UPPER SALFORD TOWNSHIP SMALL PROJECT APPLICATION STORMWATER MANAGEMENT PLANNING WORKSHEET

Why am I required to do this?

Upper Salford Township has adopted an ordinance to regulate certain activities that affect stormwater runoff and surface and groundwater quantity and quality. This Ordinance was created to comply with certain requirements specified by the Pennsylvania Department of Environmental Protection. Because your project does not meet all of the exemption criteria as noted in the Ordinance, you have chosen to complete this Small Project Application and install a best management practice (BMP) to satisfy the purpose and intent of the Ordinance.

Who is affected by these requirements?

The stormwater management requirements affect all NEW development in Upper Salford Township. The small projects application has been created for those projects that do not comply with the exemption criteria in full as noted in the Ordinance. Although applicants are not required to submit formal drainage plans to the Township under this scenario; they are still required to address water quality and groundwater recharge criteria specified in the Ordinance. This Small Project Application assists the resident in accomplishing both under a simplified approach.

Do I require professional services to complete this worksheet?

The Small Project Application has been developed to assist the individual resident in meeting the water quality and groundwater recharge goals of the Ordinance. If the guidelines presented in this Application are followed, the individual resident will not require professional services to comply with these water quality and groundwater recharge goals. However, you may require a professional contractor or excavator to install the final design on your property.

What do I need to send to the Township?

Even though a formal drainage plan is not required for individual lot owners meeting the exemption criteria, a brief description of the proposed infiltration facilities, including types of material to be used, total impervious areas and volume calculations as shown below, and a simple sketch plan showing the information below shall be submitted to the Township Engineer prior to construction. The sketch plan must include:

- Location of proposed structures, driveways or other paved areas with approximate size in square feet and locations of existing buildings / driveways, etc.
- Location of any existing or proposed on-site septic system and/or potable water wells showing rough proximity to infiltration facilities.

Upon approval of this information by the Township Engineer, you may proceed with installing your stormwater management control. Please note that all systems must be inspected and approved by the Township Engineer.

UPPER SALFORD TOWNSHIP SMALL PROJECT APPLICATION

File Number_____ Date Received _____
Submitted Fees $_____ Date of Approval of Application _____

Project Street Address:_____
Project Acct No (Tax Parcel #): _____
Project Name: _____
Owner's Name: _____
Owner's Mailing Address: _____
Phone# / Fax# / Email: _____
Please list the date(s) of any previous Small Project Applications for the subject property:
_____

Proposed Activity:

[ ] Removal of ground cover, grading, filling or excavation of an area less than 5,000 square feet
Total area of land disturbance: _____ sq. ft.
Type of Regulated Activity (check all that apply):
[ ] Removal of ground cover
[ ] Grading
[ ] Filling
[ ] Excavation
[ ] Other earth disturbance activity (please describe)
_____

[ ] Addition of Impervious Surface (more than 1,000 SF or less than 5,000 SF)
Type of new impervious surface: [ ] driveway, [ ] shed, [ ] garage, [ ] walkway,
[ ] other (describe) _____
Total new impervious surface proposed for construction: _____ sq. ft.
Are you removing existing impervious as part of this project?
[ ] No
[ ] Yes – Total area of existing Impervious to be removed _____ sq. ft.

Check all items below that will be impacted by the project:
_____Creeks, streams, wetlands, or ponds
_____Existing stormwater management facility (basin, swale, etc.)
_____Easements (Specify location/type _____)

List separation distances between proposed infiltration facility and existing features:
Water wells _____
Septic drainfields / Alternate septic drainfields (min 25') _____
Building w/ sub-grade elements (foundation/basement,etc.) (min 25') _____

SMALL PROJECT APPLICATION PG. 2

Total runoff volume to be permanently removed/managed on site from attached calculation worksheet:_____ gallons or _____ cubic feet

Proposed Stormwater Management Controls (Best Management Practice):

_____ Infiltration Trench
_____ Cistern / Rain Barrel (max 50% of volume)
_____ Other (describe) _____

*Other BMPs require approval by Township Engineer of proposed design/construction details, etc.

Sketch

Provide a sketch of the proposed additional impervious area or land disturbance. Include the following on the sketch:

- Property boundary
- Location and approximate footprint (dimensions) of existing structures (buildings, patios, driveways, etc.)
- Approximate location of any of the following features which will be impacted by the project:
  Mature trees, Sinkholes, Water wells, Septic drainfields, Alternate septic drainfields
  Creeks, streams, wetlands, ponds
  Existing stormwater management facilities (basins, swales, etc.)
- Location and approximate footprint of proposed impervious area or land disturbance.
- Approximate footprint and location of all structures on subject property and structures on adjacent properties if located within fifty feet (50') of the proposed impervious area or land disturbance
- Location and description of proposed stormwater management facilities (e.g. infiltration trench, swales, rain barrels, etc.)
- Direction of proposed stormwater discharge (e.g. with arrows pointing downslope)
- Direction of property grading (e.g. with arrows pointing downslope)
- Scale and north arrow

Person/Firm to be completing work: _____
Mailing Address: _____
Phone# / Fax# / Email: _____

Name of Person Submitting this Application: _____
Signature: _____
Date: _____

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Small Project Application Calculation Worksheet

The applicant may use the following to calculate the amount of runoff which must be managed in accordance with Chapter 18-110 & 111 of the Township Code of Ordinances.

Project Name: _____
Owner Name: _____
Proposed Additional Impervious Area: _____ square feet

Impervious Area Calculations

Calculate the amount of runoff to be permanently removed (managed on site through reuse, evaporation, transpiration or infiltration). A maximum of 50% of the required Permanently Removed Runoff Volume can be addressed through reuse (cistern/rain barrel), the remainder shall be handled with an infiltration trench or other approved BMP:

Additional impervious area (in square feet) ÷ 12 = Permanently Removed Runoff Volume (PRV)

_____ square feet of additional impervious ÷ 12 = _____cubic feet PRV

For Infiltration Trench (Complete attached detail with proposed size):

Excavated bed volume shall be equal to the Permanently Removed Runoff Volume, in cubic feet, calculated above, divided by 0.40 (stone void ratio). (i.e. PRV = 100 CF, Required Trench Volume→ 100 CF/ 0.4 = 250 CF → Utilize trench 25' long x 5' wide x 2' deep.

For Cistern/Rain Barrel (max 50% of volume):

_____ cubic feet x 7.48 gallons per cubic feet = _____ gallons PRV

*Provide construction detail/specification sheet for rain barrel/cistern; Detail must show

1. Overflow pipe at top of cistern discharging to a splash block/stone area
2. Overflow point must be minimum 50' from downslope property line and drain to grassed area that drains away from building.

Sketch (or attach additional sheet):

EXAMPLE

Small Project Application Calculation Worksheet

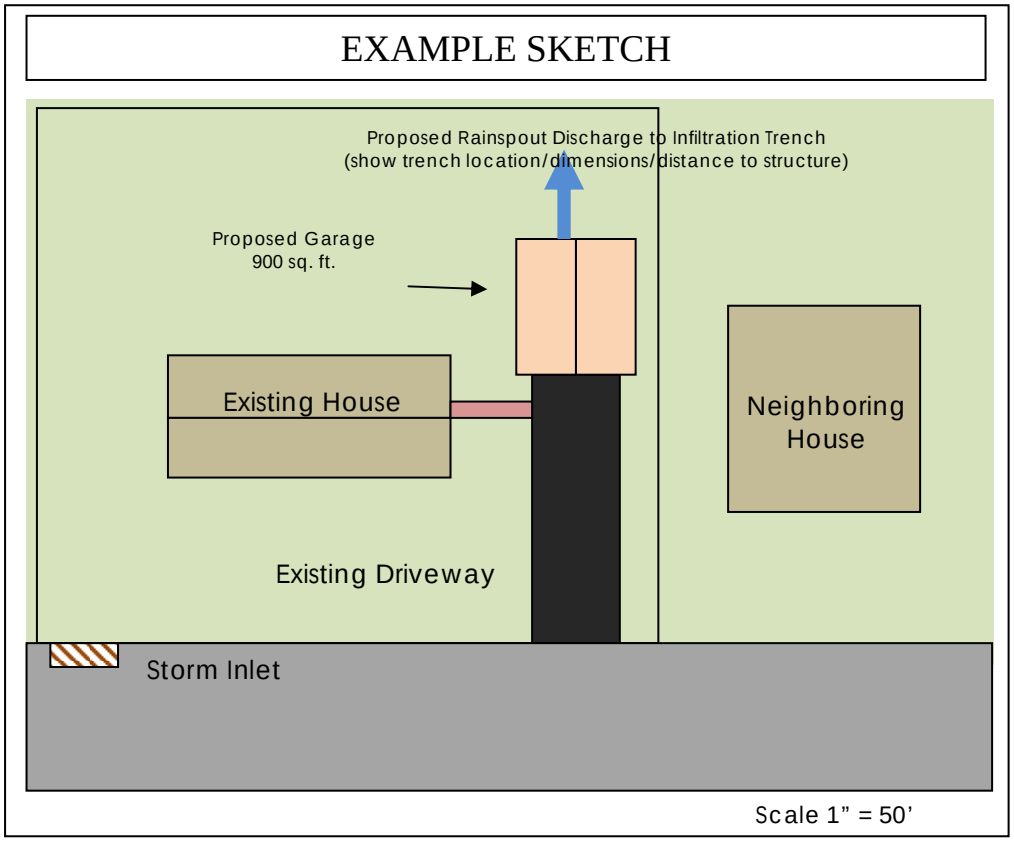
Landowner Name: Jane Doe (20 x 45' garage)
Owner Name: Jane Doe
Proposed Additional Impervious Area: 900 square feet

Impervious Area Calculations

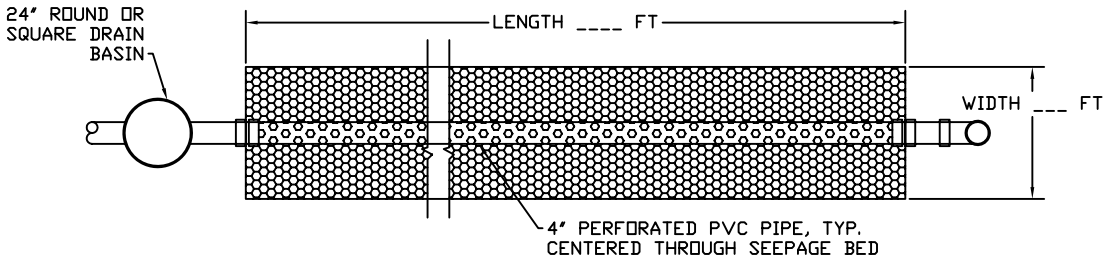
Calculate the amount of runoff to be permanently removed (managed on site through reuse, evaporation, transpiration or infiltration) using the following formula:

Additional impervious area ÷ 12 = Permanently Removed Runoff Volume (PRV)

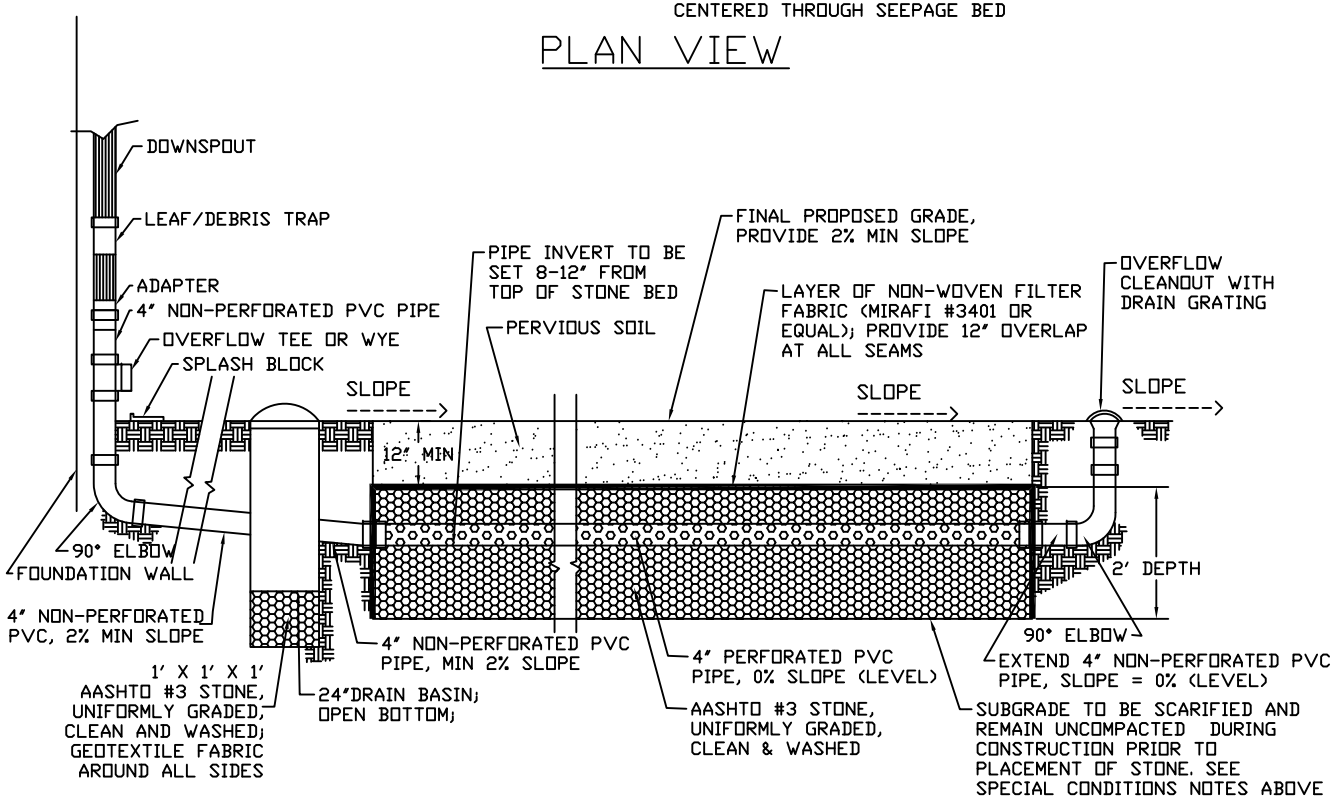
900 square feet of additional impervious ÷ 12 = 75 cubic feet PRV
75 cubic feet x 7.48 gallons per cubic feet = 561 gallons PRV



SMALL PROJECTS
STONE INFILTRATION TRENCH
CONSTRUCTION DETAIL



PLAN VIEW



CROSS SECTION

GENERAL NOTES:

1. STONE INFILTRATION BED SHALL BE SIZED PER PROPOSED IMPERVIOUS SURFACE DRAINING TO IT.
2. STONE SHALL BE AASHTO #3, UNIFORMLY GRADED, CLEAN AND WASHED, WITH 40% VOID RATIO.
3. LEAF SCREENS SHALL BE INSTALLED OVER GUTTERS OR LEAF DEFLECTOR GUARDS INSTALLED IN THE DOWNSPOUT, OR OTHER APPROVED LEAF PROTECTION DEVICE.
4. PROPERTY OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF STORMWATER FACILITIES IN ACCORDANCE WITH THE UPPER SALFORD TOWNSHIP STORMWATER ORDINANCE, CHAPTER 18, AND THE RECORDED OPERATIONS & MAINTENANCE AGREEMENT.

CONSTRUCTION NOTES:

1. INSTALLATION OF STONE INFILTRATION TRENCH SHALL BE INSPECTED BY THE TOWNSHIP ENGINEER OR DESIGNATED REPRESENTATIVE, WITH A MINIMUM 24 HOURS NOTICE.
2. REQUIRED INSPECTIONS INCLUDE EXCAVATION - PRIOR TO PLACEMENT OF STONE; STONE/PIPING PRIOR TO TOP LAYER OF FABRIC; AND FINAL GRADING AND SEEDING. ADDITIONAL INSPECTIONS MAY BE NECESSARY AS DETERMINED BY TOWNSHIP ENGINEER.
3. PRIOR TO PLACEMENT OF STONE IN THE INFILTRATION TRENCH, THE CONTRACTOR OR PROPERTY OWNER SHALL MAKE A TEST PIT 2 FEET BELOW THE BOTTOM OF INFILTRATION TRENCH TO ENSURE THAT BEDROCK AND/OR GROUNDWATER ARE NOT PRESENT IN THIS ZONE; IF GROUNDWATER/BEDROCK IS ENCOUNTERED, IMMEDIATELY CONTACT THE TOWNSHIP ENGINEER TO DISCUSS REDESIGN AND RELOCATION OF THE INFILTRATION TRENCH.
4. EXCAVATION FOR THE INFILTRATION TRENCH SHALL BE PERFORMED WITH EQUIPMENT THAT WILL NOT COMPACT THE BOTTOM OF THE BED AREA.
5. INFILTRATION TRENCHES SHALL BE KEPT CLEAN OF SOIL/SEDIMENT DURING THE INSTALLATION PROCESS. IF INSPECTION INDICATES THAT SOIL HAS ENTERED THE INFILTRATION TRENCH, THEN APPROPRIATE MEASURES (IE CLEANING OF SOIL FROM FABRIC/STONE ETC. AND REPLACEMENT OF FABRIC/STONE) SHALL BE ADDRESSED.
6. AFTER INFILTRATION TRENCH IS INSTALLED, ALL HEAVY CONSTRUCTION EQUIPMENT SHALL BE RESTRICTED FROM THE TRENCH AREA TO ELIMINATE IMPACTS THAT MAY COMPROMISE IT. IN THE EVENT ANY IMPACTS COMPRISE THE FUNCTIONALITY OF THE INFILTRATION TRENCH, IT MUST BE IMMEDIATELY REPAIRED OR REPLACED TO DESIGN SPECIFICATIONS.

TRENCH DIMENSIONS:

FINAL TRENCH DIMENSIONS MAY VARY ACCORDING TO SITE CONDITIONS BUT FINAL DIMENSIONS MUST PROVIDE THE REQUIRED TRENCH VOLUME (LENGTH * WIDTH * DEPTH) AND BE APPROVED BY THE TOWNSHIP.