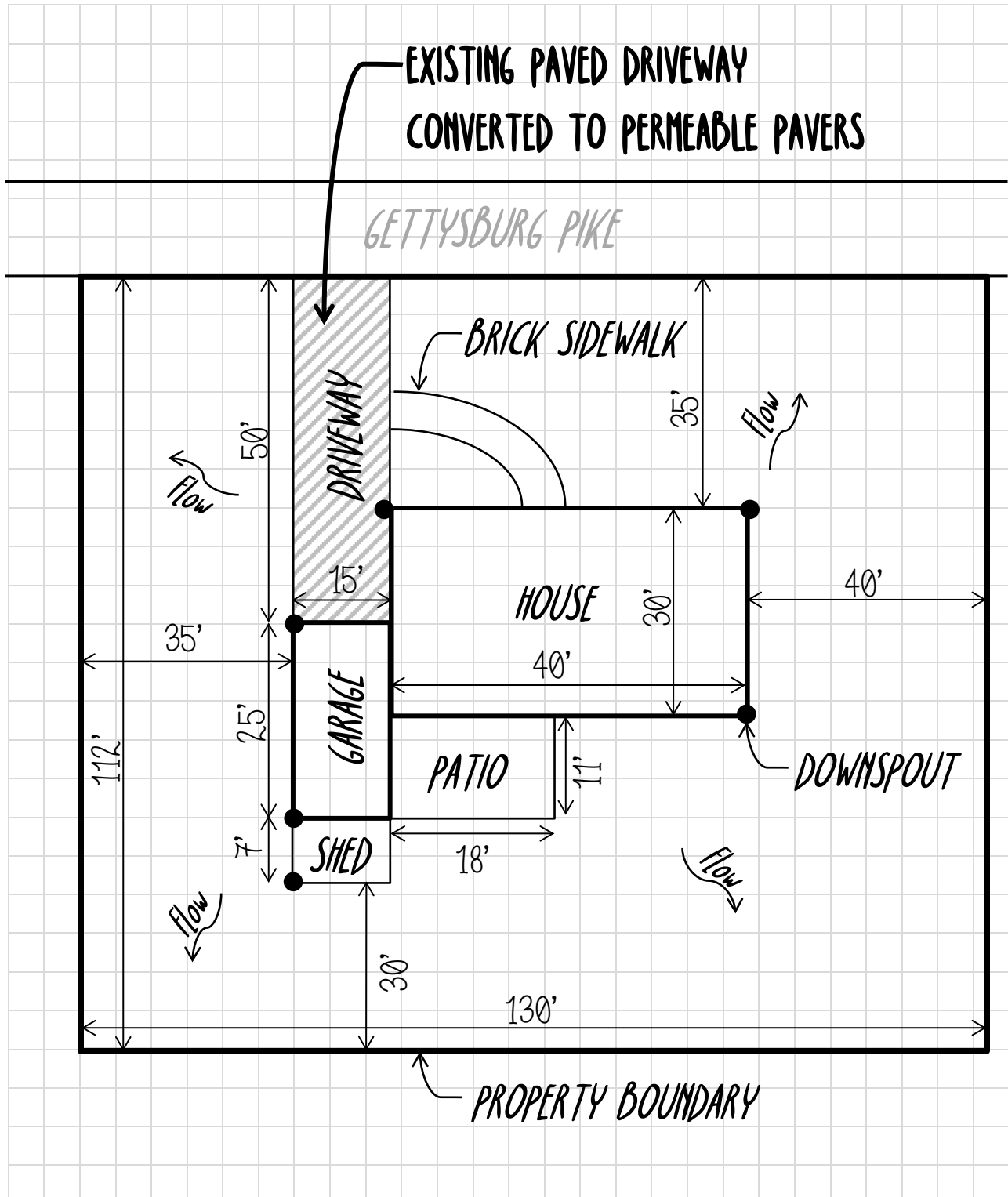
- Step 1: Complete the Stormwater Utility Fee Credit Application.
- Step 2: Provide the approximate location(s) and dimensions of the permeable surface system(s) on the Sketch Plan (see example on Page 5).
- Step 3: Submit one application and sketch plan per parcel to:
Upper Allen Township Authority
Attn: Stormwater Utility Fee Credit
100 Gettysburg Pike
Mechanicsburg, PA 17055



UPPER ALLEN TOWNSHIP AUTHORITY
STORMWATER UTILITY FEE CREDIT GUIDE

PERMEABLE SURFACE SYSTEMS (OPTION A)

Sketch Plan





UPPER ALLEN TOWNSHIP AUTHORITY STORMWATER UTILITY FEE CREDIT GUIDE

STRUCTURAL BEST MANAGEMENT PRACTICES (OPTION B)

Best Management Practices (BMPs) are stormwater facilities that are designed and constructed with the goal of managing and treating stormwater runoff. BMPs reduce the impact that land development activities have on downstream streams and lakes by minimizing the amount of runoff going to surface waters; as well as reducing the amount of sediment, nitrogen, and phosphorus pollutant loads that result from these activities.

Property owners are eligible to receive area reduction credits by constructing the following Structural BMPs:

<u>Structural BMP Name</u>	<u>Impervious Area Reduction Credit</u>
Rain Garden	80%
Infiltration Bed, Infiltration Trenches, Infiltration Berm	95%
Wet Pond	60%
Riparian Buffers	50%
Soil Amendments	85%
Vegetated Swales	70%
Existing Structural BMPs	10%

The impervious area reduction credit will be applied to the total amount of impervious area that drains to the Structural BMP.

Please note that the Township Authority has an inventory of existing Structural BMPs that were constructed as part of previously approved land development plans. The existing Structural BMPs included in this inventory are not eligible to receive the Structural BMP credit as credit was already received for these facilities through the creation of the Combined Pollutant Reduction Plan (PRP).

The inventory of existing Structural BMPs is included under Appendix IV of the Combined PRP, which can be found on the Township's website at <https://uatwp.org/storm-water-management/> or by calling the Township office at 717-766-0756.

Property owners with existing Structural BMPs that were not included on the inventory are eligible to receive a ten percent (10%) impervious area reduction credit for area tributary to the existing Structural BMP. Additional credit may be received if the property owner can demonstrate that performance levels exceed current design parameters achieved by the existing Structural BMPs.

Property owners that receive impervious area reduction credits will be required to sign a Stormwater Management/BMP Facilities Operation and Maintenance Agreement, a copy of which is included at the end of this guide.



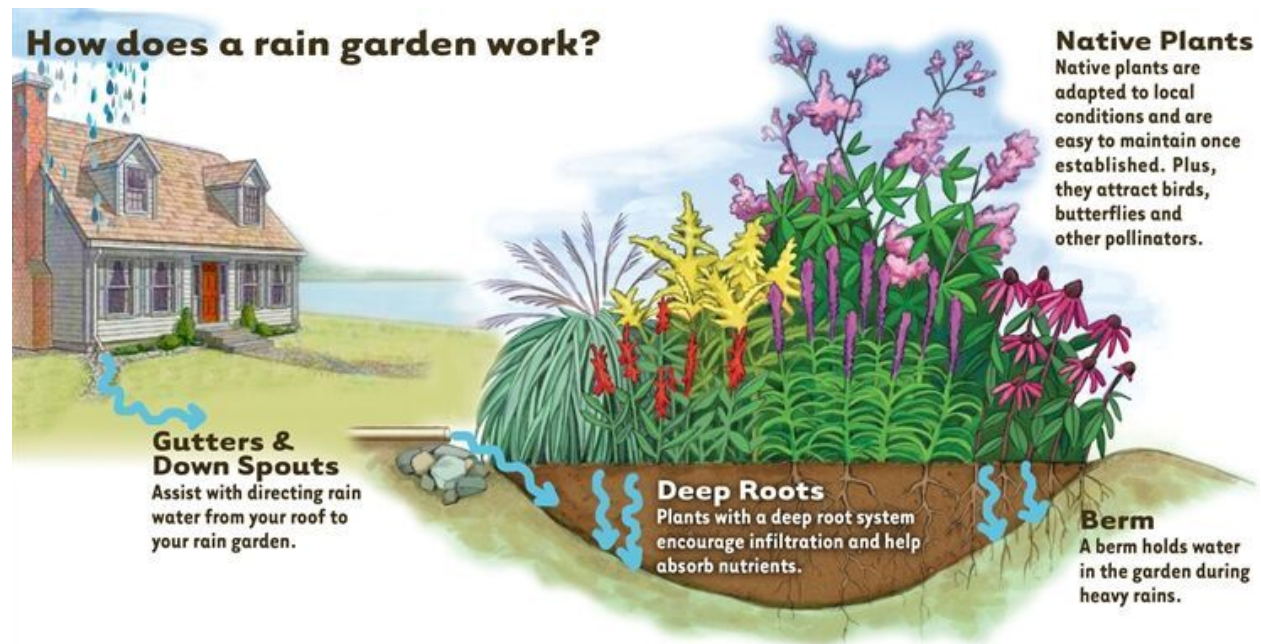
UPPER ALLEN TOWNSHIP AUTHORITY STORMWATER UTILITY FEE CREDIT GUIDE

STRUCTURAL BEST MANAGEMENT PRACTICES (OPTION B)

Rain Gardens

A rain garden is an excavated shallow surface depression planted with specially selected native vegetation to treat and capture runoff.¹

Rain gardens reduce the amount of runoff and remove pollutants. As the water pools in the depression, it can infiltrate deeper into the soil, or be used by the vegetation through evapotranspiration. The deep and dense root system of perennial vegetation increases the amount of water that infiltrate as compared to the shallow roots of lawn grasses. Even in a larger event during which the rain garden may overflow, runoff is still filtered through the vegetation removing pollutants.²



Source: <http://www.dcva.org>

Property owners installing rain gardens will receive a credit for eighty percent (80%) of the total amount of impervious area tributary to the rain garden. This credit is applicable to new rain gardens as well as rain gardens already constructed that were not part of a previously approved land development plan.

A typical construction detail for a rain garden is included on the following page.

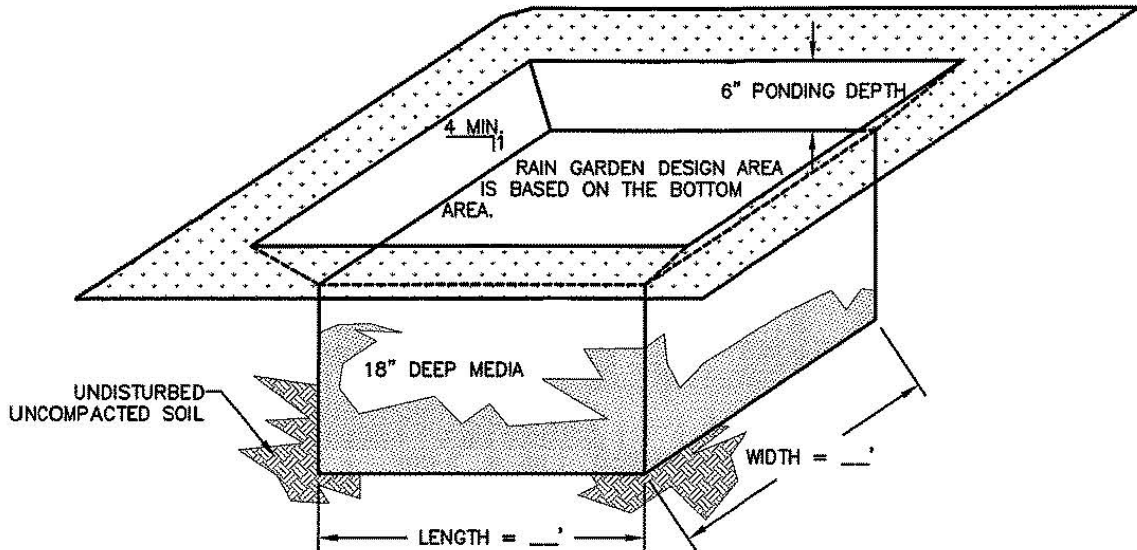
¹ Source: Pennsylvania Stormwater BMP Manual, December 30, 2006

² Source: Homeowners Guide to Stormwater BMP Maintenance, 2017, PADEP

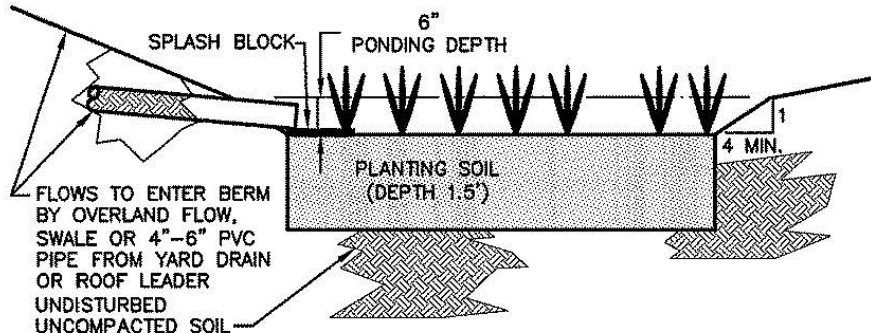


UPPER ALLEN TOWNSHIP AUTHORITY STORMWATER UTILITY FEE CREDIT GUIDE

STRUCTURAL BEST MANAGEMENT PRACTICES (OPTION B)



DESIGN NOTE:
CHOOSE LENGTH AND WIDTH TO MEET AREA REQUIREMENT PER THE BMP SIZING CHART. BERMS SHALL BE INSTALLED PARALLEL TO THE EXISTING CONTOUR SUCH THAT THE TOP OF BERM IS INSTALLED AT A UNIFORM ELEVATION.



NOTES:

1. PLANTING SOIL SHOULD BE A SANDY LOAM, LOAMY SAND, LOAM (USDA), OR A LOAM/SAND MIX. RATIO FOR RAIN GARDEN SOIL MIX SHOULD CONTAIN AN APPROXIMATE RATIO OF 50% SAND, 30% COMPOST AND 20% NATIVE SOILS
2. THE SOILS SHALL BE FREE OF STONES, STUMPS, ROOTS OR OTHER WOODY MATERIAL OVER 1" IN DIAMETER.
3. BRUSH OR SEEDS FROM NOXIOUS WEEDS SHALL NOT BE PRESENT IN THE SOILS.
4. PLACEMENT OF THE PLANTING SOIL SHOULD BE IN 9" LIFTS THAT ARE LOOSELY COMPACTED.
5. BIO-RETENTION AREA MUST BE PROTECTED FROM EROSION/SEDIMENTATION DURING CONSTRUCTION.
6. WET PLANTINGS IN RAIN GARDEN SHOULD BE NATIVE TO PA. DIRECTION FOR PLANTING SCHEDULE AND DENSITY BASED ON SITE CONDITIONS (SUN/SHADE/APPEAL) CAN BE OBTAINED FROM THE CUMBERLAND COUNTY CONSERVATION DISTRICT
7. SUBGRADE IN THE RAIN GARDEN BOTTOM SHOULD NOT BE COMPACTED. IF THE SUBGRADE BECOMES COMPACTED FOR ANY REASON, IT SHALL BE SCARIFIED PRIOR TO SOIL PLACEMENT
8. IN TOWNSHIPS WHERE INFILTRATION MAY BE IMPOSSIBLE DUE TO SOIL CONDITIONS OR BASEMENTS, IT IS RECOMMENDED THAT A 60 MIL HDPE POND LINER BE INSTALLED ALONG WITH 30" OF PLANTING SOIL MEDIA.

RAIN GARDEN
N.T.S.

DRAWING PREPARED BY C. S. DAVIDSON, INC.

SIMPLIFIED APPROACH DETAILS.dwg



UPPER ALLEN TOWNSHIP AUTHORITY STORMWATER UTILITY FEE CREDIT GUIDE

STRUCTURAL BEST MANAGEMENT PRACTICES (OPTION B)

Infiltration Trench, Infiltration Berm, and Infiltration Beds

An infiltration trench contains a perforated pipe in a stone trench. It can be thought of as the opposite of a French drain. In a French drain, water flows from the soil into a perforated pipe and away from the wet spot. For an infiltration trench, stormwater runoff is directed into a perforated pipe that is surrounded by gravel. The water then drains out of the perforated pipe into the trench. The intent is to utilize the pipe and stone bedding to stormwater runoff until it can slowly recharge the groundwater.



Source: [Google Image Search](#)

An Infiltration Berm is a mound of compacted earth with sloping sides that is usually located along a contour on relatively gently sloping sites. Berms can also be created through excavation/removal of upslope material, effectively creating a Berm with the original grade. Berms may serve various stormwater drainage functions including: creating a barrier to flow, retaining flow and allowing infiltration for volume control, and re-directing flow from downstream properties and conveying concentrated flows back to sheet flow.



Source: [Google Image Search](#)



UPPER ALLEN TOWNSHIP AUTHORITY STORMWATER UTILITY FEE CREDIT GUIDE

STRUCTURAL BEST MANAGEMENT PRACTICES (OPTION B)

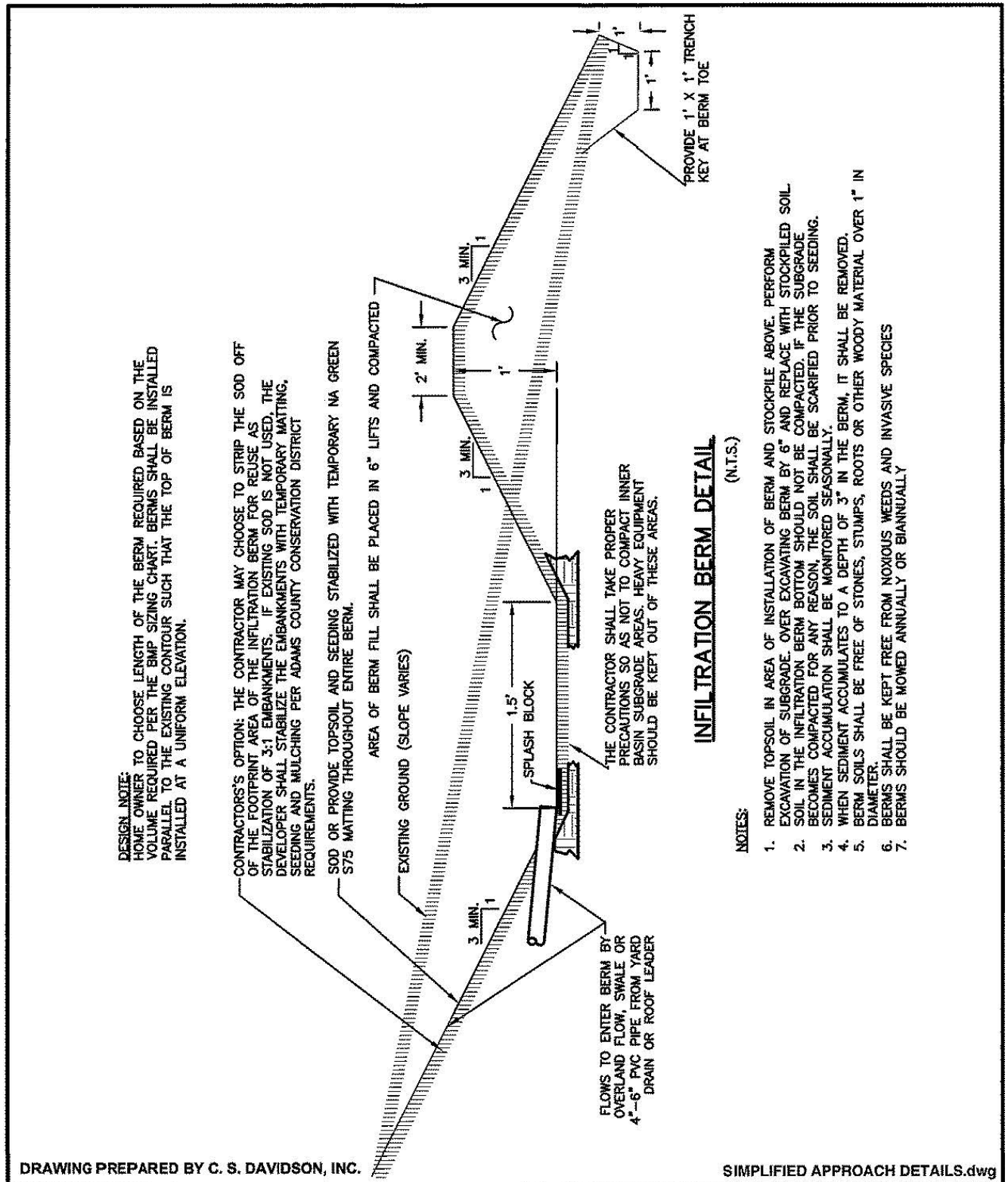
An Infiltration Bed provides temporary storage and infiltration of stormwater runoff by placing storage media of varying types beneath the proposed surface grade. Vegetation will help to increase the amount of evapotranspiration taking place. Typically in residential settings downspouts are directly piped into underground infiltration beds.



Source: [Google Image Search](#)

Property owners installing infiltration trenches, infiltration berms, and/or infiltration beds will receive a credit for ninety-five percent (95%) of the total amount of impervious area tributary to the infiltration facilities. This credit is applicable to new infiltration trenches, infiltration berms, and/or infiltration beds. Existing infiltration trenches, infiltration berms, and/or infiltration beds that were not constructed as part of a previously approved land development plan are eligible to receive a credit for ten percent (10%) of the total amount of impervious area tributary to the infiltration facilities.

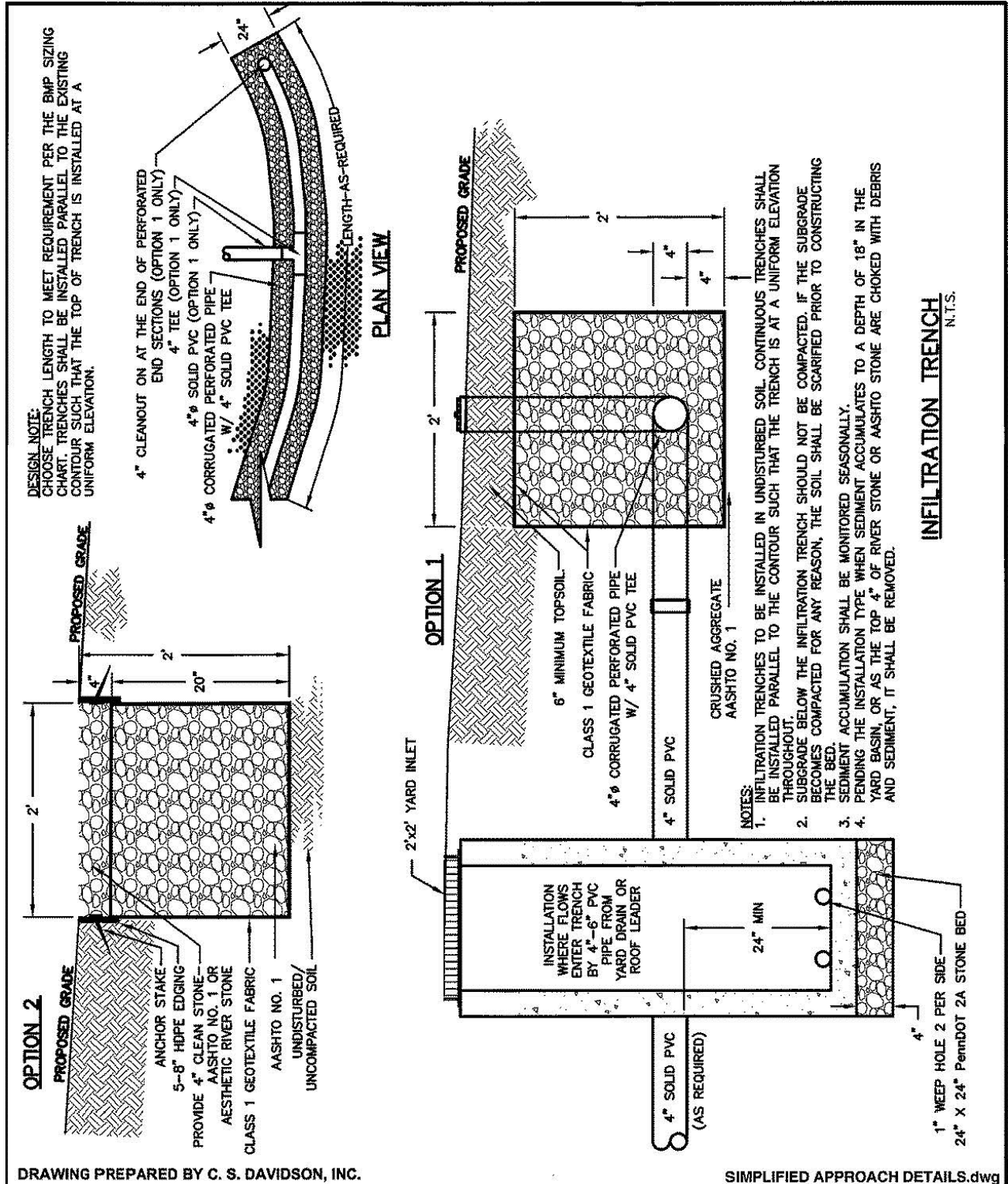
Typical construction details for these infiltration facilities are included on the following pages.





UPPER ALLEN TOWNSHIP AUTHORITY STORMWATER UTILITY FEE CREDIT GUIDE

STRUCTURAL BEST MANAGEMENT PRACTICES (OPTION B)





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STRUCTURAL BEST MANAGEMENT PRACTICES (OPTION B)

Wet Pond

A wet pond is a water impoundment structure that intercepts stormwater runoff then releases it to an open water system at a specified flow rate. These structures retain a permanent pool and usually have retention times sufficient to allow settlement of some portion of the intercepted sediments and attached nutrients/toxics. There is little or no vegetation living within the pooled area nor are outfalls directed through vegetated areas prior to open water release.³

Wet ponds reduce the velocity of stormwater runoff that is discharged from a land development site that converted pervious surfaces to impervious surfaces after construction. Wet ponds help reduce soil erosion downstream while also providing volume and water quality benefits.



Source: [Google Image Search](#)

Property owners installing wet ponds will receive a credit for sixty percent (60%) of the total amount of impervious area tributary to the basin. This credit is applicable to new wet ponds. Existing wet pond(s) that were not constructed as part of a previously approved land development plan are eligible to receive a credit for ten percent (10%) of the total amount of impervious area tributary to the wet pond(s).

³ NPDES Small MS4s BMP Effectiveness Values, 5/2016, PADEP
Stormwater Utility Fee Credit Guide, 11/20/2019



UPPER ALLEN TOWNSHIP AUTHORITY STORMWATER UTILITY FEE CREDIT GUIDE

STRUCTURAL BEST MANAGEMENT PRACTICES (OPTION B)

Riparian Buffers

A riparian buffer is a vegetated area near a stream, usually forested, which helps shade and partially protect a stream from the impact of adjacent land uses. The vegetated area acts as a buffer to pollutants entering a stream from runoff, controls erosion, and provides habitat and nutrient input into a stream.

Credit will also be considered for property owners choosing to establish a riparian buffer along their property line, not adjacent to a stream.

Riparian buffers can also be referred to as forest buffers or vegetated filter strips.



Source: [Google Image Search](#)

Property owners installing riparian buffers or vegetated filter strips will receive a credit for fifty percent (50%) of the total amount of impervious area tributary to the buffer area. This credit is applicable to new riparian buffers. Existing riparian buffers that were not constructed as part of a previously approved land development plan are eligible to receive a credit for ten percent (10%) of the total amount of impervious area tributary to the buffer area.

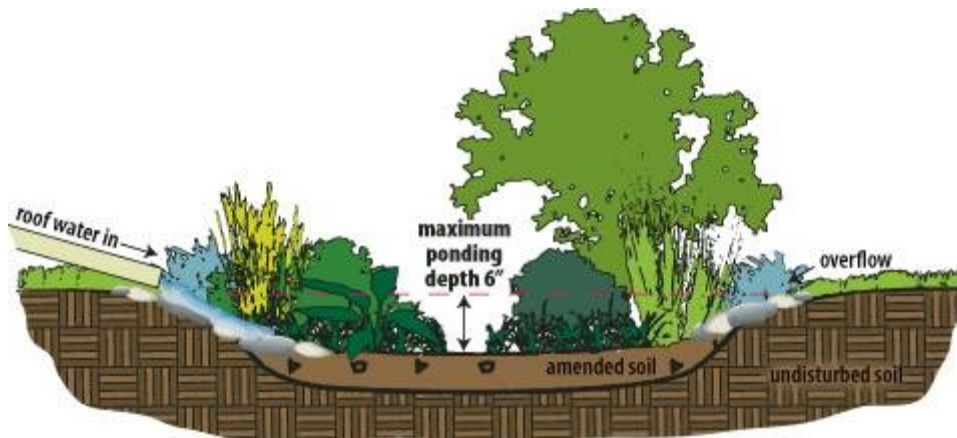


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STRUCTURAL BEST MANAGEMENT PRACTICES (OPTION B)

Soil Amendments

Little spaces between soil particles called pores or voids allow water to both be stored in the soil and move through the soil as infiltration. When the soil is compacted through the process of development, the pores or void spaces are reduced. Compaction of soil prevents water from infiltrating. Loosening the soil or tilling can reduce compaction and increase the soils ability to infiltrate runoff. Adding organic material like compost, sand, or manufactured soil media to the soil increases the pore spaces in the soil, which increases its ability to hold water.⁴



Source: [Google Image Search](#)

Property owners installing amended soils will receive a credit for eighty-five percent (85%) of the total amount of impervious area tributary to the amended soil area. This credit is applicable to new amended soil areas. Existing amended soil areas that were not constructed as part of a previously approved land development plan are eligible to receive a credit for ten percent (10%) of the total amount of impervious area tributary to the amended soil area.

Property owners should note that the key to maintaining amended soils is to protect and preserve them. Compaction of the soil should be avoided. Don't use as an extra parking area or storage for a recreational vehicle. Amended soils that are a BMP can't be removed. For example, the area cannot to be converted to a patio or other use that would prevent stormwater infiltration.

⁴ Source: Homeowners Guide to Stormwater BMP Maintenance, 2017, PADEP
Stormwater Utility Fee Credit Guide, 11/20/2019



UPPER ALLEN TOWNSHIP AUTHORITY STORMWATER UTILITY FEE CREDIT GUIDE

STRUCTURAL BEST MANAGEMENT PRACTICES (OPTION B)

Vegetated Swales

A vegetated swale is a wide, shallow channel, planted with grass or shrubs. A swale conveys runoff like a ditch, but a swale is much shallower and wider than a typical drainage ditch. If the swale is located on a steeper slope, rocks may be used to prevent erosion.

The wide, shallow design of swales allows runoff to flow more slowly than it would in a narrow, deep ditch or in a pipe. Vegetated swales slow runoff, promote infiltration, and filter pollutants and sediment in the process of conveying runoff.⁵

Property owners installing vegetated swales will receive a credit for seventy percent (70%) of the total amount of impervious area tributary to the swale. Property owners must be improving swale conditions to be eligible for this credit. For example, property owners must convert an eroding swale to an established grass lined swale, or convert a grass lined swale to a naturalized swale.



Source: [Google Image Search](#)

This credit is applicable to new vegetated swales or improvements to existing vegetated swales. Existing vegetated swales that were not constructed as part of a previously approved land development plan are eligible to receive a credit for ten percent (10%) of the total amount of impervious area tributary to the vegetated swale.

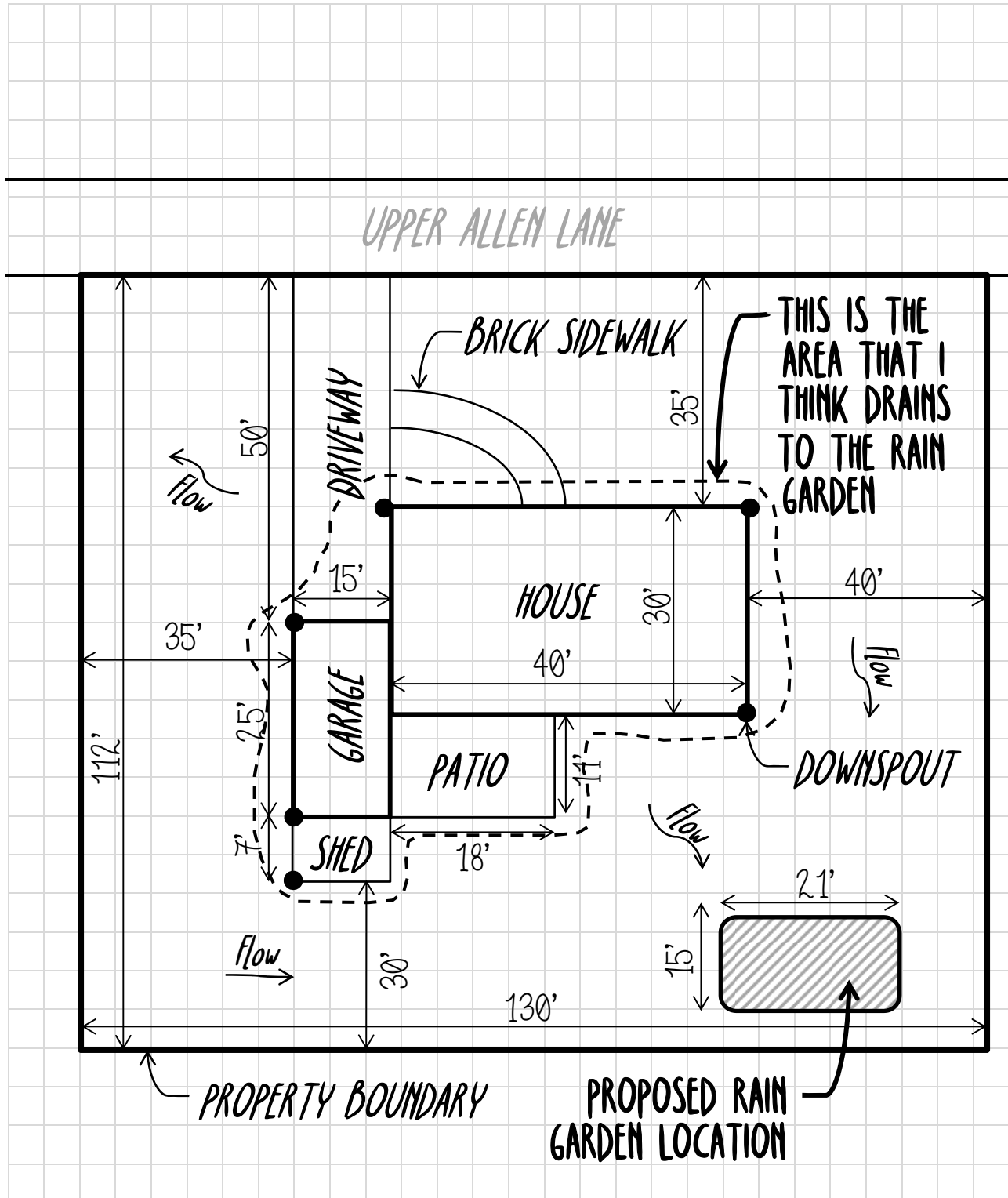
⁵ Source: Homeowners Guide to Stormwater BMP Maintenance, 2017, PADEP
Stormwater Utility Fee Credit Guide, 11/20/2019



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STRUCTURAL BEST MANAGEMENT PRACTICES (OPTION B)

Sketch Plan





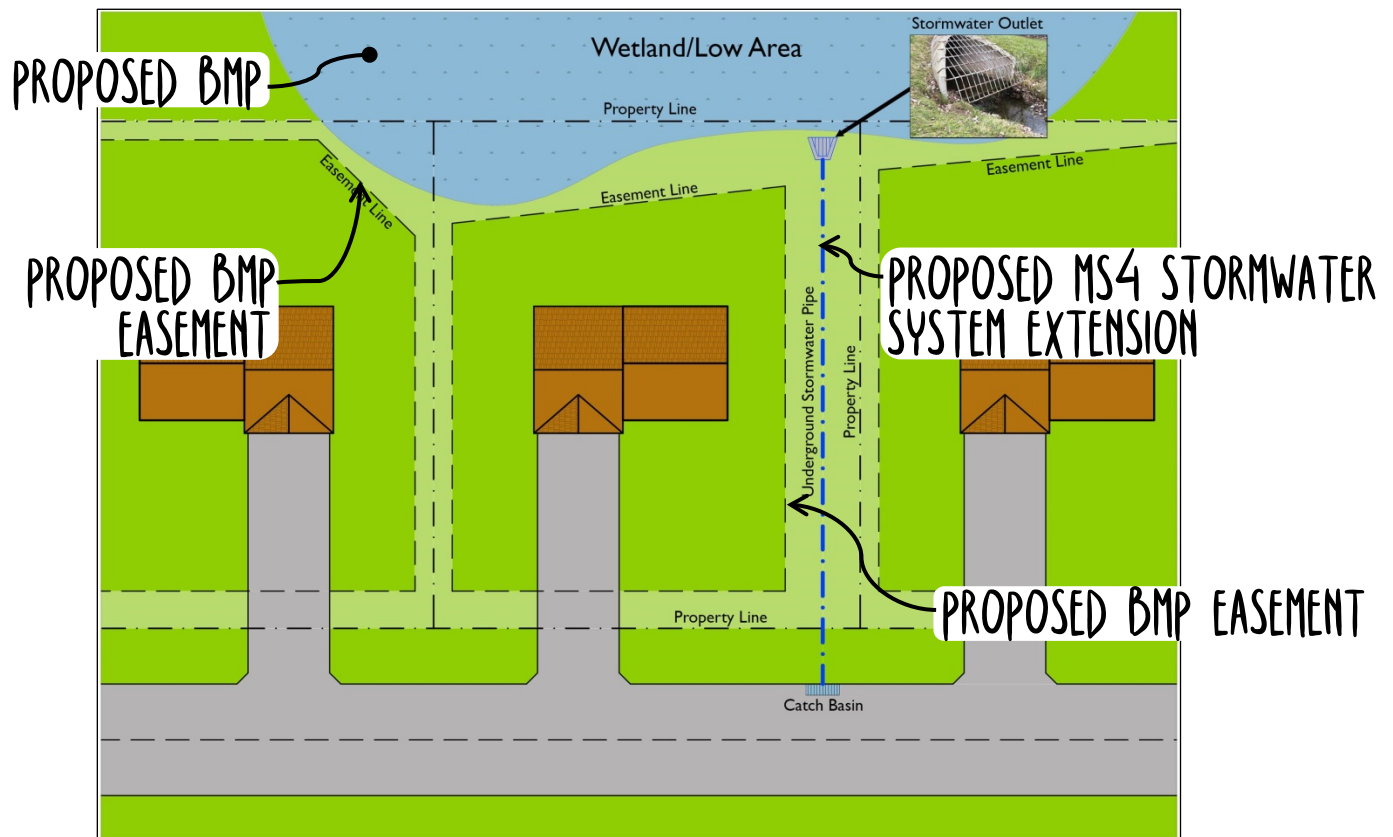
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BEST MANAGEMENT PRACTICE EASEMENT (OPTION C)

Best Management Practices (BMPs) are stormwater facilities that are designed and constructed with the goal of managing and treating stormwater runoff. BMPs reduce the impact of land development activities have on downstream streams and lakes by minimizing the amount of runoff going to surface waters; as well as reducing the amount of sediment, nitrogen, and phosphorus pollutant loads that result from these activities.

The BMP Easement credit will be available to any parcel granting an easement to the Township Authority for construction of a BMP for the purpose of reducing pollutant loads and/or other stormwater management purposes as defined by the Township Authority. Instances of applicable BMP Easements include a property owner granting the Township Authority the right to use private land to construct BMPs such as dry extended detention basins, stormwater pipes, swales, riparian buffers, water quality basins, wetlands, rain garden, and so forth.

An example of a BMP easement for the purpose of stormwater pipes is included below.



Source: <https://www.elkrivernm.gov/1168/Drainage-Easements-and-Ditches>

The impervious area reduction credit amount will be negotiated with the property owner based upon their ERU assessment and the area of land included in the easement. The BMP easement shall be discussed and approved by the Township Authority.



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BEST MANAGEMENT PRACTICE EASEMENT (OPTION C)

Instructions:

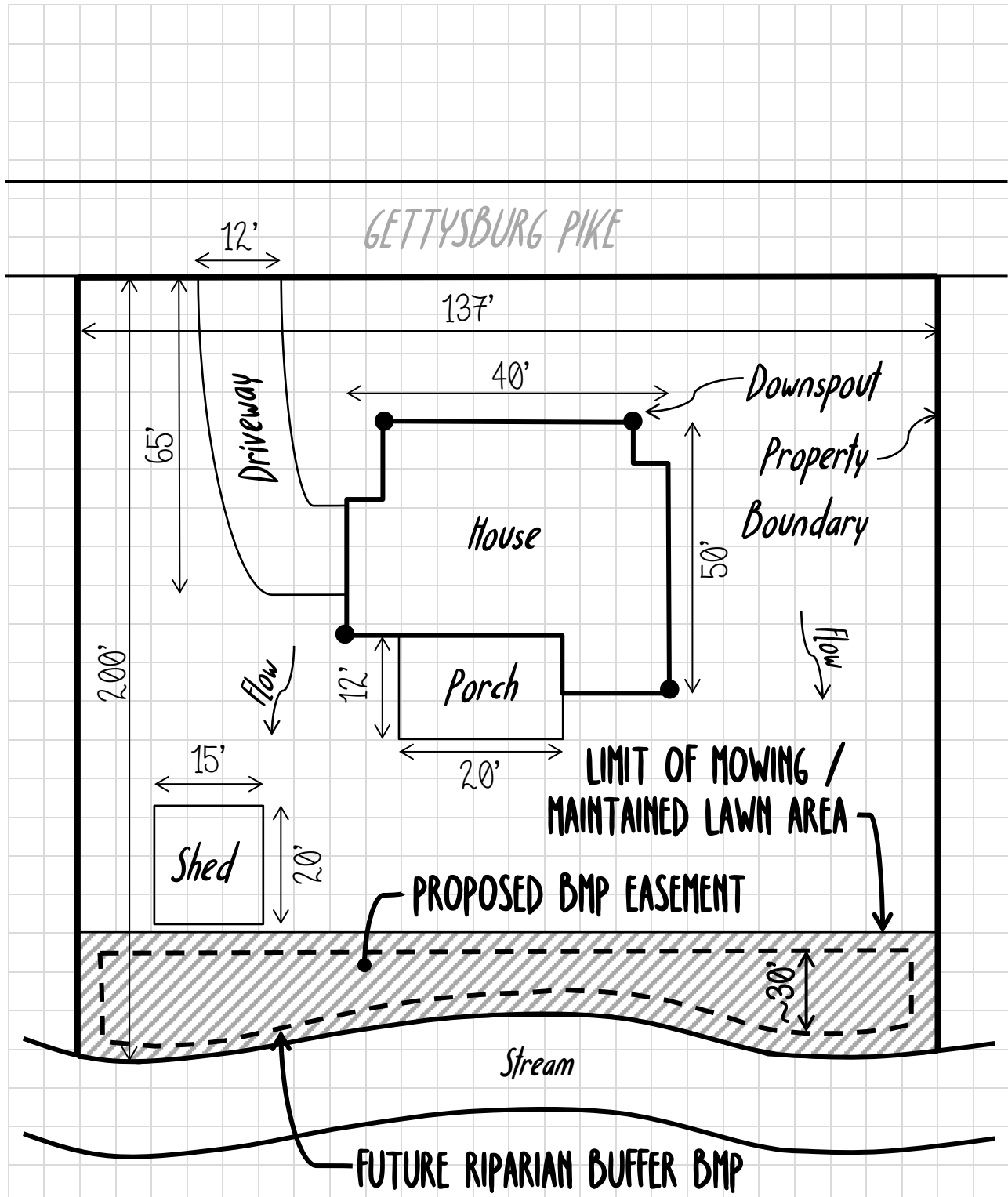
- Step 1: Complete the Stormwater Utility Fee Credit Application.
- Step 2: Provide the approximate location(s) and dimensions of the proposed BMP easement on the Sketch Plan (see example on Page 21).
- Step 3: Submit one application and sketch plan per parcel to:
Upper Allen Township Authority
Attn: Stormwater Utility Fee Credit
100 Gettysburg Pike
Mechanicsburg, PA 17055



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BEST MANAGEMENT PRACTICE EASEMENT (OPTION C)

Sketch Plan





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LOW IMPACT PARCEL (OPTION D)

Credit will be given if the property owner can demonstrate that the total impervious area of a parcel is less than ten percent (10.0%) of the total property area. In addition, impervious surfaces shall not be located any closer than seventy-five (75) feet from any property line with the exception of the driveway in order to be eligible for this credit.

When a property contains ten percent (10.0%) or less of impervious area, the stormwater runoff generated from surfaces such as rooftops and paved areas is typically directed to pervious areas, such as grass, that will allow for better absorption of water. Larger vegetated surfaces allow for increased filtration of pollutants from stormwater runoff and reduced rates of runoff from the parcel.



Source: [Google Image Search](#)

Property owners qualifying for the Low Impact Parcel credit will be assigned a twenty-five percent (25%) credit reduction to the property's total amount of impervious area.

Instructions:

- Step 1: Complete the Stormwater Utility Fee Credit Application.
- Step 2: Provide approximate dimensions of how close impervious areas are to each property line to ensure that they are at least seventy-five (75) feet away.
- Step 3: Submit one application and sketch plan per parcel to:
Upper Allen Township Authority
Attn: Stormwater Utility Fee Credit
100 Gettysburg Pike
Mechanicsburg, PA 17055



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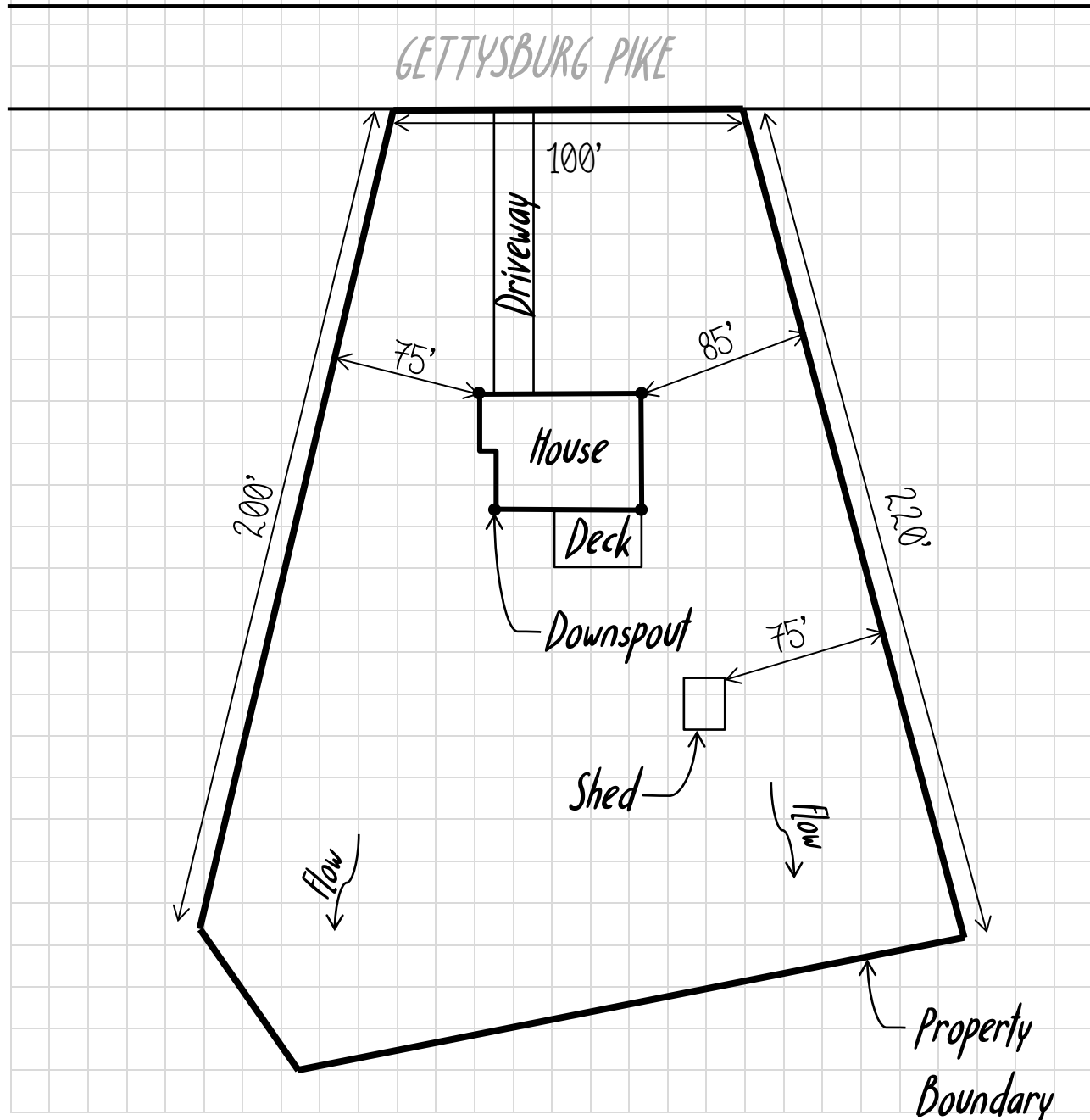
LOW IMPACT PARCEL (OPTION D)

Sketch Plan

Total Property Area = 43,560 sqft

Total Impervious Area = 3,950 sqft

$$\frac{3,950 \text{ sqft}}{43,560 \text{ sqft}} = 9\%$$

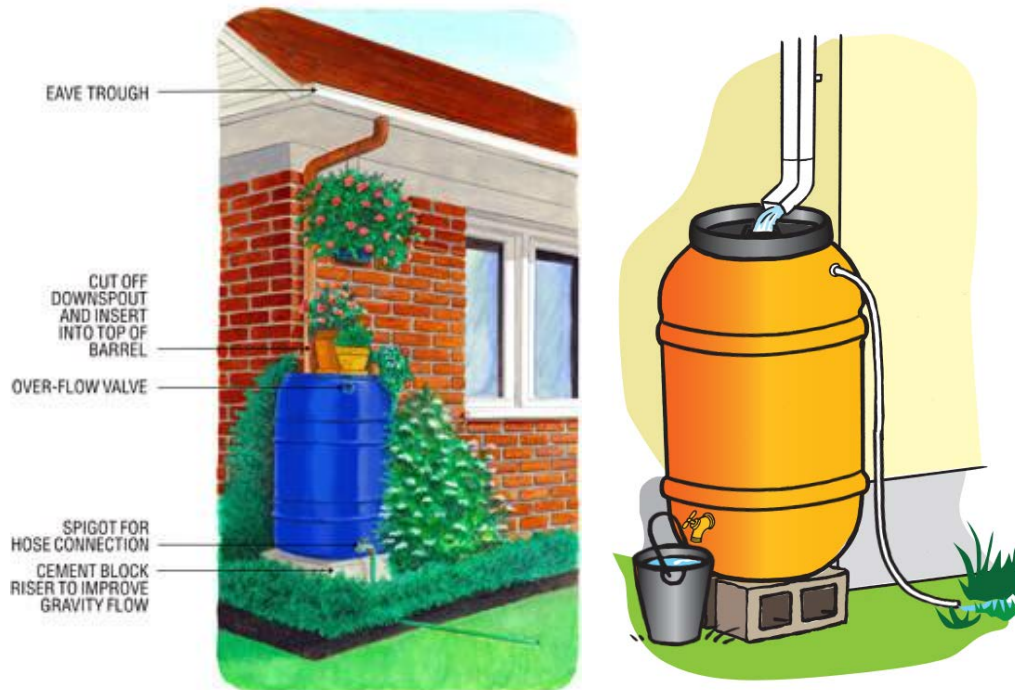




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RAIN BARRELS (OPTION E)

A rain barrel is a system that collects and stores rainwater from your roof that would otherwise be lost to runoff and diverted to storm drains and streams. Usually a rain barrel is composed of a 55 gallon drum, a vinyl hose, PVC couplings, a screen grate to keep debris and insects out, and other off-the-shelf items. A rain barrel is relatively simple and inexpensive to construct and can sit conveniently under any residential gutter down spout.



Sources: <http://wcdpa.com/wp-content/uploads/You-Can-rain-barrel.pdf>
<https://www.townofmccandless.org/resident-info/pages/what-rain-barrel>

Lawn and garden watering make up nearly 40% of total household water use during the summer. A rain barrel collects water and stores it for when you need it most, such as during periods of drought to water plants. It provides an ample supply of free "soft water" to homeowners, containing no chlorine, lime or calcium making it ideal for gardens, flower pots, and washing.

A rain barrel will save most homeowners about 1,300 gallons of water during the peak summer months. Saving water not only helps protect the environment, it saves you money and energy (decreased demand for treated tap water). Diverting water from storm drains also decreases the impact of runoff to streams. Therefore, a rain barrel is an easy way for you to have a consistent supply clean, fresh water for outdoor use, free.¹

¹ Source: http://stormwater.allianceforthebay.org/wp-content/uploads/dlm_uploads/2013/07/what-is-rainbarrel.pdf



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RAIN BARRELS (OPTION E)



Source: [Google Image Search](#)

Property owners installing rain barrels are eligible to receive a twenty percent (20%) reduction in their total impervious area. In order to receive the 20% credit reduction, property owners must install more than one (1) rain barrel to cover a minimum of seventy-five percent (75%) the total number of downspouts on a property. For example, if a property has a total of four (4) downspouts, the property owner would be required to install at least one (1) rain barrel on three (3) of the downspouts.

The goal of the rain barrel credit is to collect runoff from at least seventy-five percent (75%) of all roof area. It is recommended that rain barrels be placed on downspouts that receive the largest amount of roof area.

Instructions:

- Step 1: Complete the Stormwater Utility Fee Credit Application.
- Step 2: Provide the approximate location(s) of each downspout on the Sketch Plan (see example on Page 26).
- Step 3: Count the number of downspouts shown on the Sketch Plan. Multiply the total number of downspouts by 0.75 to determine the minimum required number of rain barrels to be installed.
- Step 4: Provide the approximate location(s) of each rain barrel on the Sketch Plan.
- Step 5: Submit one application and sketch plan per parcel to:
Upper Allen Township Authority
Attn: Stormwater Utility Fee Credit
100 Gettysburg Pike
Mechanicsburg, PA 17055



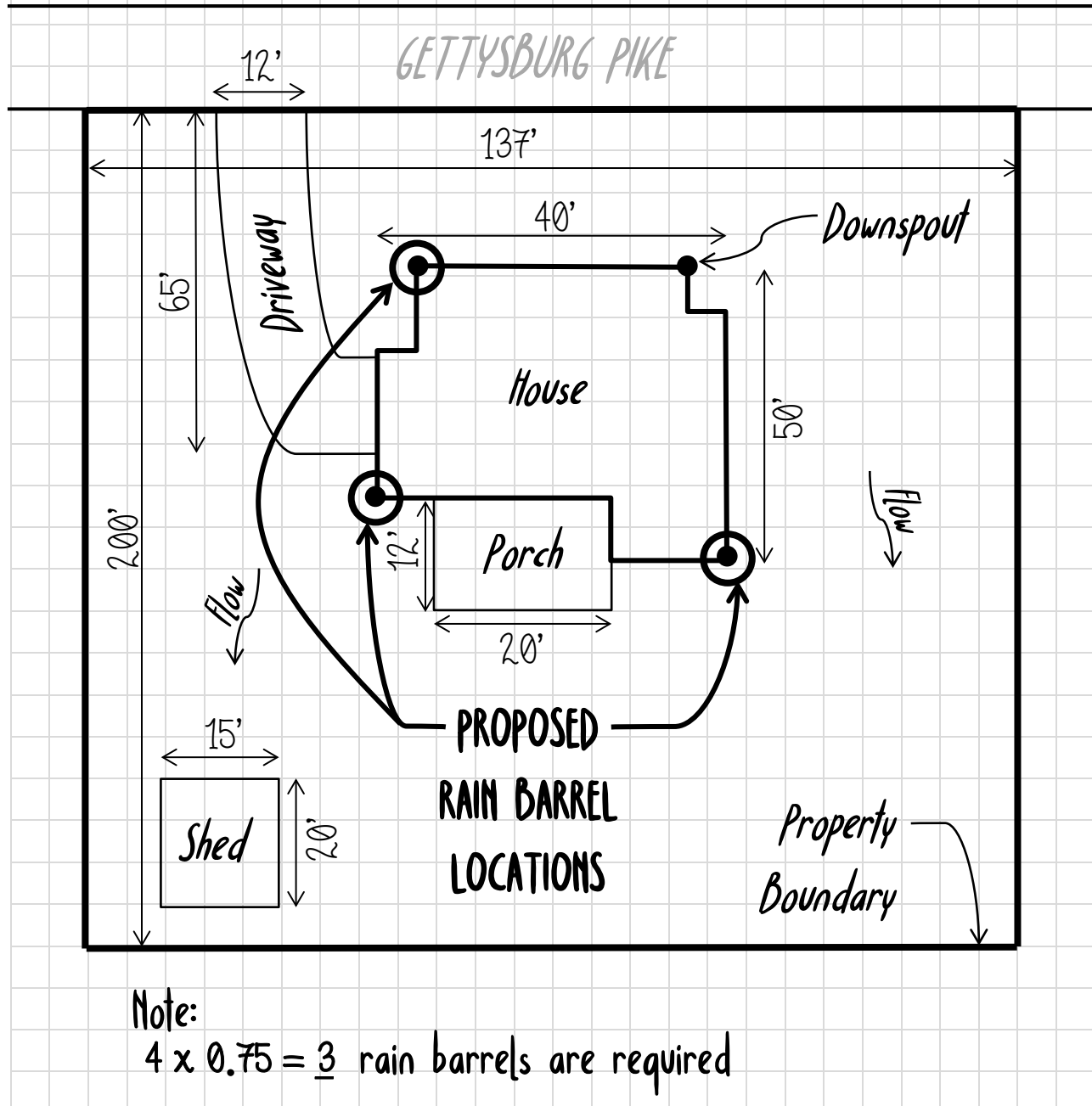
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RAIN BARRELS (OPTION E)

Sketch Plan

Total Number of Downspouts = 4

Total Number of Rain Barrels Proposed = 3





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ADOPT-AN-INLET (OPTION F)

Stormwater inlets collect stormwater runoff on the ground surface and are connected to an underground piping system that conveys the stormwater runoff to a management facility. The stormwater runoff is ultimately conveyed to nearby streams.

Inlets are also commonly referred to as catch basins, storm drains, and curb inlets. A few examples of types of inlets commonly found in the Township are shown below.



Source: [Google Image Search](#)

Residents are eligible to receive a five percent (5%) impervious area reduction credit per inlet, up to a maximum twenty percent (20%) impervious area reduction credit, through the Adopt-an-Inlet credit.

In order to receive an adopt-an-inlet credit, the property owner agrees to be responsible for keeping leaves and other debris away from their adopted(s) inlets for the approved credit period as outlined in Section 3.4 of the approved credit resolution.

In addition, property owners agree to alert the Township Authority of any maintenance issues that need to be addressed with the adopted inlets and also report any illicit discharges being released into the Township's storm sewer system. An illicit discharge is defined as any unauthorized discharge other than clean stormwater released into the Municipal Separate Storm



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ADOPT-AN-INLET (OPTION F)

Sewer System (MS4). Illicit connections may be intentional or may be the result of connections made years ago when water quality issues were not as strictly regulated.

The types of illicit discharges vary widely with some examples being:

- Waste oil, antifreeze, paint, trash or other household chemicals
- Car wash, laundry, and industrial wastewaters
- Pool water discharge (chlorinated and dechlorinated)
- Spills on roadways and other accidents
- Failing septic systems and illegal dumping practices
- Improper disposal of sewage from recreational practices such as boating or camping

Common indicators of illicit discharges include abnormal odors, strange colors, or oil sheen present around or inside storm inlets or pipes. Keeping harmful substances out of our water benefits everyone; environmentally and economically.¹



Source: <https://uatwp.org/storm-water-management/>

If you witness or become aware of an illicit discharge or illegal dumping, please contact Collin Barge, MS4 Coordinator, by telephone at 717-766-0756 or by e-mail at cbarge@uatwp.org.

¹ Source: <https://uatwp.org/storm-water-management/>



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ADOPT-AN-INLET (OPTION F)

Instructions:

Step 1: Determine if your property is eligible for the Adopt-an-Inlet credit. All boxes must be checked to be eligible.

- ☐ The property owner agrees to be responsible for keeping leaves and other debris away from their adopted inlet for the approved credit period as outlined in Section 3.4. of the approved Credit Resolution
- ☐ The property owner agrees to receive periodic e-mails that alert them to check on and remove surface debris from their adopted inlet(s)
- ☐ The property owner agrees to alert the Township Authority of any maintenance issues that need to be addressed
- ☐ The property owner agrees that they and/or a member of their household attend at least one (1) informational workshop or Authority meeting held at Upper Allen Township regarding stormwater and/or MS4 related activities for each calendar year
- ☐ The property owner agrees to alert Upper Allen Township of any illicit discharges being released into the Township's storm sewer system

Step 2: Complete the Stormwater Utility Fee Credit Application.

Step 3: Provide the approximate location(s) of the inlet(s) you wish to adopt on the Sketch Plan (see example on Page 30).

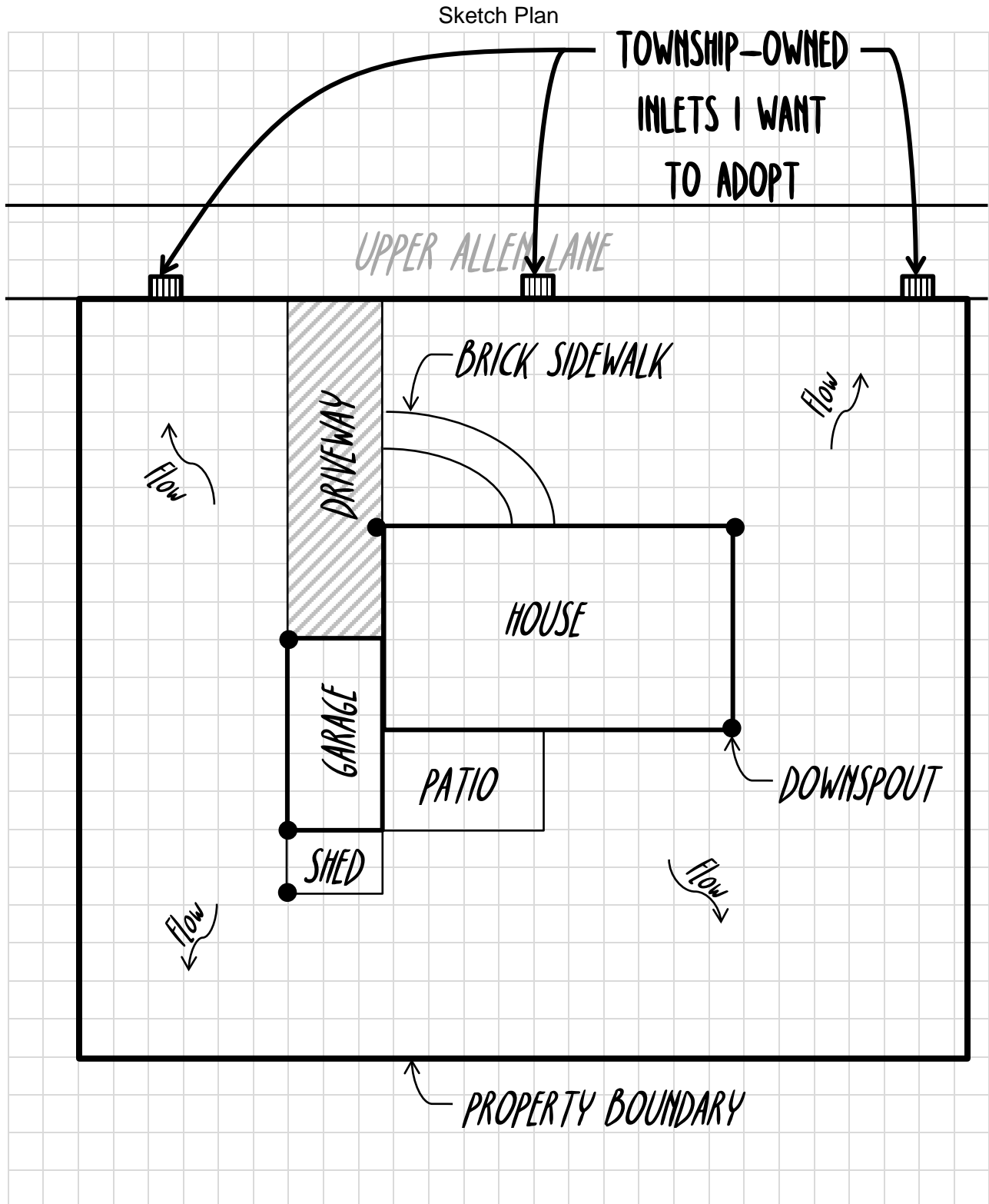
Step 4: Provide a photograph or photograph(s) of the Township-owned inlet(s) you wish to adopt as evidence of current conditions. Photograph(s) can be e-mailed to mmcnamee@uatwp.org with "Adopt-an-Inlet", your name, and property address included in the subject line. Photograph(s) can also be submitted with your credit application to the address listed in Step 5.

Step 5: Submit one application and sketch plan per parcel to:
Upper Allen Township Authority
Attn: Stormwater Utility Fee Credit
100 Gettysburg Pike
Mechanicsburg, PA 17055



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ADOPT-AN-INLET (OPTION F)





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NPDES STORMWATER PERMIT COMPLIANCE (OPTION G)

Property owners will be eligible for a twenty percent (20%) impervious area reduction credit if compliance with a NPDES stormwater permit can be demonstrated.

An example of a NPDES stormwater permit includes the land area of an industrial site that is covered by the PAG-03 General Permit for Stormwater Associated with Industrial Activity that discharges stormwater to the Township's MS4 system.

Property owners that have obtained a No Exposure Certification and/or waiver are not eligible for this credit. In addition, property owners that have a NPDES permit for earth disturbances are not eligible for this credit.



Source: [Google Image Search](#)

Instructions:

- Step 1: Complete the Stormwater Utility Fee Credit Application.
- Step 2: Provide a copy of your approved NPDES permit.
- Step 3: Submit one application and approved NPDES permit per parcel to:
Upper Allen Township Authority
Attn: Stormwater Utility Fee Credit
100 Gettysburg Pike
Mechanicsburg, PA 17055



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CONSERVATION PLAN (OPTION H)

Agricultural properties containing a Conservation Plan, also referred to as an Agricultural Erosion & Sedimentation Plan, which has been reviewed and approved by the Cumberland County Conservation District will be eligible for a seventy-five percent (75%) impervious area reduction credit.



Source: [Google Image Search](#)

The processes used by farmers to produce the food and fiber needed by our nation involve disturbing the earth to varying degrees depending on the type of tillage, planting techniques, and cultivation. Pennsylvania's Chapter 102 regulations, which address Erosion and Sediment Control, require that persons involved with earth disturbance implement Best Management Practices (BMPs) as part of a Conservation Plan to minimize erosion and soil loss. The implementation of a Conservation Plan is especially important to farmers since their use protects the soil resource and keeps water clean.¹

Instructions:

- Step 1: Complete the Stormwater Utility Fee Credit Application.
- Step 2: Provide a copy of your Conservation Plan approved by Cumberland County Conservation District.
- Step 3: Submit one application and approved Conservation Plan per parcel to:
Upper Allen Township Authority
Attn: Stormwater Utility Fee Credit
100 Gettysburg Pike
Mechanicsburg, PA 17055

¹ Source: <http://www.dauphincd.org/ag/consplng.html>



UPPER ALLEN TOWNSHIP AUTHORITY STORMWATER UTILITY FEE CREDIT GUIDE

INNOVATION CREDIT (OPTION I)

Upper Allen Township Authority desires to establish a stormwater credit fee program that rewards property owners for their participation in helping to achieve the Authority's overall pollutant reduction goal. Therefore, the Authority encourages property owners to propose other means to improve their property and our community through the use of innovative stormwater technologies.

If a property owner that has received a bill of at least one (1) ERU has an idea for a project that could be worth stormwater utility fee credits, the Township Authority encourages the property owner to submit the project idea under the Innovation Credit (Option I).

The impervious area reduction credit amount will be negotiated with the property owner based upon their ERU assessment and project idea. The project idea shall be discussed and approved by the Township Authority.

Instructions:

Step 1: Complete the Stormwater Utility Fee Credit Application.

Step 2: Submit one application per parcel including the project idea written in detail under the credit description to:

Upper Allen Township Authority
Attn: Stormwater Utility Fee Credit
100 Gettysburg Pike
Mechanicsburg, PA 17055

Stormwater Management/BMP Facilities Operation and Maintenance Agreement
Upper Allen Township Authority

THIS AGREEMENT, made and entered into this ____ day of ____, 20 ____, by and between _____ hereinafter called the “Landowner” and Upper Allen Township Authority, Cumberland County, Pennsylvania, hereinafter called the “Township Authority.”

WHEREAS, the Landowner is the owner of certain real property described as the Cumberland County Tax Map/Parcel Identification Number _____, as recorded by Deed in the Land Records of Cumberland County, Pennsylvania, Book _____ Page _____, hereinafter called the “Property;”

WHEREAS, the Landowner is proceeding to build on and develop the property; and **WHEREAS**, the Sketch Plan hereinafter called the “Plan,” which is expressly made a part hereof, as approved or to be approved by the Township Authority, provides for management of stormwater within the confines of the property through the use of Stormwater Best Management Practices (Stormwater BMPs); and

WHEREAS, the Township Authority and the Landowner, its successors and assigns, agree that the health, safety, and welfare of the residents of the Township, require that on-site Stormwater BMPs be constructed and maintained on the Property; and

WHEREAS, the Township Authority requires that on-site stormwater BMPs as shown on the Plan be constructed and adequately maintained by the Landowner, its successors and assigns. Any additional requirements imposed by the Township Authority are considered part of the Plan.

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

1. The Landowner in accordance with the specifications identified within the Plan shall construct the onsite stormwater BMPs.
2. The Landowner assumes full responsibility for the construction, operation, and maintenance of the proposed stormwater management facilities.
3. The Landowner, its successors and assigns, shall adequately maintain the stormwater BMPs. This includes all pipes and channels built to convey stormwater to the facility, as well as all structures, improvements, and vegetation provided to control the quantity and quality of the stormwater. Adequate maintenance is herein defined as good working condition so that these facilities are performing their design functions.
4. The Landowner, its successors and assigns, shall inspect the stormwater BMPs after all rainfall events exceeding one inch of precipitation in a twenty-four-hour period.
5. The Landowner, its successors and assigns, hereby grant permission to the Township Authority, its authorized agents and employees, to enter upon the Property without prior notification at reasonable times and upon presentation of proper identification to inspect the stormwater BMPs whenever the Township Authority deems necessary.
6. The Landowner acknowledges that the proposed stormwater BMPs will be a permanent fixture of the property that cannot be altered or removed without approval by the Township Authority.

Stormwater Management/BMP Facilities Operation and Maintenance Agreement
Upper Allen Township Authority

7. In the event the Landowner, its successors and assigns, fails to maintain the stormwater BMPs as shown on the Plan and in good working condition, the Township Authority may enter upon the Property and take whatever action is deemed necessary to maintain said stormwater BMPs and to charge the costs of such repairs to the Landowner, its successors and assigns. This provision shall not be construed to allow the Township Authority to erect any structure of permanent nature on the land of the Landowner unless such structures were part of the approved Plan. It is expressly understood and agreed that the Township Authority is under no obligation to routinely maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation on the Township Authority.
8. In the event that the Township Authority, 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 Township Authority within 30 days of receipt of invoice for all expenses incurred. The Township Authority has the right to file a municipal lien for unpaid costs and expenses that have not been reimbursed 30 days after receipt of invoice.
9. The intent and purpose of this Agreement is to ensure the proper maintenance of the stormwater BMPs by the Landowner. This Agreement shall not be deemed to create any additional liability of any party for damage alleged to result from or be caused by nonpoint source pollution runoff. This Agreement imposes no liability of any kind whatsoever on the Township Authority and the Landowner agrees to hold the Township Authority harmless from any liability in the event the stormwater BMPs fail to operate properly. In the event that a claim is asserted against the Township Authority, its designated representatives or employees, the Township Authority shall promptly notify the Landowner and the Landowner shall defend, at his own expense, any suit based on the claim. If any judgment or claims against the Township Authority shall be allowed, the Landowner shall pay all costs and expenses regarding said judgment.
10. This Agreement shall be binding to the Landowner, its administrators, executors, assigns, heirs and any other successors in interests, in perpetuity.

Landowner:

Signature: _____ Date: _____

Printed Name: _____

Upper Allen Township Authority:

Signature: _____ Date: _____

Printed Name: _____ Title: _____