

Section 3

Credits

Credit 1: DISCONNECTION OF IMPERVIOUS AREA

When runoff from impervious area is directed to a pervious area that allows for infiltration, filtration, and increased time of concentration, all or parts of the impervious area may qualify as Disconnected Impervious Area (DIA). DIA can reduce the volume of stormwater that needs to be managed. If the criteria listed below can be met, use this worksheet to calculate the DIA Credit and determine the portion of the impervious area that can be excluded from the calculation of impervious area to be managed for stormwater control.

Criteria

An impervious area is considered to be completely, or partially, disconnected if it meets the following:

- Flow path at the discharge area has a positive slope of $\leq 5\%$
- Soil at discharge is not classified as hydrologic soil group "D"
- Rooftop area draining to a single downspout is $\leq 500 \text{ ft}^2$
- Paved area draining to a discharge is $\leq 1,000 \text{ ft}^2$
- Flow path of paved impervious area is not more than 75'
- A gravel strip or other spreading device is used 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 is the length from the discharge to the nearest property line or channelized flow (measured along the ground slope). Pervious flow path 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	÷		=	Required Capture Volume (ft ³)
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	=	
Patios/Walks		X		=		÷	6	=	
		X		=		÷	6	=	
		X		=		÷	6	=	
		X		=		÷	6	=	
Other		X		=		÷	6	=	
		X		=		÷	6	=	
		X		=		÷	6	=	
Total Required Capture Volume									

Credit 2: TREE PLANTING

Trees provide many stormwater benefits such as intercepting rainfall, increasing evapotranspiration and increasing time of concentration. The total volume of stormwater to be managed can be further reduced by planting new trees. Provided the criteria below are met, the Total Required Capture Volume can be reduced per the following table:

Deciduous Trees	Evergreen Trees
6 ft ³ per tree planted	10 ft ³ per tree planted

Criteria

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

- Trees must be native species (see list below), Non-native species are not eligible
- Trees shall be a 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.

Native Species Trees (Common Name)

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

		Required Capture Volume (ft³)
-		- Tree Planting Credit (ft³)
		= Capture Volume to be Managed by Structural BMPs (ft³)

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 Dry Well or Infiltration Trench?
		Capture Volume to be managed (ft³)

Enter these volumes into the **Small Project SWM Plan Worksheet** on the following page.

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 Venango County's Act 167 County-Wide Stormwater Management Plan (Plan) regulates compliance requirements for Stormwater management in this jurisdiction. A complete copy of the Plan can be obtained from the County Planning office.

Development activities shall begin only after _____ (municipality) approves a stormwater management plan. The Plan will assist you in preparing the necessary information and plans for _____ (municipality) 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 affects any septic systems or drinking water wells on this, or any other, parcel.** If an alternative system is to be used a plan will need to be submitted to _____ (municipality) for approval. A design by a qualified professional may be required for more complex sites.

PLEASE INITIAL EACH APPLICABLE BOX BELOW TO INDICATE THE STORMWATER MANAGEMENT PLAN FOR THIS SITE

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

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The relevant details from Venango County's Act 167 County-Wide 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 ³)			Conversion	Surface Area of BMPs (ft ²)
	By Rain Garden 6" ponding; 2' soil depth	x	1.20	
	Dry Well or Infiltration Trench 2½' aggregate depth	x	1.25	
	Total		Total	

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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.

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Site Sketch Plan showing (May Use Attached Sheet):

- 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)

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Operation and Maintenance Agreement

Condition on Approval – The Stormwater Management Plan must be fully implemented prior to a request for final inspection of proposed structures or issuance of a zoning permit.

Acknowledgement – By executing below, the Owner acknowledges the following:

- I hereby declare that I am the Property Owner, or Owner's Representative
- The information provided on this application is accurate to the best of my knowledge. I understand that submission of inaccurate information may result in a stop work order and/or revocation of permit(s).
- Municipal representatives are hereby granted access to the above described property as may be required for review and inspection of this project

Applicant Signature: _____

Date: _____

County SWM Administrator: _____

Date: _____

Municipal Approval: _____

Date: _____

Administrative Flow Chart for the Stormwater Management Program

