APPENDIX R-9
VEGETATIVE FILTER STRIP
FOR DISCONNECTED IMPERVIOUS COVER CALCULATIONS
FOR DEVELOPMENT PERMITS

DRAINAGE AREA AND WATER QUALITY VOLUME DATA:

Drainage Area (DA)	_____ ac.		
Total Site Percent Impervious Cover (IC)	_____ %	_____ ac.	
Capture Depth (CD)	_____ in.		
Total Site Required Water Quality Volume (WQV = CD*DA*3630)	_____ cf.		

VEGETATIVE FILTER STRIP CALCULATIONS:

	Required		Provided	
Drainage Area to Proposed Vegetative Filter Strip	_____ ac.			
Impervious cover of area treated by Vegetative Filter Strip (Treated IC)	_____ ac.			
IAF = Treated IC / IC	maximum 1.0		_____	
Size of Vegetative Filter Strip required per ECM 1.6.7F (A_{ecm})	_____ ac.			
Size of proposed Vegetative Filter Strip (A_{vfs})	_____ ac.			
A_{vfs} / A_{ecm}	maximum 1.0		_____	

HYDRAULIC LOADING RATE DATA:

Required Hydraulic Loading Rate per ECM 1.6.7F (HLR_{ecm})	maximum 0.05	cfs./ft.	_____	cfs./ft.
Hydraulic Loading Rate provided (HLR_{vfs})	maximum 0.15	cfs./ft.	_____	cfs./ft.
HLRvfs / HRLecm	maximum 1.0		_____	

WATER QUALITY CREDIT:

Impervious Area Factor (IAF)	maximum 1.0		_____
BMP Design Factor (BMPDF = A_{vfs} / A_{ecm} * HLR_{vfs} / HLR_{ecm})	maximum 1.0		_____
Water Quality Credit (WQC = IAF * BMPDF)	maximum 1.0		_____
Water Quality Volume Reduction (WQV * WQC)			_____ cf.

Replaces Previous Appendix R-9

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VEGETATIVE FILTER STRIP CALCULATIONS
FOR DEVELOPMENT PERMITS

DRAINAGE AREA AND WATER QUALITY VOLUME DATA:

Drainage Area (DA)	_____ ac	
Drainage Area Impervious Cover (IC)	_____ %	_____ ac
Capture Depth (CD)	_____ in	
Total Site Required Water Quality Volume (WQV=CD*DA*3630)	_____ cf	

VEGETATIVE FILTER STRIP CALCULATIONS:

Drainage Area to Proposed Vegetative Filter Strip	_____ ac	
Impervious cover of area treated by Vegetative Filter Strip (Treated IC)	_____ ac	
Soil Type (Type A, B, C, Amended C, or Amended D)	_____	
	Required	Provided
Size of Vegetative Filter Strip per ECM 1.6.7(B) - Table B-1	_____ ac	_____ ac
Width of Vegetative Filter Strip (VFS_{width})		_____ ft
Hydraulic Loading Rate ($HLR_{VFS} = Q_{peak} / VFS_{width}$)		_____ cfs/ft

WATER QUALITY CREDIT:

Impervious Area Factor (IAF = Treated IC / IC)	maximum 1.0	_____
Percent Infiltration Provided by VFS (I_{VFS}) per ECM 1.6.7.5(B) - Table B-2		_____ %
BMP Design Factor (BMPDF)		
For HLR<0.05 cfs/ft: BMPDF = I_{VFS} / 65	maximum 1.0	_____
For HLR>0.05 and <0.15 cfs/ft: BMPDF = (I_{VFS} / 65)*(0.05/HLR_{VFS})	maximum 1.0	_____
Water Quality Credit (WQC = IAF * BMPDF)	maximum 1.0	_____
Water Quality Volume Reduction (WQV * WQC)		_____ cf