# Z-0006 - 2014



# PLANNING DIVISION

FEB 02 2015

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# **Project Description**

The Peninsula Pentecostals Rezoning of the 40.3± acre Greenmount Kirby Tract (Lots P-1, P-2 & P-3) contemplates development of a House of Worship, Day Care, Administration Offices, Ministry Support Apartment, Family Life Center, Accessory/Utility Structure, multi-purpose recreational fields, 480 car parking lot and associated drive aisles and sidewalks on the 24.8± acre Lot P-1. The Peninsula Pentecostals Rezoning of the 40.3± acre Greenmount Kirby Tract also contemplates a Commercial Mixed Use development on the 10.8± acre Lot P-2 and 4.7± acre Lot P-3. The 40.3± acre Greenmount Kirby Tract (Lots P-1, P-2 & P-3) is located on the northerly side of US Route 60 (Pocahontas Trail) near the corporate boundary between James City County and Newport News.

## **Existing Site Conditions**

Lot P-1 is 24.8± acres in size, half of which is wooded. The other half is in cropland. Lot P-1 is also encumbered by a high voltage electricity transmission line and appurtenant easement. The easement is maintained in a cleared condition. 15± acres of the Lot P-1 is anticipated to be disturbed as a part of this project. The western boundaries of Lot P-1 is the centerline of a tributary stream to Skiffes Creek. The northern boundary is the centerline of Skiffes Creek. There are wetlands and buffers upland and along the northern and western boundaries. The southern boundary is US Route 60 (Pocahontas Trail) a Community Character Corridor and the eastern boundary is the centerline of the 120' wide easement for the existing high voltage electricity transmission line.

Lot P-2 is 10.8 acres in size, 4.5± acres are wooded and 6.3± acres are open, in cropland. Lot P-2 is also encumbered by an high voltage electricity transmission line and appurtenant easement. The easement is maintained in a cleared condition.

Lot P-3 is 4.7± acres in size, 3.5± acres are wooded and 1.2± acres are open, in cropland. Part of Lot P-3 has been identified as corridor for the preferred alternative for the Skiffes Creek Connector (US Route 60 Realignment) project.

Lots P-2 and P-3 are bound on the west by Lot P-1, the north and erast by Skiffes Creek and south by US Route 60 (Pocahontas Trail) a Community Character Corridor.

Slopes vary from less than 2% across the cropland areas to 3:1 or steeper along embankments leading down to the streams. Elevations range from 16 to 60 feet above sea level.



## **Adjacent Area**

Adjacent property to the west, north and east of Lots P-1, P-2 and P-3 is part of Skiffes Creek and Skiffes Creek Reservoir. Erosion and sediment control measures will need to be designed to protect these sensitive lands from construction activities on Lots P-1, P-2 and P-3. Stormwater runoff from Lots P-1, P-2 and P-3 during and after construction will need to conform to water quality and water quantity design criteria defined by Code.

### Offsite Disturbed Area

No off-site disturbance is anticipated with this project.

### **Critical Erosion Areas**

Disturbance of steep slopes will be avoided to the extent practicable, other than the work necessary for stormwater BMPs discharge and sanitary sewer connection. Such disturbances will have protective covering applied immediately in order to accelerate stabilization as will constructed slopes 3:1 and steeper.

### **Demolition**

Demolition will involve clearing and grubbing the portion of Lots P-1, P-2 and P-3 as needed for construction.

### **Utilities**

The proposed buildings will be served by underground electric, telephone, sanitary, and gas utilities. The existing overhead utilities along U.S. Route 60 (Pocahontas Trail) will remain as will the existing overhead high voltage electricity transmission line.

# **Proposed Grading and Paving**

Lots P-1, P-2 and P-3 will be graded to direct stormwater runoff away from the proposed buildings to perimeter grass lined swales and BMPs.

# **Stormwater Management Considerations**

The site naturally drains south to north from US Route 60 to Skiffes Creek. This drainage pattern will be maintained to the extent practicable.



The buildings, parking areas, drive aisles and sidewalks will create 8.7± acres of impervious surfaces on Lot P-1. Additionally, 6± acres of woods and cropland will be converted into managed turf and landscaped areas. The stormwater runoff from these areas will need to conform to water quality and water quantity design criteria defined by Code. Multiple areas will be available to accommodate stormwater BMPs. Stormwater runoff from the constructed improvements will be conveyed via grass lined swales to the BMPs for quality improvement and quantity control prior to discharge to a stilling basin upstream of wetlands, thus dissipating the energy from the concentrated flow before discharging to the receiving channel, Skiffes Creek. The point of discharge to Skiffes Creek is located approximately 1,000 feet upstream of Skiffes Creek Reservior. At the point of discharge, the receiving channel is a mild gradient meandering channel, several feet wide, stable condition and within a broad, moderately wooded floodplain. Channel protection criteria will be as required by the minimum stadards published in section 9CAC25-870-66 Water Quantity of the Virginia Stormwater Management Regulations.

Two options are proposed to provide compliance with Code required water quality and water quantity discharge criteria. Exhibit A provides an option using several bioretention basins and an extended detention pond. The bioretention basins are proposed to be located in areas of the site suitable to treat most of the parking area and the building roof. Bioretention basins A, B, and C are located in drainage area #1 which covers most of the front half of the site. Drainage area #1 is 6.3± acres and will require all three basins because of the Code requirement limiting each bioretention cell to 2.5 acres of drainage area. Drainage area #2 is 4.0± acres and receives runoff from the middle of the parking lot and the building roof. Basin D is shown as a single bioretention basin and will need to be designed as two separate cells since the drainage area is larger than 2.5 acres. Drainage area #3 is 2.0 acres and covers the rear of the proposed building and part of the roof. Bioretention basins E and F are sized much larger than required since the contributing drainage area may change depending on roof drainage design. Overflow from all of the bioretention basins will be conveyed to the extended detention basin in the rear of the site via open channels or underground conduits. Exhibit B provides an option using wet ponds. Grass lined channels will convey the runoff from the improved areas wet ponds. A single wet pond near the rear of Lot P-1 is preferable, however, it may necessary to construct supplemental wet ponds around the front parking area in order to achieve the treatment shown in the VRRM Worksheet.

In both of these scenarios, a storm sewer system will convey discharge from the ponds' outlet control structures to a stilling basin located upland of the wetlands, requiring encroachment into the RPA buffer. Encroachment into the RPA buffer will be limited to construction of the BMP discharge structure and stilling basin.

Virginia Runoff Reduction Metho	od New Devel	opment Works	heet - v2.8 - June	2014	
To be used w/ 2011 BMP Standa					
Site Data	lao ana opoo				
Project Name: Peninsula Pentecosta	Lat D 1 Evhib	it A Diaretentian			
Date: 1/2015	LOLP-1 - EXIIID	ILA BIOTELETILIOTI			
Date: 1/2015					
	data input cells				
	calculation cells				
	constant values				
1. Post-Development Project & L	and Cover In	formation			
Constants					
Annual Rainfall (inches)	43				
Target Rainfall Event (inches)	1.00				
Phosphorus EMC (mg/L)	0.26		Nitrogen EMC (mg/L)	1.86	
Target Phosphorus Target Load (lb/acre/yr)	0.41		(g/L)		
Pj	0.90				
Land Cover (acres)					
,	A soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) undisturbed,					
protected forest/open space or reforested land	0.0000	0.0000	5.2700	0.0000	5.2700
Managed Turf (acres) disturbed, graded for	0.0000	0.0000	40,0000	0.0000	40,0000
yards or other turf to be mowed/managed	0.0000	0.0000	10.8600	0.0000	10.8600
Impervious Cover (acres)	0.0000	0.0000	8.6700	0.0000	8.6700
				Total	24.8000
Rv Coefficients					
NV Coefficients	A soils	B Soils	C Soils	D Soils	
Forest/Open Space	0.02	0.03	0.04	0.05	
Managed Turf	0.15	0.20	0.22	0.25	
Impervious Cover	0.95	0.95	0.95	0.95	
Importious cover	0.00	0.00	0.00	0.00	
Land Cover Summary					
Forest/Open Space Cover (acres)	5.2700				
Weighted Rv(forest)	0.0400				
% Forest	21%				
Managed Turf Cover (acres)	10.8600				
Weighted Rv(turf)	0.2200				
% Managed Turf	44%				
Impervious Cover (acres)	8.6700				
Rv(impervious)	0.95				
% Impervious	35%				
Total Site Area (acres)	24.8000				
Site Rv	0.44				
Post-Development Treatment Volume (acre-ft)	0.90				
Post-Development Treatment Volume (acte-it)	0.90				
feet)	39,336				
Post Development Load (TP) (lb/yr)	24.72		lopment Load (TN) (lb/yr)	176.81	1
Total Load (TP) Reduction Required (lb/yr)	14.55			110.01	

inage Area A Land Cover (acres) ist/Open Space (acres) iaged Turf (acres)	A soils 8 Soils 0.0000 0.0000	C Soils D Soils 0.0000 0.0000	Totals 0.0000	Land Cover Rv 0.00	ļ														
ervious Cover (acres)	0.0000 0.0000	8.6700 0.0000 Total	8.6700 16.6700	0.95		Post Develo	pment Treatme	ent Volume (ci	36287										
ply Runoff Reduction Practic	ces to Reduce Treatm	nent Volume & Post-E	Developmen	nt Load in Dra	Volume from	Å	Remaining	I	Phosphorus Load from	Untreated Phosphorus	Phonobonus	Pamalalan	1		Mitrogram	Nitrogen Load from Upstream RR Practices	Untreated	Miterana	Pamalalan
tice	Unit	Description of Credit	Credit	Credit Area (acres)	Upstream RR Practice (cf)	Runoff Reduction (cf)	Runoff Volume (cf)	Phosphorus Efficiency (%	Upstream RR Practices (lbs)	Phosphorus Load to Practice (lbs.)	Phosphorus Removed By Practice (lbs.)	Phosphorus Load (lbs.)	Downstream Treatment to be Employed		Nitrogen Efficiency (%)	RR Practices (lbs)	Nitrogen Load to Practice (lbs.)	Nitrogen Removed By Practice (lbs.)	Remaining Nitrogen Load (lbs.)
/egetated Roof				0.0000			0			0.00					1. Green R	oof	0.00		
Vegetated Roof #1 (Spec #5) Vegetated Roof #2 (Spec #5)	acres of green roof	45% runoff volume reduction 60% runoff volume reduction	0.45	0.0000	0	0	0	0	0.00	0.00	0.00	0.00			0	0.00	0.00	0.00	0.00
ooftop Disconnection			•												2 Impervio	us Surface Dis	connection		
Simple Disconnection to A/B Soils (Spec	impervious acres disconnected	50% runoff volume reduction d for treated area	0.50	0.0000	0	0	0	0	0.00	0.00	0.00	0.00			0	0.00	0.00	0.00	0.00
Simple Disconnection to C/D Soils (Spec	impervious acres disconnected	25% runoff volume reduction d for treated area	0.25	0.0000	0	0	0	0	0.00	0.00	0.00	0.00			0	0.00	0.00	0.00	0.00
To Soil Amended Filter Path as per cifications (existing C/D soils) (Spec #4) To Dry Well or French Drain #1	impervious acres disconnectes	50% runoff volume reduction d for treated area 50% runoff volume reduction	0.50	0.0000	0	0	0	0	0.00	0.00	0.00	0.00			0	0.00	0.00	0.00	0.00
roinfination #1) (Spec #8) To Dry Well or French Drain #2 (Micro- ration #2) (Spec #8)	impervious acres disconnected	d for treated area 90% runoff volume reduction	0.50	0.0000	0	0	0	25	0.00	0.00	0.00	0.00			15	0.00	0.00	0.00	0.00
ation #2) (spec #6) To Rain Garden #1 (Micro-Bioretention Spec #9)	impervious acres disconnected	d for treated area d 40% of volume captured	0.90	0.0000	0	0	0	25 25	0.00	0.00	0.00	0.00			15 40	0.00	0.00	0.00	0.00
To Rain Garden #2 (Micro-Bioretention (Spec #9)	impervious acres disconnected	80% runoff volume reduction for treated area based on tank size and	0.80	0.0000	0	0	0	50	0.00	0.00	0.00	0.00			60	0.00	0.00	0.00	0.00
To Rainwater Harvesting (Spec #6)	impervious acres captured	design spreadsheet (See Spec #6)	0.00	0.0000	0	0	0	0	0.00	0.00	0.00	0.00			0	0.00	0.00	0.00	0.00
To Stormwater Planter (Urban etention) (Spec #9, Appendix A)	impervious acres disconnected	40% runoff volume reduction d for treated area	0.40	0.0000	0	0	0	25	0.00	0.00	0.00	0.00			40	0.00	0.00	0.00	0.00
ermeable Pavement		1													3. Permeat	le Pavement			
Permeable Pavement #1 (Spec #7)	acres of permeable pavement - acres of "external" (upgradient) impervious pavement	+ (i) 45% runoff volume reduction	0.45	0.0000	0	0	0	25	0.00	0.00	0.00	0.00			25	0.00	0.00	0.00	0.00
Permeable Pavement #2 (Spec #7)	acres of permeable pavement		0.75	0.0000	0	0	0	25	0.00	0.00	0.00	0.00			25	0.00	0.00	0.00	0.00
rass Channel															4. Grass Cl	nannel			
a. Grass Channel A/B Soils (Spec #3)	impervious acres draining to grass channels turf acres draining to grass	20% runoff volume reduction	0.20	0.0000	0	0	0	15	0.00	0.00	0.00	0.00			20	0.00	0.00	0.00	0.00
	channels impervious acres draining to	20% runoff volume reduction	0.20	0.0000	0	0	0	15	0.00	0.00	0.00	0.00			20	0.00	0.00	0.00	0.00
b. Grass Channel C/D Soils (Spec #3)	grass channels turf acres draining to grass channels	10% runoff volume reduction 10% runoff volume reduction	0.10	0.0000	0	0	0	15 15	0.00	0.00	0.00	0.00			20	0.00	0.00	0.00	0.00
Grass Channel with Compost Amended Soils as per specs (see Spec #4)	impervious acres draining to grass channels	30% runoff volume reduction	0.30	0.0000	0	0	0	15	0.00	0.00	0.00	0.00			20	0.00	0.00	0.00	0.00
octo as per specs (see opec =+)	turf acres draining to grass channels	30% runoff volume reduction	0.30	0.0000	0	0	0	15	0.00	0.00	0.00	0.00			20	0.00	0.00	0.00	0.00
Dry Swale	impervious acres draining to dr	0													5. Dry Swa	e			
5.a. Dry Swale #1 (Spec #10)	swale	40% runoff volume reduction	0.40	0.0000	0	0	0	20	0.00	0.00	0.00	0.00			25	0.00	0.00	0.00	0.00
Ch Decoder C	turf acres draining to dry swale impervious acres draining to dr swale	e 40% runoff volume reduction ry 60% runoff volume reduction	0.40	0.0000	0	0	0	20 40	0.00	0.00	0.00	0.00			25 35	0.00	0.00	0.00	0.00
5.b. Dry Swale #2 (Spec #10)	turf acres draining to dry swale		0.60	0.0000	0	0	0	40	0.00	0.00	0.00	0.00			35	0.00	0.00	0.00	0.00
lioretention															6. Bioreten	tion			
a. Bioretention #1 or Urban Bioretention (Spec #9)	impervious acres draining to bioretention turf acres draining to	40% runoff volume reduction	0.40	0.0000	0	0	0	25	0.00	0.00	0.00	0.00			40	0.00	0.00	0.00	0.00
(open any	bioretention impervious acres draining to	40% runoff volume reduction	0.40	0.0000	0	0	0	25	0.00	0.00	0.00	0.00			40	0.00	0.00	0.00	0.00
6.b. Bioretention #2 (Spec #9)	bioretention turf acres draining to bioretention	80% runoff volume reduction 80% runoff volume reduction	0.80	6.4800	0	17877 3846	4469 962	50	0.00	14.02	12.62	1.40	8a. ED#1		60	0.00	100.33	92.30	8.03 1.73
nfiltration		- Land and and and and and and and and and													7. Infiltratio	in .			
7.a. Infiltration #1 (Spec #8)	impervious acres draining to infiltration	50% runoff volume reduction	0.50	0.0000	0	0	0	25	0.00	0.00	0.00	0.00			7. Intiltratio	0.00	0.00	0.00	0.00
(upon mu)	turf acres draining to infiltration	n 50% runoff volume reduction	0.50	0.0000	0	0	0	25	0.00	0.00	0.00	0.00			15	0.00	0.00	0.00	0.00
7.b. Infiltration #2 (Spec #8)	impervious acres draining to infiltration	90% runoff volume reduction	0.90	0.0000	0	0	0	25	0.00	0.00	0.00	0.00			15	0.00	0.00	0.00	0.00
	turf acres draining to infiltration	n 90% runoff volume reduction	0.90	0.0000	0	0	0	25	0.00	0.00	0.00	0.00			15	0.00	0.00	0.00	0.00
Extended Detention Pond	impervious acres draining to EU	D 0% runoff volume reduction	0.00	2.1900	4469	0	12021	15	1.40	4.74	0.92	5.22			8. Extende	B.03	nd 33.91	4.19	37.74
8.a. ED #1 (Spec #15)		0% runoff volume reduction	0.00	1.9800	962	0	2543	15	0.30	0.99	0.19	1.10			10	0.00	00.01	0.88	7.94
8.b. ED #2 (Spec #15)	turf acres draining to ED	was runnin volume reduction.						15							10	1.73	7.10		
	turf acres draining to ED impervious acres draining to EE		0.15	0.0000	0	0	0	15	0.00	0.00	0.00	0.00			10	1.73	7.10	0.00	0.00
			0.15	0.0000	0	0	0	15	0.00	0.00	0.00	0.00							0.00
Sheetflow to Filter/Open Space	impervious acres draining to ED  turf acres draining to ED  impervious acres draining to	D 15% runoff volume reduction 15% runoff volume reduction ;	0.15	0.0000	-	0	-		0.00	0.00	0.00	0.00			10 10 9. Sheetflo	0.00 0.00 w to Conservat	0.00 0.00 tion Area or Filt	0.00 0.00 eer Strip	0.00
Sheetflow to Filter/Open Space  Sheetflow to Conservation Area with A/B Soils (Spac #2)	impervious acres draining to E0 turf acres draining to ED impervious acres draining to conserved open space turf acres draining to conserved	D 15% runoff volume reduction 15% runoff volume reduction 75% runoff volume reduction for treated area d 75% runoff volume reduction	0.15	0.0000	-	0	-		0.00	0.00	0.00	0.00			10	0.00 0.00 w to Conservat	0.00 0.00 tion Area or Filt	0.00 0.00 er Strip	0.00
Sheetflow to Conservation Area with A/B Soils (Spec #2)	Impervious acres draining to EE turf acres draining to ED impervious acres draining to conserved open space turf acres draining to conserved acres draining to conserved open space impervious acres draining to conserved open space	D 15% runoff volume reduction 15% runoff volume reduction 75% runoff volume reduction for treated area d 75% runoff volume reduction for treated area 50% runoff volume reduction for treated area	0.15	0.0000	-	0	-		0.00	0.00	0.00	0.00			10 10 9. Sheetflo	0.00 0.00 w to Conservat	0.00 0.00 tion Area or Filt	0.00 0.00 eer Strip	0.00
Sheetflow to Conservation Area with A/B Scils (Spec #2)  Sheetflow to Conservation Area with C/D Scils (Spec #2)	impervious acres draining to ED turf acres draining to ED impervious acres draining to ED impervious acres draining to conserved open space turf acres draining to conserved open space impervious acres draining to conserved open space turf acres draining to conserved open space turf acres draining to conserved open space	15% runoff volume reduction     15% runoff volume reduction     15% runoff volume reduction     75% runoff volume reduction     75% runoff volume reduction     75% runoff volume reduction     15 for treated area     25% runoff volume reduction     15 for treated area     25% runoff volume reduction     15 for treated area     25% runoff volume reduction     25% runoff volume     35% runoff volume reduction	0.15 0.75 0.75 0.50	0.0000 0.0000 0.0000 0.0000 0.0000	0 0 0 0 0	0 0	0 0 0 0		0.00	0.00	0.00	0.00			10 10 9. Sheetflo 0 0	0.00 0.00 w to Conserved 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 er Strip 0.00 0.00	0.00 0.00 0.00 0.00
Sheetflow to Conservation Area with A/B Scils (Spec #2)  Sheetflow to Conservation Area with C/D Scils (Spec #2)	impervious acres draining to EE buf acres draining to ED impervious acres draining to ED impervious acres draining to conserved open space that acres draining to conserved open space that acres draining to conserved the space of the space that acres draining to conserved impervious acres draining to filter step.	15% runoff volume reduction     15% runoff volume reduction     15% runoff volume reduction     75% runoff volume reduction	0.75 0.75 0.75 0.50 0.50	0.0000 0.0000 0.0000 0.0000 0.0000	0	0 0 0 0 0	0 0 0 0 0 0		0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00			10 10 9. Sheetflo 0 0 0	0.00  v to Conservat  0.00  0.00  0.00  0.00  0.00  0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 er Strip 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
Sheetflow to Conservation Area with A/B Soits (Spec #2) Sheetflow to Conservation Area with C/D	impervious acres draining to ED but acres draining to ED but acres draining to ED impervious acres draining to ED conserved open space but acres draining to conserved open space impervious acres draining to conserved open space but acres draining to conserved open space impervious acres draining to conserved open space impervious acres draining to open space impervious acres draining to filter strip.	D 15% runoff volume reduction 15% runoff volume reduction 15% runoff volume reduction 15% runoff volume reduction for treated use 0.75% runoff volume reduction for treated use 50% runoff volume reduction for treated use 0.50% runoff volume reduction for treated use 50% runoff volume reduction for treated use 50% runoff volume reduction for treated use 50% runoff volume reduction for treated use	0.15 0.75 0.75 0.50 0.50 0.50	0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	0	0 0	0 0 0 0		0.00	0.00	0.00	0.00			10 10 9. Sheetflo 0 0	0.00 0.00 w to Conserved 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 er Strip 0.00 0.00	0.00 0.00 0.00 0.00
Sheetflow to Conservation Area with A/B Scils (Spec #2)  Sheetflow to Conservation Area with C/D Scils (Spec #2)	impervious acres draining to ED but acres draining to ED but acres draining to ED impervious acres draining to ED conserved open space but acres draining to conserved open space impervious acres draining to conserved open space but acres draining to conserved open space impervious acres draining to conserved open space impervious acres draining to open space impervious acres draining to filter strip.	15% runoff volume reduction     15% runoff volume reduction     15% runoff volume reduction     75% runoff volume reduction	0.75 0.75 0.50 0.50 0.50 0.50 R TREATED (ac	0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000  0.0000	0	0 0 0 0 0	0 0 0 0 0 0		0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00			10 10 9. Sheetflo 0 0 0	0.00  v to Conservat  0.00  0.00  0.00  0.00  0.00  0.00	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 er Strip 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
Sheetflow to Conservation Area with A/B Scils (Spec #2)  Sheetflow to Conservation Area with C/D Scils (Spec #2)	impervious acres draining to ED but acres draining to ED but acres draining to ED impervious acres draining to ED conserved open space but acres draining to conserved open space impervious acres draining to conserved open space but acres draining to conserved open space impervious acres draining to conserved open space impervious acres draining to open space impervious acres draining to filter strip.	D 15% runoff volume reduction 15% runoff volume reduction 15% runoff volume reduction 15% runoff volume reduction for treated use 0.75% runoff volume reduction for treated use 50% runoff volume reduction for treated use 0.50% runoff volume reduction for treated use 50% runoff volume reduction for treated use 50% runoff volume reduction for treated use 50% runoff volume reduction for treated use	0.15  0.75  0.75  0.50  0.50  0.50  R TREATED (ac	0.0000 0.000000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0		0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00			10 10 9. Shectflo 0 0 0 0	0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00
Sheetflow to Conservation Area with A/B Solis (Spec #2) Sheetflow to Conservation Area with C/D Solis (Spec #2)	Importation acres drawing is ED  And acres opening is ED  Importation acres drawing to ED  Importation acres drawing to  Impor	15% nunelf volume selución 15% nunelf volume redución 15% nunelf redución volume 15% nunelf redución volume 15% nunelf redución 15% nunel	0.15  0.75  0.75  0.50  0.50  0.50  0.50  A TREATED (see APEA CHECK CHEC	0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0		0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	Nitrogen As		10 10 9. Shectflo 0 0 0 0	0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00
Sheetflow to Conservation Area with A/B Soils (Spec #2) Sheetflow to Conservation Area with C/D Soils (Spec #2)	Importation acres drawing is ED  And acres opening is ED  Importation acres drawing to ED  Importation acres drawing to  Impor	15% nurelf volume selución     15% nurelf volume edución     15% nurelf edución volume     15% nurelf edución     15% nurelf edución volume     15% nurelf volume     15% n	0.15  0.75  0.75  0.50  0.50  0.50  0.50  A TREATED (see APEA CHECK CHEC	0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0		0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	NITOGEN M	MOVAL FROM B	10 10 9. Shectflo 0 0 0 0	0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00
Sheetflow to Conservation Area with A/B Scila (Spec #2) Sheetflow to Conservation Area with C/D Scila (Spec #2)	trependous across drawing is ED  That across drawing is ED  Important across drawing is Conserved  Across drawing is Conserved  Conserved drawing is Conserved  Important across drawing is Conserved  Important across drawing is ED  Important across drawing is Titler allip  Ital across drawing is Titler allip  Ital across drawing is Titler allip  Important across drawing is Titler across drawing	15% norall values adulcion 15% norall values 15% norall v	0.15  0.75  0.75  0.50  0.50  0.50  AREA CHECI HOSPHORUS R TOTAL T	0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	0 0 0 0 0 0 0 0 0 0 ACCULATIONS	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0		0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00	0.00 0.00 0.00 0.00 0.00	MITOGRA M	MOVAL FROM I	10 10 9. Shectflo 0 0 0 0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00
Cheerfour to Conservation Assa with ASI Solis (Spec #2) Interflow to Conservation Area with CO Solis (Spec #2)	trependous across drawing is ED  That across drawing is ED  Important across drawing is Conserved  Across drawing is Conserved  Conserved drawing is Conserved  Important across drawing is Conserved  Important across drawing is ED  Important across drawing is Titler allip  Ital across drawing is Titler allip  Ital across drawing is Titler allip  Important across drawing is Titler across drawing	15% norall values adulcion 15% norall values 15% norall v	0.15  0.75  0.75  0.50  0.50  0.50  AREA CHECI HOSPHORUS R TOTAL T	0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0		0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	Junipodes All	MANAYAL FROM 8	10 10 9. Shectflo 0 0 0 0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00
Sheatfor is Comercial Assault AB Both (Sine Co.) Beatfor is Comercial Assault AB Both (Sine Co.) Beatfor is Comercial Assault AB Both (Sine Co.) Beatfor is Vegerated Flat Sinp in A or Company 20, 849 CO float (Spec 20, 849) Destroy	International acutes distance in Ed.  **And acutes distance in Ed.  **Improvious acutes distance in Ed.  **Improvious acutes distance in Consideration Consideration  **Improvious acutes distance in Improvious acutes in Improvious acut	15% namel values enhanced 15% namel values e	0.15  0.75  0.75  0.50  0.50  0.50  0.50  R TREATED (see A TREATED (see HOSPHORUS R TOTAL MR RUNOFF ROES FOR SITE C	0.0000  0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	O O O O O O O O O O O O O O O O O O O	0 0 0 0 0 0 0 0 0 0 14.55 21.723 16.45	0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00  0.00  0.00  0.00  0.00  0.00  0.00  Permaining Phosphorus		MOVAL FOOL	10 10 10 9. Sheetflo 0 0 0 0 TOTAL	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00  0.00  0.00  0.00  0.00  0.00  0.00  Remaining
Chestifium to Conservation Assa with ASI Solis (Spec 82) Interflicts to Conservation Area with CO Solis (Spec 82) Solistic to Vagasted Fair Solis (A) Are Compact Annuals BCO Solis (Spec 82 8.44)  Life Practices that Remove P Life Practices that Remove P Life Vaswale (Cosstal Plain)	International acutes distance in EE  That device stateming in EED  Improvince acute distance in EED  Improvince acute distance in EED  Improvince acute distance in Improvince acute distance in Improvince acute acute in Improvince acutes acute in Improvince acutes acute in Improvince acutes acute in Improvince acutes acutes distance in Improvince acutes acute in Improvince acute in Improvinc	15% north whethe scholars 15% north whether scholars 15% north w	0.15  0.75  0.75  0.50  0.50  0.50  0.50  0.50  ATREATED (sc ATREATED	0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 COMPLIANCE C.	O O O O O O O O O O O O O O O O O O O	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00		MOVAL PROOF	10 10 10 10 10 10 10 10 10 10 10 10 10 1	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00  0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
Chestifium to Conservation Assa with ASI Solis (Spec 82) Interflicts to Conservation Area with CO Solis (Spec 82) Solistic to Vagasted Fair Solis (A) Are Compact Annuals BCO Solis (Spec 82 8.44)  Life Practices that Remove P Life Practices that Remove P Life Vaswale (Cosstal Plain)	International acutes districting in SEE  Inflammation acutes districting in Inflammation acutes districting in Inflammation acutes districting in Inflammation acutes of Inflammation a	15% north values aductor 15% north values 15% north v	0.15  0.75  0.75  0.50  0.50  0.50  0.50  ATRIATED (see AT	0.0000 0.0000	O O O O O O O O O O O O O O O O O O O	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0			10 10 10 10 10 10 10 10 10 10 10 10 10 1	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00
Baseline to Conservation Area with AB Sist Signer \$2.  Cheeding to Signer \$2.  Signer \$2.	Important areas diamong to ED  Surf acres diamong to ED  Important acres diamong to ED  SEE WATER QUA  SEE WATER QUA  POPULIARIANTS DUI DO NOT II  Usin  Important acres diamong to ED  Im	15% norall values aductor 15% norall values aductor 15%	0.15  0.75  0.75  0.50  0.50  0.50  0.50  0.50  ATREATED (sc ATREATED	0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 COMPLIANCE C.	O O O O O O O O O O O O O O O O O O O	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00			10 10 10 10 10 10 10 10 10 10 10 10 10 1	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00  0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
Desertion to Conservation Area with AB Site Rigors 20.  Desertion to Conservation Area with CD Site Rigors 20.  Desertion to Conservation Area with CD Site Rigors 20.  Desertion to Vegetabled Field Site Rigors 20.  Desertion to Vegetable Field Site	International across distincting in SE  That disease distincting in SE  Indigenous across distincting in Continuous  Indigenous across distincting in Continuous  Agent agrees  Indigenous distincting in Continuous  Agent agrees  Indigenous distincting in Continuous  Indigenous distinuous  Indigenous distinuous  Indigenous distinuous  Indigenous distinuous  Indigenous distinuous  Indigenous distinuous  Indigeno	15% norall values aductor 15% norall values aductor 15%	0.15  0.75  0.75  0.50	0.0000 0.0000	O O O SITE (Buyer of O O O O O O O O O O O O O O O O O O	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 Remaining Wolume (cf)	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0			10 10 10 0 Sheetfloo 0 0 0 0 0 TOTAL TOTAL TOTAL 10 10 Web Sweet Seed on the seed of the seed on the s	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
headfor to Conservation Assa with AB foot (Special Special Spe	International across distincting in SE  That disease distincting in SE  Indigenous across distincting in Continuous  Indigenous across distincting in Continuous  Agent agrees  Indigenous distincting in Continuous  Agent agrees  Indigenous distincting in Continuous  Indigenous distinuous  Indigenous distinuous  Indigenous distinuous  Indigenous distinuous  Indigenous distinuous  Indigenous distinuous  Indigeno	15% norall values aductor 15% norall values aductor 15%	0.15  0.75  0.75  0.50	0.0000 0.0000	O O O SITE (Buyer of O O O O O O O O O O O O O O O O O O	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 Remaining Wolume (cf)	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0		MACOVAL PROM N	10 10 10 10 10 10 10 10 10 10 10 10 10 1	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
Consensation has with AS Sold (Special Plant)	International acutes distance in EED  And acutes distance in EED  Improvious acutes distance in EED  Improvious acutes distance in EED  Improvious acutes distance in Improvious acutes di	15% nead values aduction 15% nead values aduct	0.15 0.75 0.75 0.50 0.50 0.50 0.50 0.50 0.5	0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000	O O O SITE (BLY)  D O O SITE (BLY)  ED ON SITE (BLY)  ES IN D.A. A (BLY)  Volume in the Practice (cf)  Practice (cf)	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 Ramalising Rustin (d) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	15	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	000 000 000 000 000 000 000 000 000 00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0		MACVAL PROM I	10 10 10 20. Sheetfiol 10 0 0 0 0 0 0 0 1 TOTAL TOTAL Self-circle (Circle) 25 25 35 35 35 31 11. Filterining	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
Therefore to Conservation Assa with AB Site Rigger 20.  Therefore to Conservation Area with CD Solds Rigger 20.  Sold Ri	International access distancing in EE  That desires distancing in EED  Improvinces access distancing in EED  Improvinces access distancing in EED  Improvinces access distancing in Consistence  Individual control in the Improvinces access distancing in Consistence  Improvinces access distancing in	15% norself valuete anduction	0.15 0.75 0.75 0.50 0.50 0.50 0.50 0.50 0.5	0.0000 0.0000	9 0 0 0 0 0 0 0 0 0 Values State Sta	0 0 0 0 0 0 0 14.55 21.723 16.45	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Phosphorus  Phosphorus  20  20  40  40  60  65	##DEPRINTED  ##DEPRINTED  Leaf from Upstoward Rep	0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00	0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0		MANUAL PROME	10 10 10 10 0 0 0 0 0 0 0 10 10 10 10 10	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	000 000 000 000 000 000 000 000 000 00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
Cheedfoor to Conservation Assa with AB Solts Rigos (2)  Sheetfoot to Conservation Area with CO Solts Rigos (2)  Streetfoot to Vegetated Fair Solt to Rigos (2)  Streetfoot to Vegetated Fair Solt to Rigos (2)  Streetfoot to Vegetated Fair Solt to Rigos (2)  Streetfoot to Vegetated Fair Solt (Spec (2)  Streetfoot Solt (Spec (2)  Solt Man	International access designing is ER  And access designing is ED  Integrational access designing is ED  Important access designing in Contention  Open access designing to the Access designing	15% norself volume seduction 15% norself seduction 15	0.15 0.75 0.75 0.50 0.50 0.50 0.50 0.50 0.5	0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000	O O O O O O O O O O O O O O O O O O O	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	15	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	000 000 000 000 000 000 000 000 000 00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0		MANAGEMENT AND	10 10 10 0 0 0 0 0 0 0 0 10 TOTALA UNIONY RED. Efficiency (NJ) 10. Wet Swith (NJ) 25 25 35 35 11. Filtering (NJ) 30 45	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
Cheerfor to Conservation Assa with AB Shall Stock (Spec 27)  Cheerfor to Conservation Area with CD Shall Spec 27)  Short Shall Spec 27)  Shall Shall Spec 27)  Shall Shall Spec 27(Spec 27)  Shall Specific Spec 27(Spec 27)	International access distancing in EE  That desires distancing in EED  Improvinces access distancing in EED  Improvinces access distancing in EED  Improvinces access distancing in Consistence  Individual control in the Improvinces access distancing in Consistence  Improvinces access distancing in	15% norall values adulation	0.15 0.75 0.76 0.76 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.5	0.0000 0.0000	9 0 0 0 0 0 0 0 0 0 Values State Sta	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Phosphorus  Phosphorus  20  20  40  40  60  65	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00	0.00  0.00 0.00 0.00 0.00 0.00 0.00 0.		MOVAL PROM	10 10 0 0 0 0 0 0 0 0 Newson Section 10 10 Newson Section 10 10 Newson 10 10 Newson 10 10 10 10 11 11 11 11 11 11 11 11 11 1	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
Bheatfour to Conservation Area with AS Sites (See 52)  Bheatfour to Conservation Area with CO Sites (See 52)  Streetfow to South Sides (See 52)  Streetfow to Vegetated Field (See 52)  Streetfow to Vegetated Field (See 52)  Streetfow to Vegetated Field (See 52)  Streetfow Stre	International across distance is ER  That are consistent of the Control of the Co	15% north values exhador 15% north values exha	0.15 0.75 0.75 0.50 0.50 0.50 0.50 0.50 0.5	0.0000 0.0000	9 0 0 0 0 0 0 0 0 0 Values State Sta	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	15	##DEPRINTED  ##DEPRINTED  Leaf from Upstoward Rep	0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00	0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0		NOVA PRO	10 10 10 0 0 0 0 0 0 0 0 10 TOTALA UNIONY RED. Efficiency (NJ) 10. Wet Swith (NJ) 25 25 35 35 11. Filtering (NJ) 30 45	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	000 000 000 000 000 000 000 000 000 00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
Breating to Conservation Assa with AS Sites Signer \$2.  Direction to Conservation Area with CO Sites Signer \$2.  Sites S	reportions across distingly ED  furfaces statingly ED  importions across distingly ED  importions across distingly ED  importions across distingly ED  across across distingly ED  contented (post type)  furfaces across distingly ED  importions across dist	15% north values exhador 15% north values exha	0.15 0.75 0.75 0.50 0.50 0.50 0.50 0.50 0.5	0.0000 0.0000	9 0 0 0 0 0 0 0 0 0 Values State Sta	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	15 0 0 0 0 0 0 0 0 0 0 0 0 40 40 60 65 65	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00  0.00 0.00 0.00 0.00 0.00 0.00 0.	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0			10 10 9. Sheetfill 0 0 0 0 0 0 10 17 TATAL 17 TATAL 17 TATAL 18 TATAL 19 TA	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	000 000 000 000 000 000 000 000 000 00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0
Chestifue to Conservation Area with AG State (Spec #2) Chestifue to Conservation Area with CO State (Spec #2) Chestifue to Conservation Area with CO State (Spec #2) Chestifue to Vaganted File (Spec #2) Chestifue (Spec #2) Ches	International across distincting to ED  That device statisting to ED  Imperiodic across distincting to end studied  Imperiodic across distinction to end studied  Imperiodic across disti	15% norself valuete seduction 15% norself valuete enduction 15% norself enduction 15% norself valuete enduction 15% norself valuete enduction 15% norself valuete 15% norself va	0.15 0.75 0.75 0.50 0.50 0.50 0.50 0.50 0.5	0.0000 0.0000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	15	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00  0.00 0.00 0.00 0.00 0.00 0.00 0.	0.00  0.00		SUCYAL PROM I	10 10 0 9. Sheetflood 0 0 0 0 0 10 TOTAL Morogen RESource 110 110 110 110 110 110 110 110 110 11	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	000 000 000 000 000 000 000 000 000 00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00  0.00
Cheedfoor to Conservation Assa with AB Solts Rigos (2)  Sheetfoot to Conservation Area with CO Solts Rigos (2)  Streetfoot to Vegetated Fair Solt to Rigos (2)  Streetfoot to Vegetated Fair Solt to Rigos (2)  Streetfoot to Vegetated Fair Solt to Rigos (2)  Streetfoot to Vegetated Fair Solt (Spec (2)  Streetfoot Solt (Spec (2)  Solt Man	International across distance is 10 th and across distance in 10 th across dista	15% north values scholars 15% north values exhibitor 15% north values exhib	0.15 0.75 0.75 0.75 0.50 0.50 0.50 0.50 0.5	0.0000 0.0000	9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Prospherus (%) 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00  Phosphore (%) (%) (%) (%) (%) (%) (%) (%) (%) (%)	0.00			10 10 0 0 0 0 0 0 0 0 0 10 10 10 10 10 1	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	000 000 000 000 000 000 000 000 000 00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000
Cheering to Conservation Area with AB See	International access distincting to ED  And access distincting to ED  Improvious access distingly to ED  Improvious access dist	15% north values exhibitor 15% north values exhi	0.15 0.75 0.76 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.5	0.0000 0.0000	9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Phosphorus 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00	0.00			10 10 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.000 0.000
Desertion to Conservation Area with AS Sites (See 57)  Desertion to Conservation Area with CO Sists (See 57)  Desertion to Conservation Area with CO Sists (See 57)  Desertion to Vegatised Flat (Sists (Spe- 67) 444)  Desertion (See 57)  Desertion to Vegatised Flat (Sists (Spe- 67) 444)  Desertion (See 57)  Desertion to Vegatised Flat (Sists (Spe- 67) 444)  Desertion (See 57)  Sists (See 57)  Sist	International across distancing to ED  That desires distancing to ED  Imperiodic across distancing to ED  Imperiodic across distancing to ED  Imperiodic across distancing to the across distancing to consense of the across distancing to consense of the across distancing to consense of the across distancing to the across	15% north values scholars 15% north values exhibitor 15% north values exhib	0.15 0.75 0.75 0.75 0.50 0.50 0.50 0.50 0.5	0.0000 0.0000	9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Prospherus (%) 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00  0.00	0.00			10 10 0 0 0 0 0 0 0 0 0 10 10 10 10 10 1	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	000 000 000 000 000 000 000 000 000 00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00  0.00 0.00 0.00 0.00 0.00 0.00 0.
Desertion to Conservation Assa with AB Site Rigine \$2.  Shell Rigi	International access of access to the second service of the second secon	15% north values enduction 15% north values endu	0.15 0.75 0.50 0.50 0.50 0.50 0.50 0.50 0.5	0.0000 0.	9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Phospherus  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00	0.00  0.00			10 10 0 0 0 0 0 0 10 10 10 10 10 10 10 1	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00    0.00

13.c. Wet Pond #2 (Spec #14)	turf acres draining to wet pond	0% runoff volume reduction	0.00	0.0000	0	0	0	75	0.00	0.00	0.00	0.00		40	0.00	0.00	0.00	0.00	
	impervious acres draining to we			0.0000	0	0	0	65	0.00	0.00	0.00	0.00		30	0.00	0.00	0.00	0.00	ĺ
13.d. Wet Pond #2 (Coastal Plain) (Spec #14)	turf acres draining to wet good	0% runoff volume reduction	0.00	0.0000	0	0	0	65	0.00	0.00	0.00	0.00		30	0.00	0.00	0.00	0.00	
14. Manufactured BMP														14. Manufa	ctured BMP				
	impervious acres draining to device	0% runoff volume reduction	0.00	0.0000	0	0	0	0	0.00	0.00	0.00	0.00		0	0.00	0.00	0.00	0.00	
14. Insert Name of Device	turf acres draining to device	0% runoff volume reduction	0.00	0.0000	0	0	0	0	0.00	0.00	0.00	0.00		0	0.00	0.00	0.00	0.00	
		TOTAL IMPERVIOUS COVE TOTAL TURF ARE	AREA CHECK	8.0000															
		REMOVAL BY PRACTICES	THAT DO NOT R	EDUCE RUNOFF			Ī												
	SEE WATER QUA	LITY COMPLIANCE TAB	FOR SITE C	OMPLIANCE CA	ALCULATIONS														
	NITROGEN	REMOVAL BY PRACTICES	HAT DO NOT R	EDUCE RUNOFF	VOLUME IN D.A.	0.00	İ												

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	AREA CHECK
IMPERVIOUS COVER	8.6700	0.0000	0.0000	0.0000	0.0000	OK.
IMPERVIOUS COVER TREATED	8.6700	0.0000	0.0000	0.0000	0.0000	OK.
TURF AREA	8.0000	0.0000	0.0000	0.0000	0.0000	OK.
TURF AREA TREATED	8.0000	0.0000	0.0000	0.0000	0.0000	OK.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	
Phosphorus						
TOTAL TREATMENT VOLUME (cf)	39,336					
TOTAL PHOSPHORUS LOAD REDUCTION REQUIRED (LB/YEAR)	14.55					
RUNOFF REDUCTION (cf)	21723					
PHOSPHORUS LOAD REDUCTION ACHIEVED (LB/YR)	16.45					
ADJUSTED POST-DEVELOPMENT PHOSPHORUS LOAD (TP) (Ib/yr)	8.26					
ADJUSTED POST-DEVELOPMENT PHOSPHORUS LOAD (TP) (lb/yr)		I YOU EXCEEDED THE	F TARGET REDUCTIO	N RY 19 I B/YFARI		
· · ·		! YOU EXCEEDED THI	E TARGET REDUCTIO	N BY 1.9 LB/YEAR!		
ADJUSTED POST-DEVELOPMENT PHOSPHORUS LOAD (TP) (Iblyr) REMAINING PHOSPHORUS LOAD REDUCTION (LB/YR) NEEDED CC		! YOU EXCEEDED THI	E TARGET REDUCTIO	N BY 1.9 LB/YEAR!		
ADJUSTED POST-DEVELOPMENT PHOSPHORUS LOAD (TP) (Ib/yr)  REMAINING PHOSPHORUS LOAD REDUCTION (LB/YR) NEEDED CO		I YOU EXCEEDED THI	E TARGET REDUCTIO	N BY 1.9 LB/YEARI		
ADJUSTED POST-DEVELOPMENT PHOSPHORUS LOAD (TP) (Iblyr) REMAINING PHOSPHORUS LOAD REDUCTION (LB/YR) NEEDED CC		I YOU EXCEEDED THI	E TARGET REDUCTIO	N BY 1.9 LB/YEAR!		
ADJUSTED POST-DEVELOPMENT PHOSPHORUS LOAD (TP) (Ib/yr)  REMAINING PHOSPHORUS LOAD REDUCTION (LB/YR) NEEDED CO	NGRATULATIONS!!	I YOU EXCEEDED THI	E TARGET REDUCTIO	N BY 1.9 LB/YEAR!		
ADJUSTED POST-DEVELOPMENT PHOSPHORUS LOAD (TP) (Ib/yr)  REMAINING PHOSPHORUS LOAD REDUCTION (LB/YR) NEEDED CO  Nitrogen (for information purposes)  TOTAL TREATMENT VOLUME (cf)	NGRATULATIONS!!	! YOU EXCEEDED THI	E TARGET REDUCTIO	N BY 1.9 LB/YEAR!		
ADJUSTED POST-DEVELOPMENT PHOSPHORUS LOAD (TP) (Iblyr)  REMAINING PHOSPHORUS LOAD REDUCTION (LB/YR) NEEDED CC  Nitrogen (for information purposes)  TOTAL TREATMENT VOLUME (cf)  RUNOFF REDUCTION (cf)	39,336 21723	! YOU EXCEEDED THI	E TARGET REDUCTIO	N BY 1.9 LB/YEARI		
ADJUSTED POST-DEVELOPMENT PHOSPHORUS LOAD (TP) (Ib/yr)  REMAINING PHOSPHORUS LOAD REDUCTION (LB/YR) NEEDED CO  Nitrogen (for information purposes)  TOTAL TREATMENT VOLUME (cf)	ONGRATULATIONS!!	! YOU EXCEEDED THI	E TARGET REDUCTIO	N BY 1.9 LB/YEAR!		
ADJUSTED POST-DEVELOPMENT PHOSPHORUS LOAD (TP) (Iblyr)  REMAINING PHOSPHORUS LOAD REDUCTION (LB/YR) NEEDED CC  Nitrogen (for information purposes)  TOTAL TREATMENT VOLUME (cf)  RUNOFF REDUCTION (cf)	39,336 21723	! YOU EXCEEDED THI	E TARGET REDUCTIO	N BY 1.9 LB/YEAR!		

		T	14	0	40	I	
Target Rainfall Event (in)			1-year storm 0.00	2-year storm 0.00	10-year storm 0.00		
raiget Namian Evelit (III)			0.00	0.00	0.00		
Drainage Area A							
Drainage Area (acres)		16.6700					
Runoff Reduction Volume (cf)		21,723					
Drainage Area B							
Drainage Area (acres)		0.0000					
Runoff Reduction Volume (cf)		0					
<u>Drainage Area C</u> Drainage Area (acres)		0.0000					
Runoff Reduction Volume (cf)		0.0000					
Drainage Area D		2 2222					
Drainage Area (acres) Runoff Reduction Volume (cf)		0.0000					
realist readulati volume (cr)							
Drainage Area E							
Drainage Area (acres)		0.0000					
Runoff Reduction Volume (cf)		0					
Based on the use of Runoff Reduction	practices in the sele	cted drainage areas,	the spreadsheet calc	ulates an adjusted R	V <sub>Developed</sub> and adjusted	d Curve Number.	
					·		
Drainage Area A	to to different to	Anna ()	A soils	B Soils	C Soils	D Soils	
Forest/Open Space undisturbed, pro space or reforested lar		Area (acres) CN	0.0000 30	0.0000 55	0.0000 70	0.0000 77	
Managed Turf disturbed, graded for ya		Area (acres)	0.0000	0.0000	8.0000	0.0000	
mowed/managed		CN	39	61	74	80	
		Area (acres)	0.0000	0.0000	8.6700	0.0000	
Impervious Cover		CN	98	98	98	98	c
						Weighted CN 86	S 1.63
			1-year storm	2-year storm	10-year storm	- 00	1.00
	RV <sub>Developed</sub> (in) with	no Runoff Reduction	0.00	0.00	0.00		
	RV <sub>Developed</sub> (in) w	ith Runoff Reduction	-0.36	-0.36	-0.36		
		Adjusted CN	#N/A	#N/A	#N/A		
Drainage Area B			A soils	B Soils	C Soils	D Soils	
Forest/Open Space undisturbed, pro	ntected forest/onen	Area (acres)	0.0000	0.0000	0.0000	0.0000	
space or reforested la		CN	30	55	70	77	
Managed Turf disturbed, graded for ya		Area (acres)	0.0000	0.0000	0.0000	0.0000	
mowed/managed		CN	39	61	74	80	
Impervious Cover		Area (acres) CN	0.0000 98	0.0000 98	0.0000 98	0.0000 98	
		0.1	- 00	00	00	Weighted CN	S
						0	1000.00
	DV (in) with	no Runoff Reduction	1-year storm 0.00	2-year storm 0.00	10-year storm 0.00		
	RV <sub>Developed</sub> (in) with	ith Runoff Reduction	0.00	0.00	0.00		
	Developed ( )	Adjusted CN	100	100	100		
				"			
Drainage Area C Forest/Open Space undisturbed, pro	stacted foract/onen	A ()	A soils 0.0000	B Soils 0.0000	C Soils 0.0000	D Soils 0.0000	
space or reforested lai		Area (acres) CN	30	55	70	77	
Managed Turf disturbed, graded for ya		Area (acres)	0.0000	0.0000	0.0000	0.0000	
mowed/managed		ĆN	39	61	74	80	
lean amiliana Conse		Area (acres) CN	0.0000 98	0.0000 98	0.0000 98	0.0000 98	
Impervious Cover		JIV	30	30	90	Weighted CN	s
						0	1000.00
			1-year storm	2-year storm	10-year storm		
		no Runoff Reduction	0.00	0.00	0.00		
	RV <sub>Developed</sub> (in) w	ith Runoff Reduction	0.00	0.00	0.00		
		Adjusted CN	100	100	100		
Drainage Area D			A soils	B Soils	C Soils	D Soils	
Forest/Open Space undisturbed, pro		Area (acres)	0.0000	0.0000	0.0000	0.0000	
space or reforested la		CN	30	55	70	77	
Managed Turf disturbed, graded for ya mowed/managed	rds or other turf to be	Area (acres) CN	0.0000 39	0.0000 61	0.0000 74	0.0000 80	
mowed/managed		Area (acres)	0.0000	0.0000	0.0000	0.0000	
Impervious Cover		CN	98	98	98	98	
						Weighted CN	s
			1 year starr	2 voor cterm	10 year -t	0	1000.00
	DV (in) with	no Runoff Reduction	1-year storm 0.00	2-year storm 0.00	10-year storm 0.00		
	RVo (in) w	ith Runoff Reduction	0.00	0.00	0.00		
	Developed (III) W	Adjusted CN	100	100	100		
Drainage Area E			A soils	B Soils		D Soils	
Forest/Open Space undisturbed, pro		Area (acres) CN	0.0000	0.0000 55	0.0000 70	0.0000	
space or reforested la	iiu	OIN	30	33	70	77	

CN rea (acres) CN	39 0.0000 98	61 0.0000	74 0.0000	80 0,0000	
		0.0000	0.0000	0.0000	
CN	98			0.0000	
		98	98	98	
				Weighted CN	S
				0	1000.0
	1-year storm	2-year storm	10-year storm		
noff Reduction	0.00	0.00	0.00		
noff Reduction	0.00	0.00	0.00		
ted CN	100	100	100		
1	off Reduction	noff Reduction 0.00 noff Reduction 0.00	noff Reduction         0.00         0.00           noff Reduction         0.00         0.00	noff Reduction         0.00         0.00         0.00           noff Reduction         0.00         0.00         0.00	1-year storm   2-year storm   10-year storm

### ı Runoff Reduction Method New Development Worksheet - v2.8 - June 2014

## **Site Data Summary**

Total Rainfall = 43 inches

#### Site Land Cover Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest (acres)	0.0000	0.0000	5.2700	0.0000	5.2700	21.25
Turf (acres)	0.0000	0.0000	10.8600	0.0000	10.8600	43.79
Impervious (acres)	0.0000	0.0000	8.6700	0.0000	8.6700	34.96
					24.8000	100.00

Site Rv	0.44
Post Development Treatment Volume (ft3)	39336
Post Development TP Load (lb/yr)	24.72
Post Development TN Load (lb/yr)	176.81
Total TP Load Reduction Required (lb/yr)	14.55

Total Runoff Volume Reduction (ft <sup>3</sup> )	21723
Total TP Load Reduction Achieved (lb/yr)	16.45
Total TN Load Reduction Achieved (lb/yr)	162.92
Adjusted Post Development TP Load (lb/yr)	8.26
Remaining Phosphorous Load Reduction (Lb/yr) Required	0.00

## **Drainage Area Summary**

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
Forest (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Turf (acres)	8.0000	0.0000	0.0000	0.0000	0.0000	8.0000
Impervious (acres)	8.6700	0.0000	0.0000	0.0000	0.0000	8.6700
						16.6700

### **Drainage Area Compliance Summary**

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
TP Load Red. (lb/yr)	16.45	0.00	0.00	0.00	0.00	16.45
TN Load Red. (lb/yr)	162.92	0.00	0.00	0.00	0.00	162.92

# **Drainage Area A Summary**

## **Land Cover Summary**

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest (acres)	0.00	0.00	0.00	0.00	0.00	0.00
Turf (acres)	0.00	0.00	8.00	0.00	8.00	47.99
Impervious (acres)	0.00	0.00	8.67	0.00	8.67	52.01
					16.67	

# **BMP Selections**

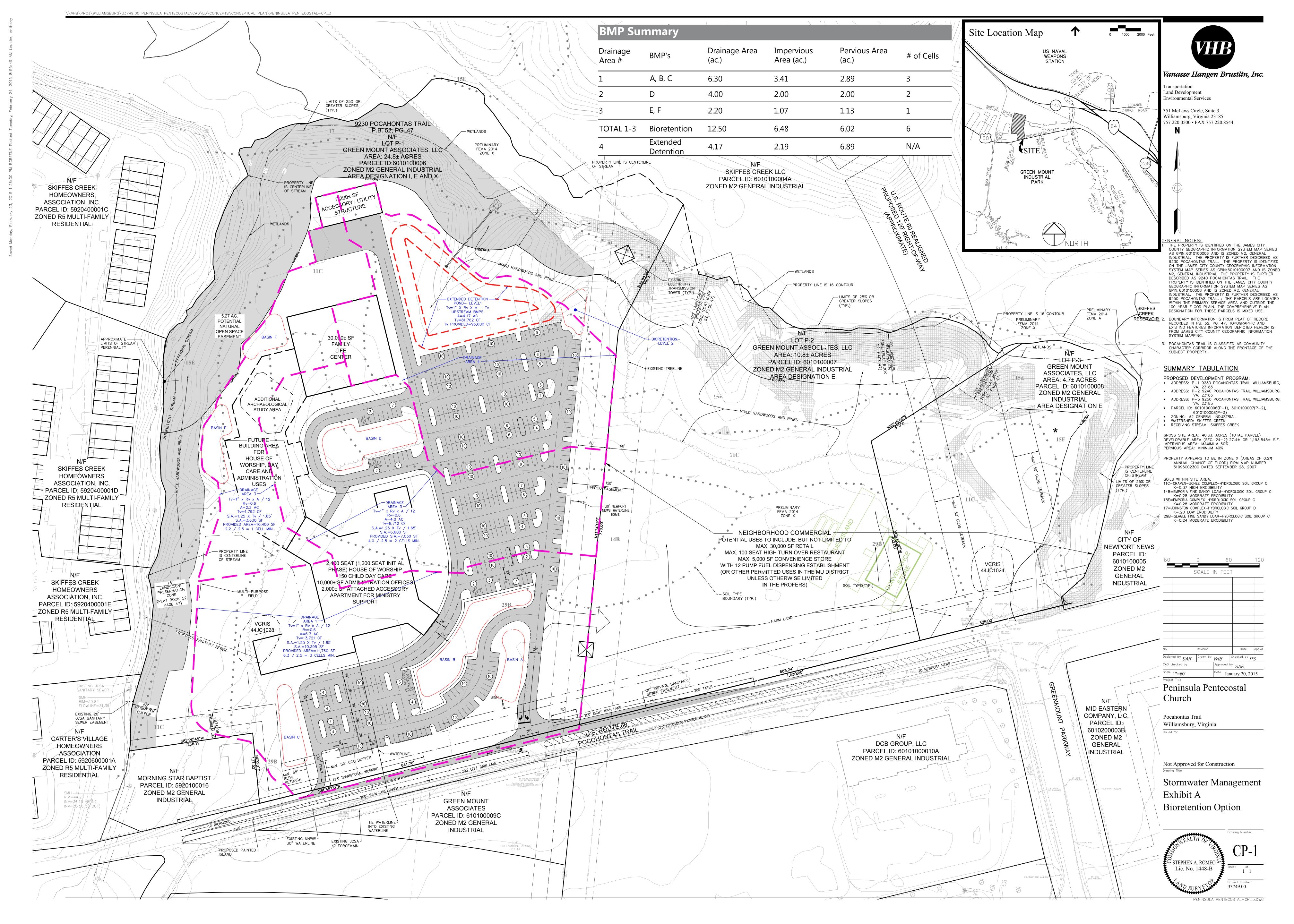
Practice	Credit Area (acres)	Downstream Practice
Total Impervious Cover Treated (acres)	8.67	
Total Turf Area Treated (acres)	8.00	
Total TP Load Reduction Achieved in D.A. A (lb/yr)	16.45	
Total TN Load Reduction Achieved in D.A. A (lb/yr)	162.92	

### **Channel and Flood Protection**

	Weighted CN	1-year storm Adjusted CN	Adjusted CN	10-year storm Adjusted CN
Target Rainfall Event (in)		0.00	0.00	0.00
D.A. A CN	86	#N/A	#N/A	#N/A
D.A. B CN	0	100	100	100
D.A. C CN	0	100	100	100
D.A. D CN	0	100	100	100
D.A. E CN	0	100	100	100

# Version 2.8 - June 2014 - 2011 BMP Stnds & Specs

- 1 Fixed summary sheet totals /percentage column fixed
- 2 Corrected nitrogen efficiency percentages
- 3 Corrected the Rv value in column J for managed turf
- 4 Checked and revised runoff reduction credit values assigned



Virginia Runoff Reduction Metho	nd New Devel	onment Works	hoot - v2 8 - lune	2014	
To be used w/ 2011 BMP Standa			Tileet - VZ.0 - Juile	2014	
Site Data	ilus allu Spec	IIICations			
	LLASDA Evelie	it D Wet Dand			
Project Name: Peninsula Pentecosta	LOT P-1 - EXNID	it B wet Pond			
Date: 1/2015					
	data input cells				
	calculation cells				
	constant values				
I. Post-Development Project & L	and Cover In	formation			
Constants					
Annual Rainfall (inches)	43				
Farget Rainfall Event (inches)	1.00				
Phosphorus EMC (mg/L)	0.26		Nitrogen EMC (mg/L)	1.86	
Target Phosphorus Target Load (lb/acre/yr)	0.41		<u> </u>		
) Pj	0.90				
_and Cover (acres)					
	A soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) undisturbed,					
protected forest/open space or reforested land	0.0000	0.0000	5.2700	0.0000	5.2700
Managed Turf (acres) disturbed, graded for					
rards or other turf to be mowed/managed	0.0000	0.0000	10.8600	0.0000	10.8600
mpervious Cover (acres)	0.0000	0.0000	8.6700	0.0000	8.6700
				Total	24.8000
Rv Coefficients					
	A soils	B Soils	C Soils	D Soils	
Forest/Open Space	0.02	0.03	0.04	0.05	
Managed Turf	0.15	0.20	0.22	0.25	
Impervious Cover	0.95	0.95	0.95	0.95	
Land Cover Summary					
Forest/Open Space Cover (acres)	5.2700				
Weighted Rv(forest)	0.0400				
% Forest	21%				
Managed Turf Cover (acres)	10.8600				
Veighted Rv(turf)	0.2200				
% Managed Turf	44%				
mpervious Cover (acres)	8.6700				
Rv(impervious)	0.95				
% Impervious	35%				
Total Site Area (acres)	24.8000	)			
Site Rv	0.44				
Post-Development Treatment Volume (acre-ft)	0.90	N			
Post-Development Treatment Volume (acre-it) Post-Development Treatment Volume (cubic					
feet)	39,336				<u> </u>
Post_Development Load (TP) (lb/yr)	24.72	Post_Deve	elopment Load (TN) (lb/yr)	176.81	
Total Load (TP) Reduction Required (lb/yr)	14.55	5			

Drainage Area A																			
Drainage Area A Land Cover (acres) Forest/Open Space (acres) Managed Turf (acres)	A soils B Soils  0.0000 0.0000  0.0000 0.0000	C Soils D Soils  0.0000 0.0000  8.0000 0.0000	Totals 0.0000 8.0000	Land Cover Rv 0.00 0.22															
Apply Runoff Reduction Practi	0.0000 0.0000	8.6700 0.0000 Total	8.6700 16.6700	0.95	no Aros A	Post Develop	oment Treatme	nt Volume (cf)	36287	j									
Practice	Unit Unit		Credit	Credit Area	Volume from Upstream RR Practice (cf)	Runoff Reduction (cf)	Remaining Runoff Volume (cf)	Phosphorus	Phosphorus Load from Upstream RR Practices (lbs)	Untreated Phosphorus Load to Practice (lbs.)	Phosphorus Removed By Practice (lbs.)	Remaining Phosphorus	Downstream Treatment to be Employed		Nitrogen Efficiency (%)	Nitrogen Load from Upstream RR Practices (lbs)	Untreated Nitrogen Load to Practice (lbs.)		Remaining Nitrogen Load (lbs.)
1. Vegetated Roof					Practice (ci)	Reduction (cr)	Volume (cr)	Enriciency (%)					Downstream Treatment to be Employed		1. Green R	oof			
1.a. Vegetated Roof #1 (Spec #5)  1.b. Vegetated Roof #2 (Spec #5)	acres of green roof	45% runoff volume reduction 60% runoff volume reduction	0.45	0.0000	0	0	0	0	0.00	0.00	0.00	0.00			0	0.00	0.00	0.00	0.00
Rooftop Disconnection     AB Solls (Spec		50% runoff volume reduction													2. Impervio	us Surface Di			
#1) 2.b. Simple Disconnection to C/D Soils (Spec #1)	impervious acres disconnected impervious acres disconnected	25% runoff volume reduction	0.50	0.0000	0	0	0	0	0.00	0.00	0.00	0.00			0	0.00	0.00	0.00	0.00
2.c. To Soil Amended Filter Path as per specifications (existing C/D soils) (Spec #4) 2.d. To Dry Well or French Drain #1	impervious acres disconnected	50% runoff volume reduction	0.50	0.0000	0	0	0	0 25	0.00	0.00	0.00	0.00			0	0.00	0.00	0.00	0.00
(Microinfilration #1) (Spec #8)  2.e. To Dry Well or French Drain #2 (Micro- Infiltration #2) (Spec #8)  2.f. To Rain Garden #1 (Micro-Bioretention	impervious acres disconnected	90% runoff volume reduction for treated area	0.90	0.0000	0	0	0	25	0.00	0.00	0.00	0.00			15	0.00	0.00	0.00	0.00
#1) (Spec #9) 2.g. To Rain Garden #2 (Micro-Bioretention #2) (Spec #9)	impervious acres disconnected	80% runoff volume reduction for treated area	0.40	0.0000	0	0	0	25 50	0.00	0.00	0.00	0.00			40 60	0.00	0.00	0.00	0.00
2.h. To Rainwater Harvesting (Spec #6)	impervious acres captured	based on tank size and design spreadsheet (See Spec #6)	0.00	0.0000	0	0	0	0	0.00	0.00	0.00	0.00			0	0.00	0.00	0.00	0.00
2.i. To Stormwater Planter (Urban Bioretention) (Spec #9, Appendix A)	impervious acres disconnected	40% runoff volume reduction for treated area	0.40	0.0000	0	0	0	25	0.00	0.00	0.00	0.00			40	0.00	0.00	0.00	0.00
Permeable Pavement  3.a. Permeable Pavement #1 (Spec #7)	acres of permeable pavement acres of "external" (upgradient impervious pavement		0.45	0.0000	0	0	0	25	0.00	0.00	0.00	0.00			3. Permeab	le Pavement 0.00	0.00	0.00	0.00
3.b. Permeable Pavement #2 (Spec #7)		75% runoff volume reduction	0.75	0.0000	0	0	0	25	0.00	0.00	0.00	0.00			25	0.00	0.00	0.00	0.00
Grass Channel     4.a. Grass Channel A/B Soils (Spec #3)	impervious acres draining to grass channels	20% runoff volume reduction	0.20	0.0000	0	0	0	15	0.00	0.00	0.00	0.00			4. Grass Ch	o.oo	0.00	0.00	0.00
v.a. Glass Chaillel NB 30lls (Spec #3)	turf acres draining to grass channels impervious acres draining to	20% runoff volume reduction	0.20	0.0000	0	0	0	15	0.00	0.00	0.00	0.00			20	0.00	0.00	0.00	0.00
4.b. Grass Channel C/D Soils (Spec #3)	grass channels turf acres draining to grass channels impervious acres draining to	10% runoff volume reduction 10% runoff volume reduction	0.10	7.5222 5.7899	0	2594 462	23346 4161	15	0.00	2.90	0.68	2.22	13.d. Wet Pond #2 (Coastal Plain)  13.d. Wet Pond #2 (Coastal Plain)		20	0.00	20.76	32.61 5.81	83.85 14.95
Grass Channel with Compost Amended Soils as per specs (see Spec #4)	grass channels turf acres draining to grass channels	30% runoff volume reduction	0.30	0.0000	0	0	0	15 15	0.00	0.00	0.00	0.00			20	0.00	0.00	0.00	0.00
5. Dry Swale	impervious acres draining to dr	у													5. Dry Swal				
5.a. Dry Swale #1 (Spec #10)	swale turf acres draining to dry swale	40% runoff volume reduction	0.40	0.0000	0	0	0	20	0.00	0.00	0.00	0.00			25 25	0.00	0.00	0.00	0.00
5.b. Dry Swale #2 (Spec #10)	impervious acres draining to dr swale turf acres draining to dry swale	y 60% runoff volume reduction	0.60	0.0000	0	0	0 0	40	0.00	0.00	0.00	0.00			35 35	0.00	0.00	0.00	0.00
6. Bioretention															6. Bioreten	tion			
6.a. Bioretention #1 or Urban Bioretention (Spec #9)	impervious acres draining to bioretention turf acres draining to bioretention	40% runoff volume reduction	0.40	0.0000	0	0	0	25 25	0.00	0.00	0.00	0.00			40 40	0.00	0.00	0.00	0.00
6.b. Bioretention #2 (Spec #9)	impervious acres draining to bioretention turf acres draining to bioretention	80% runoff volume reduction 80% runoff volume reduction	0.80	0.0000	0	0	0	50	0.00	0.00	0.00	0.00			60	0.00	0.00	0.00	0.00
7. Infiltration		so a ration volume reduction	U.0U	0.000		J	9	30	0.00	0.00	0.00	0.00			7. Infiltratio	n	5.00	0.00	0.00
7.a. Infiltration #1 (Spec #8)	impervious acres draining to infiltration turf acres draining to infiltration	50% runoff volume reduction	0.50	0.0000	0	0	0	25 25	0.00	0.00	0.00	0.00			15 15	0.00	0.00	0.00	0.00
7.b. Infiltration #2 (Spec #8)	impervious acres draining to infiltration	90% runoff volume reduction	0.90	0.0000	0	0	0	25	0.00	0.00	0.00	0.00			15	0.00	0.00	0.00	0.00
8. Extended Detention Pond	turf acres draining to infiltration	90% runoff volume reduction	0.90	0.0000	0	0	0	25	0.00	0.00	0.00	0.00			15 8. Extende	0.00 Detention Po	0.00	0.00	0.00
8.a. ED #1 (Spec #15)	impervious acres draining to El		0.00		0	0	0	15	0.00	0.00	0.00	0.00			10	0.00	0.00	0.00	0.00
8.b. ED #2 (Spec #15)		0% runoff volume reduction  15% runoff volume reduction	0.15	0.0000	0	0	0	15	0.00	0.00	0.00	0.00			10	0.00	0.00	0.00	0.00
9. Sheetflow to Filter/Open Space	turf acres draining to ED	15% runoff volume reduction	0.15	0.0000	0	0	0	15	0.00	0.00	0.00	0.00			10 9. Sheetflo	0.00 v to Conserva	0.00	0.00 er Strip	0.00
9.a. Sheetflow to Conservation Area with A/E	conserved open space turf acres draining to conserve		0.75	0.0000	0	0	0	0	0.00	0.00	0.00	0.00			0	0.00	0.00	0.00	0.00
Solis (Spec #2)  9.b. Sheetflow to Conservation Area with C/E	impervious acres draining to conserved open space	for treated area	0.75	0.0000	0	0	0	0	0.00	0.00	0.00	0.00			0	0.00	0.00	0.00	0.00
Soils (Spec #2)  9.c. Sheetflow to Vegetated Filter Strip in A	open space impervious acres draining to filter strip	for treated area 50% runoff volume reduction for treated area	0.50	0.0000	0	0	0	0	0.00	0.00	0.00	0.00			0	0.00	0.00	0.00	0.00
Soils or Compost Amended B/C/D Soils (Spec #2 & #4)	turf acres draining to filter strip	50% runoff reduction volume for treated area	0.50 TREATED (ac)	0.0000 7.5222	0	0	0	0	0.00	0.00	0.00	0.00			0	0.00	0.00	0.00	0.00
		TOTAL TURF AREA		5.7899															
	PHC	TOTAL PH	TOTAL F	MOVAL REQUIRES RUNOFF REDUCTION CTION PRACTICES	ON IN D.A. A (cf)	14.55 3,056 4.51								NOVAL FROM RU	TOTAL	UNOFF REDUC	TION IN D.A. A (cf) S IN D.A. A (lb/yr)	3,056	
	SEE WATER C	QUALITY COMPLIANCE TA	AB FOR SITE	COMPLIANCE	CALCULATIONS	3							III KOCE KE	OVAL FROM RU	NOT REDUC	IONFRACTICE	SIN D.A. A (IUV))	137.22	
Apply Practices that Remove P	Pollutants but Do Not R	educe Runoff Volume			Volume from		Remaining		Phosphorus Load from	Untreated Phosphorus	Phosphorus	Remaining			Nitrogen	Nitrogen Load from Upstream	Untreated	Nitrogen Removed By	Remaining
Practice 10. Wet Swale (Coastal Plain)	Unit	Description of Credit	Credit	Credit Area (acres)	Upstream RR Practice (cf)	Runoff Reduction (cf)	Runoff Volume (cf)	Phosphorus Efficiency (%)	Upstream RR Practices (lbs)	Load to Practice (lbs.)	Removed By Practice (lbs.)	Phosphorus Load (lbs.)	Downstream Treatment to be Employed		Efficiency (%) 10. Wet Sw	RR Practices (lbs) ale (Coastal P	Nitrogen Load to Practice (lbs.) ain)		Nitrogen Load (lbs.)
10 a Mat Supl- #4 /0-	impervious acres draining to we swale	0% runoff volume reduction	0.00	0.0000	0	0	0	20	0.00	0.00	0.00	0.00			25 25	0.00	0.00	0.00	0.00
10.a. Wet Swale #1 (Spec #11)	turf acres draining to wet swale impervious acres draining to we swale	et 0% runoff volume reduction	0.00	0.0000	0	0	0	40	0.00	0.00	0.00	0.00			35	0.00	0.00	0.00	0.00
10.b. Wet Swale #2 (Spec #11)  11. Filtering Practices	turf acres draining to wet swale	e 0% runoff volume reduction	0.00	0.0000	0	0	0	40	0.00	0.00	0.00	0.00			35 11. Filterin	0.00 g Practices	0.00	0.00	0.00
	impervious acres draining to filter	0% runoff volume reduction	0.00	0.0000	0	0	0	60	0.00	0.00	0.00	0.00			30 30	0.00	0.00	0.00	0.00
11.a.Filtering Practice #1 (Spec #12)	turf acres draining to filter impervious acres draining to filter	0% runoff volume reduction 0% runoff volume reduction	0.00	0.0000	0	0	0	65	0.00	0.00	0.00	0.00			45	0.00	0.00	0.00	0.00
11.b. Filtering Practice #2 (Spec #12)  12. Constructed Wetland	turf acres draining to filter	0% runoff volume reduction	0.00	0.0000	0	0	0	65	0.00	0.00	0.00	0.00			45 12. Constru	0.00	0.00	0.00	0.00
	impervious acres draining to wetland	0% runoff volume reduction	0.00	0.0000	0	0	0	50	0.00	0.00	0.00	0.00			25	0.00	0.00	0.00	0.00
12.a.Constructed Wetland #1 (Spec #13)	turf acres draining to wetland impervious acres draining to wetland		0.00	0.0000	0	0	0	50 75	0.00	0.00	0.00	0.00			25 55	0.00	0.00	0.00	0.00
12.b. Constructed Wetland #2 (Spec #13)  13. Wet Ponds	turf acres draining to wetland	0% runoff volume reduction	0.00	0.0000	0	0	0	75	0.00	0.00	0.00	0.00			55 13. Wet Po	0.00	0.00	0.00	0.00
	impervious acres draining to we pond	0% runoff volume reduction	0.00	0.0000	0	0	0	50	0.00	0.00	0.00	0.00			30	0.00	0.00	0.00	0.00
13.a. Wet Pond #1 (Spec #14)	turf acres draining to wet pond impervious acres draining to we pond		0.00	0.0000	0	0	0	50 45	0.00	0.00	0.00	0.00			30 20	0.00	0.00	0.00	0.00
13.b. Wet Pond #1 (Coastal Plain) (Spec #14	) turf acres draining to wet pond impervious acres draining to we pond		0.00	0.0000	0	0 0	0 0	45 75	0.00	0.00	0.00	0.00			20 40	0.00	0.00	0.00	0.00
13.c. Wet Pond #2 (Spec #14)	turf acres draining to wet pond impervious acres draining to we	0% runoff volume reduction	0.00	0.0000	0	0	0	75	0.00	0.00	0.00	0.00			40	0.00	0.00	0.00	0.00
13.d. Wet Pond #2 (Coastal Plain) (Spec #14	pond	0% runoff volume reduction	0.00	1.1478 2.2101	23,346 4,161	0	27304 5926	65 65	12.45	1.11	9.71	5.23 1.16			30	83.85 14.95	7.92	6.86	71.14
14. Manufactured BMP	impervious acres draining to	0% runoff volume reduction	0.00	0.0000					0.00	0.00	0.00	0.00			14. Manufa	ctured BMP	0.00	0.00	0.00
14. Insert Name of Device	device turf acres draining to device	0% runoff volume reduction	0.00	0.0000	0	0	0	0	0.00	0.00	0.00	0.00			0	0.00	0.00	0.00	0.00
		TOTAL IMPERVIOUS COVER TOTAL TURF AREA		8.0000															
	PHOSPHORUS	REMOVAL BY PRACTICES TH			LUME IN D.A. A . IN D.A. A (lb/yr)	11.87 16.38													
		QUALITY COMPLIANCE TA																	
	NITROGEN	REMOVAL BY PRACTICES TH	AT DO NOT REI TOTAL NIT	DUCE RUNOFF VO ROGEN REMOVAL	LUME IN D.A. A IN D.A. A (lb/yr)	37.35 174.57													

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	AREA CHECK
IMPERVIOUS COVER	8.6700	0.0000	0.0000	0.0000	0.0000	OK.
IMPERVIOUS COVER TREATED	8.6700	0.0000	0.0000	0.0000	0.0000	OK.
TURF AREA	8.0000	0.0000	0.0000	0.0000	0.0000	OK.
TURF AREA TREATED	8.0000	0.0000	0.0000	0.0000	0.0000	OK.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	
Phosphorus						
TOTAL TREATMENT VOLUME (cf)	39,336					
TOTAL PHOSPHORUS LOAD REDUCTION REQUIRED (LB/YEAR)	14.55					
RUNOFF REDUCTION (cf)	3056					
PHOSPHORUS LOAD REDUCTION ACHIEVED (LB/YR)	16.38					
ADJUSTED POST-DEVELOPMENT PHOSPHORUS LOAD (TP) (lb/yr)	8.33					
. , , , , ,		YOU EXCEEDED THE	E TARGET REDUCTIO	N BY 1.8 LB/YEAR!		
ADJUSTED POST-DEVELOPMENT PHOSPHORUS LOAD (TP) (Ib/yr)  REMAINING PHOSPHORUS LOAD REDUCTION (LB/YR) NEEDED CO		I YOU EXCEEDED THE	E TARGET REDUCTIO	IN BY 1.8 LB/YEAR!		
REMAINING PHOSPHORUS LOAD REDUCTION (LB/YR) NEEDED CO		YOU EXCEEDED THE	E TARGET REDUCTIO	IN BY 1.8 LB/YEAR!		
REMAINING PHOSPHORUS LOAD REDUCTION (LB/YR) NEEDED CO	ONGRATULATIONS!!	I YOU EXCEEDED THE	E TARGET REDUCTIO	N BY 1.8 LB/YEAR!		
REMAINING PHOSPHORUS LOAD REDUCTION (LB/YR) NEEDED CO		I YOU EXCEEDED THE	E TARGET REDUCTIO	IN BY 1.8 LB/YEAR!		
REMAINING PHOSPHORUS LOAD REDUCTION (LB/YR) NEEDED CO	ONGRATULATIONS!!	I YOU EXCEEDED THE	E TARGET REDUCTIO	IN BY 1.8 LB/YEAR!		
REMAINING PHOSPHORUS LOAD REDUCTION (LB/YR) NEEDED CO Nitrogen (for information purposes)  TOTAL TREATMENT VOLUME (cf)	ONGRATULATIONS!!	I YOU EXCEEDED THE	E TARGET REDUCTIO	IN BY 1.8 LB/YEAR!		
REMAINING PHOSPHORUS LOAD REDUCTION (LB/YR) NEEDED CO  Nitrogen (for information purposes)  TOTAL TREATMENT VOLUME (cf)  RUNOFF REDUCTION (cf)	39,336 3056	YOU EXCEEDED THI	E TARGET REDUCTIO	IN BY 1.8 LB/YEAR!		
REMAINING PHOSPHORUS LOAD REDUCTION (LB/YR) NEEDED CO Nitrogen (for information purposes)  TOTAL TREATMENT VOLUME (cf)	ONGRATULATIONS!!	YOU EXCEEDED THE	E TARGET REDUCTIO	N BY 1.8 LB/YEAR!		
REMAINING PHOSPHORUS LOAD REDUCTION (LB/YR) NEEDED CO  Nitrogen (for information purposes)  TOTAL TREATMENT VOLUME (cf)  RUNOFF REDUCTION (cf)	39,336 3056	YOU EXCEEDED THE	E TARGET REDUCTIO	N BY 1.8 LB/YEAR!		

		T44	0	140		
Target Rainfall Event (in)	1	1-year storm 0.00	2-year storm 0.00	10-year storm 0.00		+
Tangot Namian Event (III)	1	0.00	0.00	0.00		+
Drainage Area A						
Drainage Area (acres)	16.6700					
Runoff Reduction Volume (cf)	3,056					
Drainage Area B						
Drainage Area (acres)	0.0000					
Runoff Reduction Volume (cf)	0					
Duelton and Association						
<u>Drainage Area C</u> Drainage Area (acres)	0.0000					
Runoff Reduction Volume (cf)	0.0000					
Drainage Area D	0.0000					
Drainage Area (acres) Runoff Reduction Volume (cf)	0.0000					
Trainer Totaline (6.)						
Drainage Area E						
Drainage Area (acres) Runoff Reduction Volume (cf)	0.0000					
Runon Reduction Volume (CI)	U					
Based on the use of Runoff Reduction practices in the sele	ected drainage areas,	the spreadsheet calc	ulates an adjusted R	V <sub>Developed</sub> and adjusted	Curve Number.	
B		A selle	D Calle	C Calla	D Calle	
Drainage Area A	Area (acres)	0.0000	B Soils 0.0000	C Soils 0.0000	D Soils 0.0000	
Forest/Open Space undisturbed, protected forest/open space or reforested land	CN	30	55	70	77	
Managed Turf disturbed, graded for yards or other turf to be	Area (acres)	0.0000	0.0000	8.0000	0.0000	
mowed/managed	ČN	39	61	74	80	
Importácia Carra	Area (acres) CN	0.0000	0.0000	8.6700	0.0000	
Impervious Cover	CIN	98	98	98	98 Weighted CN	s
					86	1.63
		1-year storm	2-year storm	10-year storm		
	no Runoff Reduction		0.00	0.00		
RV <sub>Developed</sub> (in) w	ith Runoff Reduction		-0.05	-0.05		
	Adjusted CN	#N/A	#N/A	#N/A		
Drainage Area B		A soils	B Soils	C Soils	D Soils	
Forest/Open Space undisturbed, protected forest/open	Area (acres)	0.0000	0.0000	0.0000	0.0000	
space or reforested land	CN	30	55	70	77	
Managed Turf disturbed, graded for yards or other turf to be	Area (acres) CN	0.0000	0.0000 61	0.0000 74	0.0000 80	
mowed/managed	Area (acres)	0.0000	0.0000	0.0000	0.0000	
Impervious Cover	CN	98	98	98	98	
					Weighted CN	S
		1-year storm	2-year storm	10-year storm	0	1000.00
RV <sub>Developed</sub> (in) with	no Runoff Reduction	0.00	0.00	0.00		
RV <sub>Developed</sub> (in) w	ith Runoff Reduction		0.00	0.00		
	Adjusted CN	100	100	100		
Drainage Area C		A soils	B Soils	C Soils	D Soils	
Forest/Open Space undisturbed, protected forest/open	Area (acres)	0.0000	0.0000	0.0000	0.0000	
space or reforested land	CN	30	55	70	77	
Managed Turf disturbed, graded for yards or other turf to be mowed/managed	Area (acres) CN	0.0000 39	0.0000 61	0.0000 74	0.0000 80	
oroamungou	Area (acres)	0.0000	0.0000	0.0000	0.0000	
Impervious Cover	ĊN	98	98	98	98	
	-				Weighted CN	S 1000.00
		1-year storm	2-year storm	10-year storm	U	1000.00
	no Runoff Reduction	0.00	0.00	0.00		
	ith Runoff Reduction		0.00	0.00		
	Adjusted CN	100	100	100		
Drainage Area D		A soils	B Soils	C Soils	D Soils	1
Forest/Open Space undisturbed, protected forest/open	Area (acres)	0.0000	0.0000	0.0000	0.0000	
space or reforested land	CN	30	55	70	77	
Managed Turf disturbed, graded for yards or other turf to be	Area (acres)	0.0000	0.0000	0.0000	0.0000	
mowed/managed	CN Area (gerea)	39	61 0.0000	74	80	
Impervious Cover	Area (acres) CN	0.0000 98	0.0000 98	0.0000 98	0.0000 98	
Impervious Cover					Weighted CN	S
					0	1000.00
	L	1-year storm	2-year storm	10-year storm		
RV <sub>Developed</sub> (in) with	no Runoff Reduction	0.00	0.00	0.00		
RV <sub>Developed</sub> (in) w	ith Runoff Reduction		0.00	0.00		
	Aujustea CN	100	100	100		
Drainage Area E		A soils	B Soils	C Soils	D Soils	
Forest/Open Space undisturbed, protected forest/open	Area (acres)	0.0000	0.0000	0.0000	0.0000	
space or reforested land	CN	30	55	70	77	

CN rea (acres) CN	39 0.0000 98	61 0.0000	74 0.0000	80 0,0000	
		0.0000	0.0000	0.0000	
CN	98			0.0000	
		98	98	98	
				Weighted CN	S
				0	1000.0
	1-year storm	2-year storm	10-year storm		
noff Reduction	0.00	0.00	0.00		
noff Reduction	0.00	0.00	0.00		
ted CN	100	100	100		
1	off Reduction	noff Reduction 0.00 noff Reduction 0.00	noff Reduction         0.00         0.00           noff Reduction         0.00         0.00	noff Reduction         0.00         0.00         0.00           noff Reduction         0.00         0.00         0.00	1-year storm   2-year storm   10-year storm

### ı Runoff Reduction Method New Development Worksheet - v2.8 - June 2014

## **Site Data Summary**

Total Rainfall = 43 inches

#### Site Land Cover Summary

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest (acres)	0.0000	0.0000	5.2700	0.0000	5.2700	21.25
Turf (acres)	0.0000	0.0000	10.8600	0.0000	10.8600	43.79
Impervious (acres)	0.0000	0.0000	8.6700	0.0000	8.6700	34.96
	•	·			24.8000	100.00

Site Rv	0.44
Post Development Treatment Volume (ft3)	39336
Post Development TP Load (lb/yr)	24.72
Post Development TN Load (lb/yr)	176.81
Total TP Load Reduction Required (lb/yr)	14.55

Total Runoff Volume Reduction (ft <sup>3</sup> )	3056
Total TP Load Reduction Achieved (lb/yr)	16.38
Total TN Load Reduction Achieved (lb/yr)	174.57
Adjusted Post Development TP Load (lb/yr)	8.33
Remaining Phosphorous Load Reduction (Lb/yr) Required	0.00

## **Drainage Area Summary**

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
Forest (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Turf (acres)	8.0000	0.0000	0.0000	0.0000	0.0000	8.0000
Impervious (acres)	8.6700	0.0000	0.0000	0.0000	0.0000	8.6700
						16.6700

### **Drainage Area Compliance Summary**

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	Total
TP Load Red. (lb/yr)	16.38	0.00	0.00	0.00	0.00	16.38
TN Load Red. (lb/yr)	174.57	0.00	0.00	0.00	0.00	174.57

# **Drainage Area A Summary**

## **Land Cover Summary**

	A Soils	B Soils	C Soils	D Soils	Total	% of Total
Forest (acres)	0.00	0.00	0.00	0.00	0.00	0.00
Turf (acres)	0.00	0.00	8.00	0.00	8.00	47.99
Impervious (acres)	0.00	0.00	8.67	0.00	8.67	52.01
					16.67	

# **BMP Selections**

Practice	Credit Area (acres)	Downstream Practice	
Total Impervious Cover Treated (acres)	8.67		

### **Channel and Flood Protection**

		1-year storm Adjusted CN	Adjusted CN	10-year storm Adjusted CN
Target Rainfall Event (in)		0.00	0.00	0.00
D.A. A CN	86	#N/A	#N/A	#N/A
D.A. B CN	0	100	100	100
D.A. C CN	0	100	100	100
D.A. D CN	0	100	100	100
D.A. E CN	0	100	100	100

# Version 2.8 - June 2014 - 2011 BMP Stnds & Specs

- 1 Fixed summary sheet totals /percentage column fixed
- 2 Corrected nitrogen efficiency percentages
- 3 Corrected the Rv value in column J for managed turf
- 4 Checked and revised runoff reduction credit values assigned

