

## ELK CREEK TOWNSHIP

### Small Project Stormwater Management Application

Per Elk Creek Township's Act 167 Stormwater Management Ordinance, a stormwater management plan is required whenever more than 2,500 square feet of impervious surface are proposed. Impervious surfaces are areas that prevent the infiltration of water into the ground and shall include, but not be limited to, roofs, patios, garages, storage sheds and similar structures, and any new streets or sidewalks.

To Calculate Impervious Surfaces Please Complete This Table					
Surface Type	Length (feet)	X	Width (feet)	=	Proposed Impervious Area
Building (area per downspout)		X		=	
		X		=	
		X		=	
		X		=	
Driveway		X		=	
		X		=	
		X		=	
Parking Areas		X		=	
		X		=	
		X		=	
Patios/Walks		X		=	
		X		=	
		X		=	
		X		=	
Other		X		=	
		X		=	
		X		=	
<b>Total Impervious Surface Area to be managed (sum of all areas)</b>					

**If the Total Impervious Surface Area is LESS THAN 2,500 Square Feet, please read, acknowledge and sign below.**

**If the Total Impervious Surface Area EXCEEDS 2,500 Square Feet, complete the remainder of the Application.**

Based Upon the information you have provided a **Stormwater Management Plan IS NOT required** for this regulated activity. Elk Creek Township may request additional information and/or SWM for any reason.

Property Owner Acknowledges that submission of inaccurate information may result in a stop work order or permit revocation. Acknowledgement of such is by signature below. I declare that I am the owner or owner's legal representative. I further acknowledge that the information provided is accurate and employees of Elk Creek Township are granted access to the above described property for review and inspection as may be required.

**CREDITS**

**Credit 1: DISCONNECTION OF IMPERVIOUS AREA**

When runoff from impervious areas is directed to a pervious area that allows for infiltration, filtration, and increased time of concentration, all or parts of the impervious areas may qualify as Disconnected Impervious Area (DIA). Using the criteria below, determine the portion of the impervious area that can be excluded from the calculation of total impervious area.

**Criteria:** An impervious area is considered to be completely or partially disconnected if it meets the requirements listed below

- rooftop area draining to a downspout is ≤500 sf
- paved area draining to a discharge is ≤1,000 sf
- flow path of paved impervious area is not more than 75'
- soil at discharge is not designated as hydrologic soil group "D"
- flow path at discharge area has a positive slope of ≤5%
- gravel strip or other spreading device is required at paved discharges.

Length of Pervious Flow Path from discharge point * (ft)	DIA Credit Factor
0 – 14	1.0
15 – 29	0.8
30 – 44	0.6
45 – 59	0.4
60 – 74	0.2
75 or more	0

\* Flow path cannot include impervious surfaces and must be at least 15 feet from any impervious surfaces.

Calculate DIA Credit & Required Capture Volume									
Surface Type	Proposed Impervious Area (from previous sheet)	X	DIA Credit Factor	=	Impervious Area to be managed	÷	6	=	Required Capture Volume (ft <sup>3</sup> )
Building (area per downspout)		X		=		÷	6	=	
		X		=		÷	6	=	
		X		=		÷	6	=	
		X		=		÷	6	=	
Driveway		X		=		÷	6	=	
		X		=		÷	6	=	
		X		=		÷	6	=	
Parking Areas		X		=		÷	6	=	
		X		=		÷	6	=	
		X		=		÷	6	=	
Patios/Walks		X		=		÷	6	=	
		X		=		÷	6	=	
		X		=		÷	6	=	
		X		=		÷	6	=	
Other		X		=		÷	6	=	

		X		=		÷	6	=	
		X		=		÷	6	=	
<b>Total Req'd Capture Volume</b>									

**Credit 2: TREE PLANTING**

Perhaps the best BMP is a tree as they intercept rainfall, increase evapotranspiration and increase time of concentration. A portion of the required capture volume can be reduced provided the criteria are met.

**CREDITS**

Deciduous Trees	Evergreen Trees
6 ft <sup>3</sup> per tree planted	10 ft <sup>3</sup> per tree planted

**Criteria**

To receive credit for planting trees, the following must be met:

- Trees must be native species (see below), minimum 1" caliper tree and 3 feet tall shrub (min).
- Trees shall be adequately protected during construction.
- Trees shall be maintained until redevelopment occurs.
- No more than 25% of the required capture volume can be mitigated through the use of trees.
- Dead trees shall be replaced within 12 months.
- Non-native species are not applicable.

	<b>Req'd Capture Volume (ft<sup>3</sup>)</b>
-	
	<b>Tree Planting Credit (ft<sup>3</sup>)</b>
	<b>Capture Volume to be managed (ft<sup>3</sup>)</b>

**Sizing of BMP**

	How much of the Volume will you manage with a Rain Garden?
+	
	How much of the Volume will you manage with a Sump or Trench?
	<b>Capture Volume to be managed (ft<sup>3</sup>)</b>

Enter the volumes into the **Small Project SWM Plan Worksheet** on the next sheet.

**Native Species Trees (Common Name)**

- |                                      |   |
|--------------------------------------|---|
| - Blackgum                           | - Oak, (white, swamp white, scarlet, pin, red, black) |
| - Cucumber magnolia                  | - Dogwood (silky or red osier)                        |
| - Hophornbeam                        | - Tuliptree   |
| - Maple, (sugar, red or silver)      | - Willow, black                                       |
| - Pine, (pitch or eastern white)     | - Chokeberry (red or black)                           |
| - Ironwood                           | - Basswood, American                                  |
| - Hickory, sweet pignut or shag-bark | - Serviceberry, (downy or shadbush)                   |
| - Sycamore, American                 | - Elderberry  |
| - Cotton-wood, eastern               | - Witch hazel   |
| - Aspen, big-tooth or quaking        | - Mountain laurel                                     |
| - Cherry, black                      |   |

## Small Project SWM Plan Worksheet

Based upon the information you have provided a **Stormwater Plan IS Required** for this development activity. The Stormwater Management Ordinance developed through the *Erie County Act 167 Stormwater Management Plan* regulates compliance requirements for Stormwater Management in this jurisdiction. A complete copy of the Plan can be found on the Erie County Planning Department website (<http://www.eriecountyplanning.org>) which contains the Model Ordinance.

Regulated activities shall be conducted only after Elk Creek Township approves a stormwater management plan. The *Erie County Act 167 Stormwater Management Plan* will assist you in preparing the necessary information and plans for Elk Creek Township to review and approve. **This document will constitute an approved plan if all of the relevant details are to be installed in their entirety AND no part of the stormwater system adversely affects any other property, nor adversely affect any septic systems or drinking water wells on this, or any other, parcel.** Alternative system proposed require a plan will need to be submitted to Elk Creek Township for approval. A design by a qualified professional may be required for more complex sites.

### PLEASE INITIAL BELOW TO INDICATE THE STORMWATER MANAGEMENT PLAN FOR THIS SITE

- Minimum Control #1 Erosion & Sediment Pollution Control
- Minimum Control #2: Source Control of Pollution
- Minimum Control #3: Preservation of Natural Drainage Systems and Outfalls

The relevant details from *Erie County Act 167 Stormwater Management Plan* will be installed in their entirety AND the system will be located as not to adversely affect other property, nor any septic systems or drinking water wells on this, or any other, parcel.

To meet this requirement, the following will be installed and maintained:

Capture Volume to be managed (ft <sup>3</sup> )		Conversion	Surface Area of BMPs (ft <sup>2</sup> )
By Rain Garden 6" ponding; 2' soil depth	x	1.20	
Dry Well or Infiltration Trench 2½' aggregate depth	x	1.25	
Total		Total	

In lieu of meeting the above, an alternative and/or professional design is attached for approval AND the system will be located as not to adversely affect other property, any septic systems or drinking water wells on this, or any other, parcel.

#### Site Sketch Plan showing:

- Property lines with dimensions
- Proposed buildings with dimensions
- Proposed impervious surfaces with dimensions
- Proposed septic system, if applicable
- Proposed well site, if applicable
- Proposed stormwater management system(s)

#### Operation and Maintenance Agreement

**Condition on approval** - The stormwater management plan must be fully implemented prior to a request for final inspection of the building or zoning permit.

**Acknowledgement** - By executing below, the Owner acknowledges the following:

- I declare that I am the owner of the property.
- The information provided is accurate.
- I further acknowledge that municipal representatives are granted access to the above described

property for review and inspection as may be required.

Owner

Date:

\_\_\_\_\_

\_\_\_\_\_

**APPENDIX E – RELEASE RATE MAP**