NOCC Digital Form Instructions

Note to user: This is a PDF Fillable Form. Download the file and complete the necessary fields. An individual form is required for each BMP.

1. Complete Project Information: Name, Structure ID, Address, City, State

2. Enter Tax Map, Block, Parcel, Land Use and Growth Management Permit Number, DPW&T Permit Number.

3. Enter the Maryland 8 Digit Watershed Code (Located on St. Mary's County GIS):

02140104 Breton Bay
02139997 Middle Chesapeake Bay
02131101 Patuxent River lower
02140101 Potomac River L tidal
02140103 St. Mary's River
02140105 St. Clements Bay
02140106 Wicomico River
02140107 Gilbert Swamp

4. Location NAD 83 Coordiantes (ft.)
   Enter the Easting and Northing Coordinates, in addition to the corresponding Latitude and Longitude. (free resource: https://www.earthpoint.us/stateplane.aspx). Convert State Plane to Latitude and Longitude. Enter: Zone: 1900 - Maryland, Select US Survey Feet (3937 yards = 3600 meters).

5. Check Box: Construction Purpose: Conversion, New Development, Restoration or Redevelopment.
   Note: If Conversion, enter the existing BMP type.

6. Enter Implementation Cost: Projected or actual cost as applicable.

7. LAND USE: 1. Select Land Use Category from the drop-down menu, 2. Select appropriate corresponding subcategory.

   10 - Urban build-up

   Subcategory:

   - 11-Low density residential(.2-2 du/ac)
   - 12-Medium density residential(>2-8 du/ac)
   - 13-High density residential(>8 du/ac)
   - 14-Commercial L5 Industrial
   - 15-Industrial
   - 16-Institutional
   - 17-Extractive
   - 18-Open urban land
   - 191-Large lot subdivision (Agricultural)
   - 192-Large lot subdivision (Forest)

   20 - Agriculture

   Subcategory:

   - 21-Cropland
   - 22-Pasture
   - 23-Orchards
   - 24-Feeding Operations
   - 241-Feeding Operations
   - 242-Agricultural Facilities

40 - Forest

Subcategory:

41-Deciduous Forest
42-Evergreen Forest
43-Mixed Forest
44-Brush

50 - Water

Subcategory: N/A

60 - Wetlands

Subcategory: N/A

70 - Barren Lands

Subcategory: N/A

80 - Transportation

Subcategory: N/A

8. Choose Facility Site Location from the drop-down menu: *On-Site or Off-Site*

9. BMP CLASS: 1. Check Appropriate Box: (A) Alternative Practice, (E) Environmental Site Design, (S) Structural Practices. 2. Select associated BMP TYPE.

(A) Alternative Practice:

BMP TYPE:

FUND- Underground Filter
FSND,FUND- Underground Sand Filter System

(E) Environmental Site Design:

BMP TYPE:

Green Roof-Extensive (AGRE)
Green Roof-Intensive (AGRI)
Permeable Pavements (APRP)
Reinforced Turf (ARTF)
Rainwater Harvesting (MRWH)
Submerged Gravel Wetlands (MSGW)
Landscape Infiltration (MILS)
Infiltration Berms (MIBR)
Dry Wells (MIDW)
Micro-Bioretention (MMBR)
Rain Gardens (MRNG)
Grass Swale (MSWG)
Wet Swale (SMWW)
Bio-Swale (MSWB)
Enhanced Filters (MENF)
Disconnection of Rooftop Runoff (NDRR)
Disconnection of Non-Rooftop Runoff (NDNR
Sheetflow to Conservation Areas (NSCA)

(S) Structural Practices:

BMP TYPE:

Retention Pond-Wet (PWET)
Multiple Pond System (PMPS)
Extended Detention Structure, Wet (PWED)
Pocket Pond (PPKT)
Micropool Extended Detention Pond (PMED
ED-Wetland (WEDW)
Wet Pond- Wetland (WPWS)
Pocket Wetland (WPKT)
Shallow Marsh (WSHW)
Infiltation Basin (IBAS)
Infiltration Trench (ITRN)
Bioretention (FBIO)
Sand Filter (FSND)
Perimeter (Sand) Filter (FPER)
Underground Filter (FUND)
Organic Filter (Peat Filter) (FORG)
Dry Swale (ODSW)
Wet Swale (OWSW)

Enter BMP Information:

- Facility Drainage Area
- Total Project Area – (Limits of Disturbance - LOD)
- Major Drainage Area ID # - (Enter ID Name and Number from Plan Set)
- Sub Drainage Area ID #- (Enter ID Name and Number from Plan Set)
- RCN (Runoff Curve Number) – (Use Chart 5.3 page 5.21 from "2000 Maryland Stormwater Design Manual Volumes I & II)
- Pe Treated Prior to Conversion (if applicable),
- Pe REQ – (Required)
- Pe Provided – (Rainfall Treated for water quality WQt)
- EIA (Equivalent Impervious Area) (Ac) – See The Maryland Department of the Environment "Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated Guidance for National Pollutant Discharge Elimination System Stormwater Permits" (2014, Phase II).
- Impervious Drainage Area (Ac) – (Input impervious with associated Drainage Area)

10. Enter Alternative BMP if applicable from drop-down menu.

CBC-Catch Basin Cleaning
CLTM-Conservation Landscaping
DGI-Elimination of Nutrient Discharges
FCO-Forest Conservation
FPU-Forestation to Perv. Urban
FTW-Floating Treatment Wetlands
MSS-Mechanical Street Sweeping
OUT-Outfall Stabilization
RCL-Riparian Conservation Landscaping
RFP-Riparian Forest Planting
SDV - Storm Drain Vaccming
SEPC-Septic Connecitons to WWTP
SEPD-Septic Denitrification
SEPP-Septic Plumbing
SHST-Shoreline Management
STCI-Street Trees
STRE-Stream Restoration
USRI-Urban Soil Restoration (Remvd. imp surfaces)
USRP-Urban Soil Restoration(Comp. perv surfaces)
UTC-Urban Tree Canopy
VSS-Regenerative Vacuum Street Swp
IMPF-Impervious Surface Elimination (to Forest)
IMPP-Impervious Surface Elimination (to pervious)

11. If applicable input amount with units for the Alternative BMP (examples: OUT-Outfall Stabilization 200 LF, IMPP-Impervious Surface Elimination to Pervious 1 Ac).

12. Enter values for TN (Total Nitrogen) Load Reduction Total, TP (Total Phosphorous) Load Reduction Total, TSS (Total Suspended Solids) Load Reduction Total, and Equivalent Impervious Area. This calculation shall be in accordance with The Maryland Department of the Environment "Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated Guidance for National Pollutant Discharge Elimination System Stormwater Permits" (2014, Phase II). See "Attachment A" for guidance.

    TN: load reduction (lbs/year; limit to 2 significant digits.
    TP: load reduction (lbs/year); limit to 2 significant digits.
    TSS: load reduction (lbs/year): limit to 2 significant digits.

13. Enter Pretreatment Practices if applicable from the drop-down menu.
    - FSND-Membrane (Structural) Filter
    - XOTH-Inlet Filter
    - XOTH-Trash and Debris Screen
    - XOGS-Catch Basin Insert
    - XOGS-Hydrodynamic Device
    - XOGS-OGS Filter
    - XOGS-OGS/Filter System
    - XOGS-Vault/Filter System

14. Provide the Product Name, Manufacturer and Model Number. If using a pretreatment practice not listed in the drop-down menu, check the OTHER box and provide a description.

15. Enter the Name, Title, Company, Authorized Signature and Phone Number of the person completing the form. Authorized Signature in accordance with COMAR 26.17.02.09.A, may be a professional engineer, professional land surveyor, or landscape architect licensed in the State.

16. OFFICIAL USE ONLY to be completed by authorized government personnel only.

Attachment "A"

1. New Development

Use Q to find your Percent (%) Efficiency

$$Q = \frac{(12 \times EP)}{IA}$$

where: Q = runoff depth treated per impervious acre (inches)
EP = state-specific engineering parameter (acre-feet); either ESD_v or WQ_v
IA = impervious area (acres)

Table 6. Removal Rates for ESD/RR and ST Practices

Runoff Depth Treated Q (inches)	TSS		TP		TN	
	Ch 5 ESD/RR	Ch 3 ST	Ch 5 ESD/RR	Ch 3 ST	Ch 5 ESD/RR	Ch 3 ST
0.00	0%	0%	0%	0%	0%	0%
0.25	40%	37%	38%	29%	32%	19%
0.50	56%	52%	52%	41%	44%	26%
0.75	64%	60%	60%	47%	52%	30%
*1.00**	70%	66%	66%	52%	57%	33%
1.25	76%	71%	70%	55%	60%	35%
1.50	80%	74%	74%	58%	64%	37%
1.75	83%	77%	77%	61%	66%	39%
2.00	86%	80%	80%	63%	69%	40%
2.25	88%	83%	82%	65%	71%	41%
2.50	90%	85%	85%	66%	72%	42%

NOTE: Where runoff reduction or ESD practices are used, or other acceptable RR practices predominate, the ESD/RR curves should be used. Otherwise, the stormwater treatment or ST curves should be used.

***Typical scenario for redevelopment projects treating 50% of existing surface area.**

Table 5. Classification of BMPs Used in Maryland[1]

Runoff Reduction (RR) Practices	Stormwater Treatment (ST) Practices
All ESD Practices in Manual[2]: • Alternative Surfaces • Nonstructural Practices • Micro-Scale Practices	Structural Practices in Manual[2] • Wet Ponds • Wetlands • Filtering Practices (ex. Bioretention) • Wet Swales
Structural Practices in Manual[2]: • Infiltration Practices • Bioretention Filters • Dry Swales	

Note: Structural stormwater management practices that do not meet the performance criteria established in the Manual (e.g., dry detention or extended detention ponds, hydrodynamic structures) may not be used to meet restoration requirements.

1. Schueler and Lane, 2012
2. 2000 Maryland Stormwater Design Manual, Volumes I & II

Table A.1 CBP Annual Urban Runoff Loads Per Acre, Version 5.3.2

Parameter	Urban Impervious	Urban Pervious	Weighted All Urban
TN (lbs)	15.3	10.8	11.7
TP (lbs)	1.69	0.43	0.68
TSS (tons)	0.44	0.07	0.18

Source: CBWM version 5.3.2, Maryland Statewide average urban loading rates without BMPs provided by MDE, Science Service Administration, Jeff White, 2014b.

Pollutant reduction =
(Percent Efficiency in decimal form (i.e. 90 % use 0.90)) (Pollutant Load Per Ac Imp. Area) (Imp. DA)
+ (Percent Efficiency in decimal form (i.e. 90 % use 0.90)) (Pollutant Load Per Ac Pervious Area) (Pervious DA)