

ORDINANCE NO. 142-2012

AN ORDINANCE OF THE TOWNSHIP OF CENTRE, BERKS COUNTY, PENNSYLVANIA, AMENDING ORDINANCE NO. 124-2008 OF THE TOWNSHIP OF CENTRE, ENTITLED "SCHUYLKILL RIVER WATERSHED STORMWATER MANAGEMENT ORDINANCE", BY ADDING THERETO QUANTITY EXCEPTIONS TO THE STORMWATER MANAGEMENT REQUIREMENTS FOR CERTAIN SMALL PROJECTS AND ADDING STORMWATER MANAGEMENT IMPLEMENTATION PROCEDURES FOR SUCH EXEMPTIONS

BE IT ENACTED by the Board of Supervisors of the Township of Centre, Berks County, Pennsylvania, and IT IS HEREBY ENACTED AND ORDAINED by the authority of the same as follows:

Section 1. Subsection 402(a) of the Stormwater Ordinance is hereby supplemented by adding thereto the following new Subsection (4):

(4) Small Projects. Regulated Activities that create disconnected Impervious Areas smaller than one thousand (1,000) square feet are exempt from the Stormwater Management Site Plan preparation requirements of this Ordinance; provided, however if the Township Code Officer determines an exception is detrimental to or has an adverse impact on roadways, adjoining properties, streams or waterways of the Commonwealth of Pennsylvania, such exemption may not be applied and such new impervious area shall be subject to all other requirements set forth in this Stormwater Ordinance.

Small projects that utilize the exemption under this Subsection 402(a)(4) shall be required to comply with the Stormwater Management Implementation Procedures for Small Projects Meeting the Land Cover Exemption Criteria for construction projects that result in less than one thousand (1,000) square feet of new impervious area (including but not limited to building footprint, driveway, sidewalks and parking areas) or less than five thousand (5,000) square feet of earth disturbance, as set forth in Appendix H attached hereto and made a part hereof. The Township may inspect the subject property from time to time, and if such property is not in compliance with such procedures, the property owner shall be required to bring such property into compliance at the property owner's sole cost and expense.

For small projects that utilize the exemption under this Subsection 402(a)(4), it is the property owner's responsibility to comply with the Stormwater Management Implementation Procedures for Small Projects Meeting the Land Cover Exemption Criteria set forth in Appendix H attached hereto and made a part hereof.

Section 2. Subsection 403(a)(6) of the Stormwater Ordinance is hereby amended in its entirety so as to hereafter read as follows:

(6) Regulated Activities that create disconnected Impervious Areas smaller than one thousand (1,000) square feet are exempt from the Stormwater Maintenance Site Plan preparation requirements of this Ordinance pursuant to the terms and conditions set forth in Subsection 402(a)(4) of this Ordinance.

The Stormwater Ordinance is hereby supplemented by adding thereto the following new Appendix H:

Section 3. The Stormwater Ordinance is hereby supplemented by adding thereto the following new Appendix H:

## **APPENDIX H**

### **STORMWATER MANAGEMENT IMPLEMENTATION PROCEDURES FOR SMALL PROJECTS MEETING THE LAND COVER EXEMPTION CRITERIA OF SUBSECTION 402(a)(4)**

#### **What are the Act 167 stormwater management requirements?**

Pennsylvania Act 167 was authorized on October 4, 1978 (32 P.S., P.L. 864) and gave Pennsylvania Municipalities the power to regulate activities that affect stormwater runoff and surface and groundwater quantity and quality.

#### **Who is affected by these requirements?**

The Act 167 stormwater management requirements affect all development in the Township. Construction projects that result in less than one thousand (1,000) square feet of new impervious area (including but not limited to building footprint, driveway, sidewalks and parking areas) or less than five thousand (5,000) square feet of earth disturbance are not required to submit formal drainage plans to the Township or the County; however, they are still required to address water quality and groundwater recharge criteria specified in this Appendix H.

#### **Do I require professional services to meet these requirements?**

This Appendix H has been developed to assist the individual property owner in meeting the required water quality and groundwater recharge goals of this Ordinance. If the requirements presented in this Appendix H are followed, the property owner will not require professional services to comply with these water quality and groundwater recharge goals.

#### **What do I need to send to the Township?**

Even though a formal drainage plan is not required for such projects, property owners are required to follow the requirements of this Appendix H. Property owners shall be required to

submit to the contractor prior to commencement of construction 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 following information:

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

**Determination of Recharge Volume for Small Projects as defined in Subsection 402(a)(4)**

The amount of recharge volume that should be provided can be determined using the following computation:

$Re_v = (I) \times \text{impervious area (square feet)} / (12 \text{ in/ft}) = \text{Cubic Feet}$
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Where:

- I = infiltration requirements (in inches.)
- I = 0.6 inches (for most places in Centre Township, therefore use 0.6)

Example Recharge Volume:

**STEP 1** – Determine Total Impervious Surfaces.

**STEP 2** – Determine Required Recharge (Infiltration) Volume ( $Re_v$ ) using the formula set forth in Determination of Recharge Value above.

**STEP 3** – Sizing of Select Infiltration Method

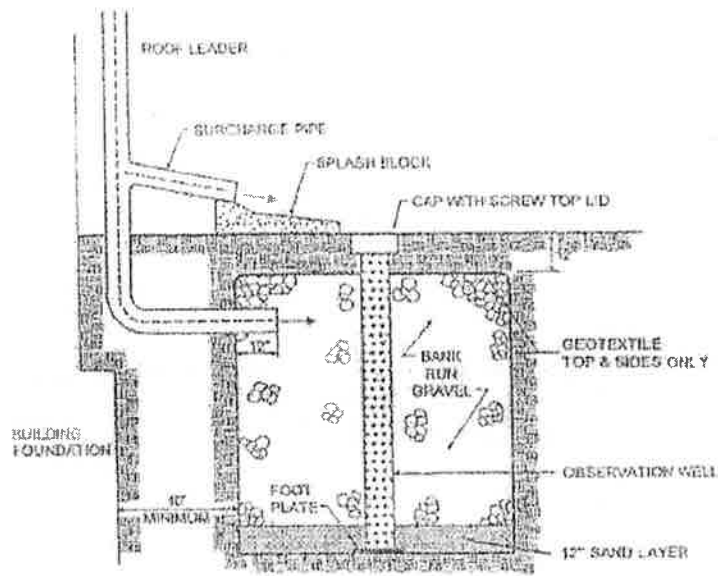
The following pages show several methods of infiltrating stormwater runoff from impervious areas. Their appropriateness depends on the amount of infiltration volume required and the amount of land available. More than one method can be implemented on a site, depending on site constraints. Dry wells should be used only for receiving runoff from roof drains. Infiltration trenches are appropriate for receiving runoff from driveways, sidewalks or parking areas. Other methods of control, such as rain barrels and rain gardens, may be appropriate if they satisfy the volume requirements.

**Dry Wells**

Dry wells are effective methods of infiltrating runoff from roof leaders. These facilities should be located a minimum of ten (10) feet from the building foundation to avoid seepage problems. A dry well can be either a structural prefabricated chamber or an excavated pit filled with aggregate. Construction of a dry well should be performed after all other areas of the site are

stabilized to avoid clogging. During construction, compaction of the subgrade soil should be avoided and construction should be performed with only light machinery. Depth of dry wells in excess of three and one-half (3-1/2) feet should be avoided. Gravel fill should be an average one and one-half to three (1.5 – 3.0) inches in diameter. Dry wells shall be inspected at least four (4) times annually as well as after large storm events.

**FIGURE B-1**  
**TYPICAL DRY WELL CONFIGURATION**



Source: Maryland Stormwater Design Manual

Example Sizing:

**STEP 1** – Determine Total Impervious Surfaces

**STEP 2** – Determine Required Recharge (Infiltration) Volume ( $Re_v$ ) using the formula set forth in Determination of Recharge Value above.

**STEP 3** – Sizing of Select Infiltration Method

Volume of facility = Depth times width times Length .

Volume of facility must account for assumed forty percent (40%) void ratio in gravel bed.

**EXAMPLE**

**STEP 1:** Suppose proposed impervious surface = five hundred (500) square feet; provide stormwater management under required stormwater management procedures.

**STEP 2:** Required Recharge (Infiltration) Volume ( $Re_v$ ) is determined using the formula set forth in Determination of Recharge Value above.

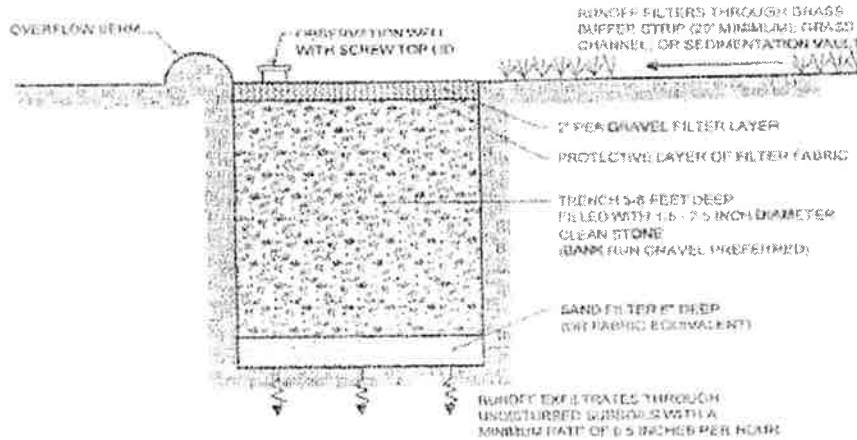
$$Re_v = 0.6 \text{ inches} \times 500 \text{ square feet} / 12 \text{ inches per foot} = 25 \text{ cubic feet}$$

**STEP 3:** Facility volume =  $Re_v / 0.40$  (accounting for void ratio in bed). Therefore, the proposed facility volume =  $25 / 0.40 = 63$  cubic feet.

**Infiltration Trenches**

An infiltration trench is a long, narrow, rock-filled trench with no outlet that receives stormwater runoff. Runoff is stored in the void space between the stones and infiltrates through the bottom and into the soil matrix. Infiltration trenches perform well for removal of fine sediment and associated pollutants. Pretreatment using buffer strips, swales or detention basins is important for limiting amounts of coarse sediment entering the trench which can clog and render the trench ineffective.

**FIGURE B-2  
TYPICAL INFILTRATION TRENCH CONFIGURATION**



Source: Maryland Stormwater Design Manual

Example Sizing:

**STEP 1:** Suppose proposed impervious surface = five hundred (500) square feet; provide stormwater management under required stormwater management procedures.

**STEP 2:** Required Recharge (Infiltration) Volume ( $Re_v$ ) is determined using the formula set forth in Determination of Recharge Value above.

$$Re_v = 0.6 \text{ inches} \times 500 \text{ square feet} / 12 \text{ inches per foot} = 25 \text{ cubic feet}$$

**STEP 3: Sizing of Select Infiltration Method**

Required facility volume =  $Re_v / 0.40$  (accounting for void ratio in bed). Therefore, the proposed facility volume =  $25 / 0.40 = 63$  cubic feet.

Set  $D = 2$  feet; determined required surface area of trench

$63 \text{ cubic feet} / 2 \text{ feet} = 32 \text{ square feet}$

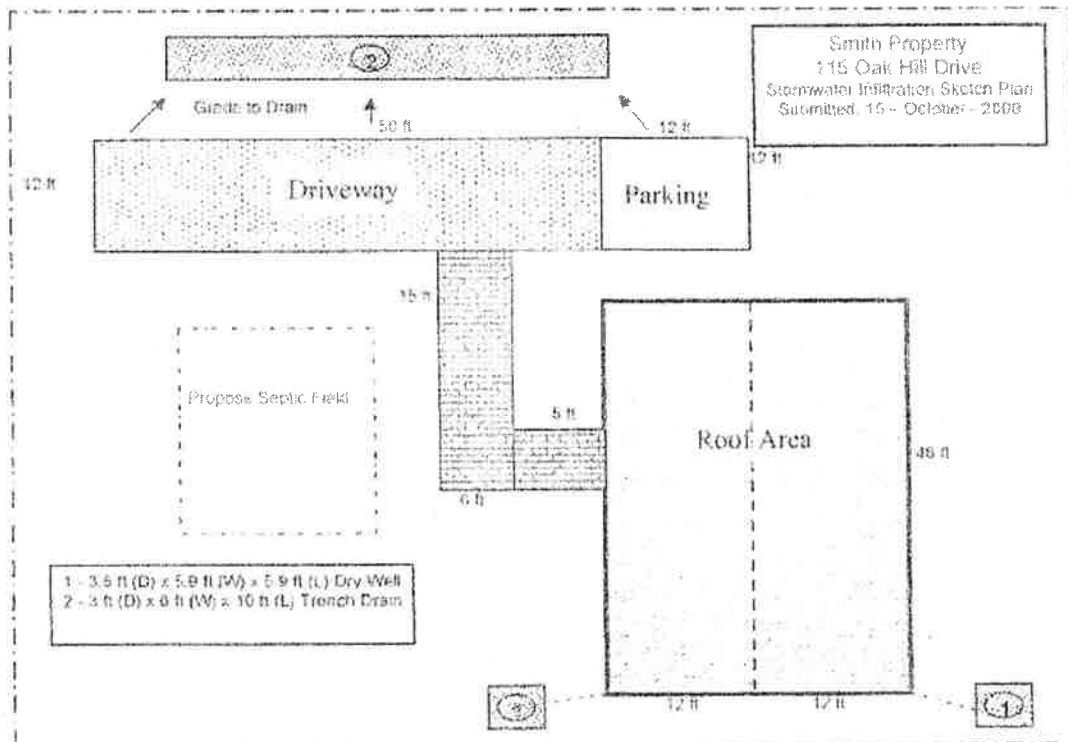
The width of the trench should be greater than two (2) times its depth ( $2 \times D$ ); therefore, in this example, a trench width of 4 feet is selected;

Determine trench length:  $L = 32 \text{ square feet} / 4 \text{ feet} = 8 \text{ feet}$

Final trench dimensions: 2 feet ( $D$ ) x 4 feet ( $W$ ) x 8 feet ( $L$ )

**FIGURE B-3**

**SAMPLE SITE SKETCH PLAN**



Source: Maryland Stormwater Design Manual

Section 4. Severability. The provisions of this Ordinance shall be severable, and if any of

its provisions shall be held to be unconstitutional, illegal or invalid, such decision shall not affect the validity of any of the remaining provisions of this Ordinance. It is hereby declared as a legislative intent that this Ordinance would have been adopted had such unconstitutional, illegal, or invalid provision not been included herein.

Section 5. Repealer. All ordinances or parts of ordinances which are inconstistence herewith are hereby repealed insofar as they are inconsistent with the provisions hereof.

Section 6. Effective Date. This Ordinance shall become effective five (5) days from the date of enactment hereof.

DULY ENACTED AND ORDAINED this 9<sup>th</sup> day of April, 2012.

BOARD OF SUPERVISORS OF THE  
TOWNSHIP OF CENTRE,  
BERKS COUNTY, PENNSYLVANIA

By: Ray L. L...  
Chairman

By: Orl W...  
Supervisor

By: \_\_\_\_\_  
Supervisor

Attest:

Deanna J...  
Secretary

[SEAL]