Urban Best Management Practice (BMP) Database and Codes

The data tables below provide a tracking system for all BMPs within a jurisdiction. BMP reporting requires populating data from three related tables as follows:

1. Table B.1.a: Information in this table must be completed for all structural, ESD, and alternative BMPs.

2. Table B.1.b: This table provides more specific information related to structural and ESD practices. The table is linked to Table B.1.a using the common field BMP_ID.

3. Table B.1.c: This table provides more specific information related to alternative BMPs. The table is linked to Table B.1.a using the common field BMP_ID.

Data must be submitted in Microsoft Excel spreadsheet format. A map using geographic information system (GIS) software is optional. An Excel spreadsheet template is provided on MDE's Phase II webpage to assist permittees in developing the database.

Some data for older BMPs may not be available, as the information was not required at the time of BMP construction. In these cases, an explanation must be provided. MDE expects that data development and verification will be an ongoing process throughout the permit term and baselines may be adjusted accordingly. Permittees may submit an adjusted impervious area baseline in MS4 Progress Reports to reflect updated information.

Reporting for ESD Practices

ESD practices may be entered as a single structure or as a system of practices. When numerous ESD practices are installed to collectively address stormwater requirements for a project, permittees may choose to enter these data as a system of ESD practices. Data for ESD systems may be captured by specifying:

- The common BMP_ID field will link ESD data in Table B.1.a to Table B.1.b.
- Table B.1.a requires Maryland grid coordinates for each BMP. For ESD systems this location must represent the most downstream point or practice.
- Table B.1.a requires the BMP type (BMP_Type). This is the most predominant BMP type in the ESD system.
- Table B.1.b requires the total number of BMPs (NUM_BMPS) implemented to address stormwater requirements for the ESD system of practices.
- Table B.1.b requires the total rainfall treated (PE_ADR). This represents the total rainfall treated for the collective number of BMPs in the ESD system.

Inspections for ESD Systems

Projects that meet the ESD to MEP requirement may be inspected as a collection of practices. Inspection and maintenance data in Table B.1.a. for ESD systems will represent the performance of the system of practices versus each individual practice. This is consistent with Code of Maryland Regulations 26.17.02.

Table B.1.a BMP Reporting Requirements

Description: This table is to be completed for all structural, ESD, and alternative BMPs.

Column Name	Data Type	Size	Description
BMP_ID	TEXT	13	Unique MDE BMP ID. (Ex: RO12BMP000001, Table B.2.a) (Ex: AOC12BMP00001, Table B.2.b)
REPORTING_YEAR	TEXT	4	State fiscal year (YYYY)
MD_NORTH	NUMERIC	8	Maryland grid coordinate Northing (NAD 83 meters)
MD_EAST	NUMERIC	8	Maryland grid coordinate Easting (NAD 83 meters)
PERMIT_NUM	TEXT	10	General Discharge Permit Number (municipal permittees use: 13-IM-5500. State and federal permittees use 13-SF-5501)
LOCAL_BMP_ID	TEXT	25	Local or State/federal project approval number (optional info)
BMP_NAME	TEXT	100	Use BMP names (e.g., Glendale Pond)
BMP_CLASS	TEXT	1	Use BMP classification noted in Table B.3 below (E, S, or A)
BMP_TYPE	TEXT	4	Use BMP Type or most predominant type in Table B.3 below
CON_PURPOSE	TEXT	4	Enter code for New Development (NEWD), Redevelopment (REDE), or Restoration (REST), Conversion (CONV)
LAST_INSP_DATE	DATE	8	Last inspection date (MM/DD/YYYY)
BMP_STATUS	TEXT	1	Enter P = Pass or F = Fail for BMP inspection status
MAIN_DATE	DATE	8	Last date maintenance was performed (MM/DD/YYYY); field is conditional on the BMP failing an inspection
REINSP_DATE	DATE	8	Next planned inspection date (MM/DD/YYYY)
REINSP_STATUS	TEXT	1	Re-inspection status (i.e., Pass/Fail); This is a follow-up inspection after a failed BMP has undergone maintenance
GEN_COMMENTS	TEXT	255	General comments - optional information

Table B.1.b Reporting Requirements for ESD and Structural Practices

Description: More specific data related to ESD and structural BMPs is populated in this table.

Column Name	Data Type	Size	Description
BMP_ID	TEXT	13	BMP_ID linking record to BMP_ID in Table B.1.a
NUM_BMPS	NUMERIC	2	Sum total of BMPs used to meet P_E (enter 1 for a single BMP)
ON_OFF_SITE	TEXT	10	Is the BMP located on the project site or off site
CONVERTED_FROM	TEXT	13	If conversion of existing BMP then prior BMP_ID must be entered here. Conditional on Con_Purpose = CONV
BMP_STATUS	TEXT	10	Enter "ACT" for active or "REM" for removed
BMP_DRAIN_AREA	NUMERIC	6	Total drainage area (acres) to a single BMP or ESD system
IMP_ACRES	NUMERIC	8	Total impervious area (acres) to a single BMP or ESD system
PE_ADR	NUMERIC	8	P_E addressed: Water quality treatment reported as rainfall (inches) treated for a single BMP or system of ESD practices within the drainage area
APPR_DATE	DATE	8	Permit approval date (MM/DD/YYYY)
BUILT_DATE	DATE	8	Construction completion date (MM/DD/YYYY)
GEN_COMMENTS	TEXT	255	General comments - optional information

Table B.1.c Reporting Requirements for Alternative BMPs

Description: More specific data related to alternative BMPs is populated in this table.

Column Name	Data Type	Size	Description
BMP_ID	TEXT	13	BMP_ID linking record to BMP_ID in Table B.1.a
PROJECT_DESC	TEXT	75	Description of project
PROJECT_LENGTH	NUMERIC	8	Length of stream restoration, shoreline or outfall stabilization in feet; Field is conditional on BMP_TYPE = OUT, SHST, or STRE
ACRES_SWEPT	NUMERIC	6	Acres swept for street sweeping (one pass); Field is conditional on BMP_TYPE = MSS or VSS
TIMES_SWEPT	NUMERIC	2	Number of times per year area is swept; Field is conditional on BMP_TYPE = MSS or VSS
ACRES_PLANTED	NUMERIC	6	Acres of trees planted; Field is conditional on BMP_TYPE = FPU or IMPF
IMP_ACR_ELIM	NUMERIC	6	Impervious acres removed to pervious land (IMPP); Field is conditional on BMP_TYPE = IMPP
EQU_IMP_ACR	NUMERIC	6	Equivalent impervious acres treated by alternative BMP (total acres of credit for the alt BMP)
INSTALL_DATE	DATE	8	BMP completion date (MM/DD/YYYY); Field is conditional on BMP_TYPE = OUT, SHST, STRE, SEPC, SEPD, or SEPP
IMPL_COMP_YR	TEXT	4	Year (calendar) of completed Project (YYYY); Field is conditional on BMP_TYPE = MSS, VSS, CBC, SDV, IMPF, IMPP, or FPU
GEN_COMMENTS	TEXT	255	General comments - optional information

BMP ID Field

The BMP_ID is a unique identifier assigned to each BMP or system of BMPs. An example of how to populate the BMP_ID field for a municipality using the required 13 characters is provided:

County or Municipal code + 2 digit year + BMP identifying code + 6 digit sequential number = 13 character BMP_ID code.

Table B.2.a

Municipality: City of Rockville	*RO*
	+
Year feature/record was captured: 2012	*12*
	+
Identifying code: BMP	*BMP*
	+
Record number: 1	*000001*
BMP_ID	***= RO12BMP000001***

County or Municipal Codes for Phase II Reporting:

Jurisdiction	Code
Aberdeen	AB
Annapolis	AN
Bel Air	BE
Bowie	BO
Calvert County	CV
Cecil County (includes North East, Perryville, and Rising Sun)	CE
Easton	EA
Elkton	EL
Frederick County (includes Brunswick, Emmitsburg, Middletown, Myersville, Thurmont, and Walkersville)	FR
City of Frederick	FC
Gaithersburg	GA
Hagerstown	HG
Havre de Grace	HV
Indian Head	IH
La Plata	LP
Queen Anne's County	QA
Rockville	RO
Takoma Park	TP
Salisbury	SI
St. Mary's County	SM
Wicomico County (includes Fruitland)	WI
Washington County (includes Boonsboro, Smithsburg, and Williamsport)	WA

State and federal permittees are also required to use a 13 character BMP_ID. Suggested agency codes are listed in the Excel spreadsheet template. If a permittee would like to use a different agency code than found in the template, MDE must approve that alternative agency code to ensure that it is not already in use.

Examples of how to populate the BMP_ID field for a State or federal permittee using the required 13 characters is provided:

Table B.2.b

Agency: Architect of the Capitol	*AOC*
	+
Year feature/record was captured: 2012	*12*
	+
Identifying code: BMP	*BMP*
	+
Record number: 1	*00001*
BMP_ID	***= AOC12BMP00001***

Agency: Maryland Army National Guard	*MARNG*
	+
Year feature/record was captured: 2012	*12*
	+
Identifying code: BMP	*BMP*
	+
Record number: 1	*001*
BMP_ID	***= MARNG12BMP001***

Table B.3 BMP Database Codes: BMP Class and BMP Type

BMP Class	BMP Type Code	BMP Type
Alternative Surfaces (A)		
E	AGRE	Green Roof – Extensive
E	AGRI	Green Roof – Intensive
E	APRP	Permeable Pavements
E	ARTF	Reinforced Turf
Nonstructural Techniques (N)		
E	NDRR	Disconnection of Rooftop Runoff
E	NDNR	Disconnection of Non-Rooftop Runoff
E	NSCA	Sheetflow to Conservation Areas
Micro-Scale Practices (M)		
E	MRWH	Rainwater Harvesting
E	MSGW	Submerged Gravel Wetlands
E	MILS	Landscape Infiltration
E	MIBR	Infiltration Berms
E	MIDW	Dry Wells
E	MMBR	Micro-Bioretention
E	MRNG	Rain Gardens
E	MSWG	Grass Swale
E	MSWW	Wet Swale
E	MSWB	Bio-Swale
E	MENF	Enhanced Filters
Ponds (P)		
S	PWED	Extended Detention Structure, Wet
S	PWET	Retention Pond (Wet Pond)
S	PMPS	Multiple Pond System
S	PPKT	Pocket Pond
S	PMED	Micropool Extended Detention Pond
Wetlands (W)		
S	WSHW	Shallow Marsh
S	WEDW	Extended Detention – Wetland
S	WPWS	Wet Pond – Wetland
S	WPKT	Pocket Wetland
Infiltration (I)		
S	IBAS	Infiltration Basin
S	ITRN	Infiltration Trench
Filtering Systems (F)		
S	FBIO	Bioretention
S	FSND	Sand Filter
S	FUND	Underground Filter
S	FPER	Perimeter (Sand) Filter

BMP Class	BMP Type Code	BMP Type
S	FORG	Organic Filter (Peat Filter)
S	FBIO	Bioretention
Open Channels (O)		
S	ODSW	Dry Swale
S	OWSW	Wet Swale
Other Practices (X)		
S	XDPD	Detention Structure (Dry Pond)
S	XDED	Extended Detention Structure, Dry
S	XFLD	Flood Management Area
S	XOGS	Oil Grit Separator
S	XOTH	Other

Alternative BMP Classification, Alternative BMP Type, and Alternative BMP Name

Alt. BMP Class	BMP Type Code	BMP Name
A	MSS	Mechanical Street Sweeping
A	VSS	Regenerative/Vacuum Street Sweeping
A	IMPP	Impervious Surface Elimination (to pervious)
A	IMPF	Impervious Surface Elimination (to forest)
A	FPU	Planting Trees or Forestation on Pervious Urban
A	CBC	Catch Basin Cleaning
A	SDV	Storm Drain Vacuuming
A	STRE	Stream Restoration
A	OUT	Outfall Stabilization
A	SPSC	Regenerative Step Pool Storm Conveyance
A	SHST	Shoreline Management
A	SEPP	Septic Pumping
A	SEPD	Septic Denitrification
A	SEPC	Septic Connections to WWTP
A	NNET	Nutrient Net (Agriculture Trading)
A	POTW	Publicly Owned Treatment Works (WWTP Trading)