



Date: _____
 Permit #: _____ (Completed by Town)
 Project Name : _____
 Project Address: _____
 Property Owner and Contact: _____
 Property Owner Address: _____
 Email Address: _____
 Phone Number: _____

Refer to "A User's Guide to Environmental Site Review" last revised February 2022 to Complete this form

Ocean City Critical Area 10% Rule Worksheet
 Standard Application Process

Step 1: Calculating Existing and Proposed Site Impervious

A. Calculate Percent Imperviousness
 Site Area within the Critical Area IDA = A SF

B. Site Impervious Surface Area, Existing and Proposed

	(1) Existing (SF)	(2) Proposed (SF)
Driveway	<input type="text"/>	<input type="text"/>
Parking	<input type="text"/>	<input type="text"/>
Sidewalk/paths	<input type="text"/>	<input type="text"/>
Roof	<input type="text"/>	<input type="text"/>
Deck	<input type="text"/>	<input type="text"/>
Pools	<input type="text"/>	<input type="text"/>
Dumpster	<input type="text"/>	<input type="text"/>
Water meter	<input type="text"/>	<input type="text"/>
Transformer	<input type="text"/>	<input type="text"/>
Light pole base	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
Pervious Gravel, Pavers, Asphalt (50% of Total Area)	<input type="text"/>	N/A
Total Impervious surface area	<input type="text" value="0"/>	<input type="text"/>

C. Non-structural BMP's Applied to the Site Disconnected Impervious Area (SF)

a.	<input type="text"/>	<input type="text"/>
b.	<input type="text"/>	<input type="text"/>
c.	<input type="text"/>	<input type="text"/>
Total Disconnected Impervious Area (SF)		<input type="text" value="0"/>

D. Adjusted Proposed Impervious Surface Step B (2) minus total of Step C

E. Impervious (I) calculations

Existing Impervious - I_{pre} = $\frac{\text{Impervious Surface/Site Area}}{\#DIV/0!}$

Proposed Impervious - I_{post} = $\frac{\text{Adjusted Proposed Impervious/Site Area}}{\#DIV/0!}$

Define development category (circle)

- 1 Redevelopment: Existing imperviousness greater than 15% I (go to step 2A)
- 2 New Development: Existing imperviousness less than 15% I (go to Step 2B)
- 3 Single Lot Residential Single lot being developed SF and more than 250SF meet 10% rule with CAM Calcs.

STEP 2: Calculated the Predevelopment Phosphorous Pollution Load (Lpre)

A. Redevelopment
 $L_{pre} = (Rv) (C) (A) (.000187)$

$(Rv) = .05 + (.009(I_{pre}))$ (Rv) #DIV/0!

$L_{pre} =$ #DIV/0!

Where: L_{pre} = Average annual load of total phosphorus exported for site prior to development (lb/year)
 Rv = Runoff coefficient, which expresses the fraction of rainfall which is converted into runoff
 I_{pre} = predevelopment (existing) site imperviousness
 C = Flow-weighted mean concentration of the pollutant (total P in urban runoff) (mg/l=.3mg/l)
 A = Area of site within the IDA (SF)
 (.000187 = Includes regional constants and unit conversions factors

B. New Development

$L_{pre} = (.5) (A/43560)$

$L_{pre} =$ 0

Where: L_{pre} = Average annual load of total phosphorus exported for site prior to development (lb/year)
 0.5 = Annual total Phosphorus load from undeveloped land (lbs/acre/year)
 A = Area of the site within the Critical Area IDA (SF)

STEP 3: Calculate the Post-Development Load

A New Development and Re- Development:

$L_{post} = (RV) (C) (A) (.000187)$

$(Rv) = .05 + (.009(I_{post}))$ (Rv) #DIV/0!

$L_{post} = (Rv) (C) (A) (.000187)$

$L_{post} =$ #DIV/0!

Where: L_{post} = Average annual load of total phosphorus exported for site prior to development (lb/year)
 Rv = Runoff coefficient, which expresses the fraction of rainfall which is converted into runoff
 I_{post} = post development site imperviousness
 C = Flow-weighted mean concentration of the pollutant (total P in urban runoff) (mg/l=.3mg/l)
 A = Area of site within the IDA (SF)
 .000187 = Includes regional constants and unit conversions factors

STEP 4: Calculate the Pollutant Removal Requirements (RR)

Redevelop	10% Reduction Calculation = $.9 * (L_{pre})$	10% Reduction =	#DIV/0!
	RR = $L_{post} - 10\% \text{ reduction}$	RR =	#DIV/0!

New	10% Reduction Calculation = $.9 * (L_{pre})$	10% Reduction =	0
	RR = $L_{post} - 10\% \text{ reduction}$	RR =	#DIV/0!

Where: RR = Pollutant removal requirements (lbs/year of total phosphorus)
 L_{post} = average annual load of total phosphorus exported from the post-dev site (lbs/year)
 L_{pre} = Average annual load of total phosphorus exported from the site prior to develop (lbs/year)

Step 5: Identify Feasible Stormwater Control Measures (BMP)

Select BMP options using the screening matrices provided in Chapter 4 of the 2000 Maryland Stormwater Design Manual. Calculate the load removed for each option.

BMP Type	Lpost	*	BMPre	*	% of Site	=	LR	
							0	
							0	
							0	
							0	
							0	
							0	
							0	
							0	
							0	
							0	
							0	
Load removed LR (total)								0
Pollutant Removal Requirement (RR)								#DIV/0!

If the load removed is equal to or greater than the Pollutant removal requirements computed in Step 4, than the on-site BMP complies with the 10% rule. If not, More BMPs are required or Fee-in-lieu as followed:

RR - LR = Lbs/yerer, Fee-in-lieu (\$35,000lb per year) RR due #DIV/0!

\$35,000 * RR due Fee-in-lieu = #DIV/0!

