INSPECTION FIELD DATA FORMS: Enhanced Swales

### **GENERAL INFORMATION:**

BMP Identifier:	Inspection type:
Address:	Location:
BMP construction date:	BMP assumption date:

# **VISUAL INDICATORS:**

Inspection date and time:	Weather (24 hours prior to inspection):		
Inspected by:	Inspection duration (minutes):		

ZONE	INDICATOR & TRIGGER FOR FOLLOW-UP	CONDITION		FOLLOW-UP
CDA	Contributing drainage area condition:  Area differs by >10% from design or as-built drawing; Excessive trash, debris, sediment or	Comments/Measurements:		Action:
	other pollutant load is present or impairing function of the BMP; Land cover has changed	Pass:	Fail:	Timeframe:
	Inlet structural integrity: Damage to inlet or flow spreader structure is impairing function of the BMP	Comments/Measurements:		Action:
		Pass:	Fail:	Timeframe:
	Inlet obstruction:  Sediment/trash/debris/vegetation ≥5 cm deep or blocking inflow over one third (33%)	Comments/Measurements:		Action:
	of the width	Pass:	Fail:	Timeframe:
INLET	Pretreatment sediment accumulation:  Device is ≥50% full of sediment/trash/debris	Comments/Measurements:		Action:
	or inflow of water to the BMP is impaired	Pass:	Fail:	Timeframe:
	Inlet erosion: Gullies or bare soil areas ≥ 30 cm in length	Comments/Measurements:		Action:
	are visible	Pass:	Fail:	Timeframe:

PERIMETER	BMP dimensions: Differ from design or as-built drawing by	Comments/Measurements:		Action:
	>10%	Pass:	Fail:	Timeframe:
	Side slope erosion: Gullies, ruts or bare soil areas ≥30 cm in	Comments/Measurements:		Action:
PEF	length are visible	Pass:	Fail:	Timeframe:
	Surface ponding area: Effective surface ponding area differs from	Comments/Measurements:		Action:
	design by >25%	Pass:	Fail:	Timeframe:
	Standing water: Standing water ponded on filter bed surface	Comments/Measurements:		Action:
	>24 hours after the end of a storm event	Pass:	Fail:	Timeframe:
	Trash: Trash is visible and impairing aesthetics or	Comments/Measurements:		Action:
	function of the BMP	Pass:	Fail:	Timeframe:
Ω	Filter bed erosion: Gullies, ruts or bare soil areas ≥30 cm in	Comments/Measurements:		Action:
R BI	length are visible	Pass:	Fail:	Timeframe:
FILTER BED	Mulch depth:  Average depth is less than 5 cm or greater than 15 cm or bare soil areas are visible	Comments/Measurements:		Action:
	than 15 cm of bare son areas are visible	Pass:	Fail:	Timeframe:
	Filter bed sediment accumulation:  Mean or local accumulation of sediment is ≥5	Comments/Measurements:		Action:
	cm in depth	Pass:	Fail:	Timeframe:
	Surface ponding depth:  Maximum differs from design by ≥10 cm	Comments/Measurements:		Action:
		Pass:	Fail:	Timeframe:

FILTER BED	Filter bed surface sinking:  Local surface depressions are ≥10 cm in	Comments/Measurements:		Action:
	depth or animal burrows are visible	Pass:	Fail:	Timeframe:
	Check dams: Structures are missing or buried in sediment	Comments/Measurements:		Action:
		Pass:	Fail:	Timeframe:
	Vegetation cover: Less than 80% of planting area is covered by	Comments/Measurements:		Action:
⋖	living vegetation	Pass:	Fail:	Timeframe:
PLANTING AREA	Vegetation condition: Vegetation is over-grown or over-crowded and is impairing aesthetics or obstructing	Comments/Measurements:		Action:
AN.	sight lines needed for safety	Pass:	Fail:	Timeframe:
PL	Vegetation composition: More than 50% of the vegetation is undesirable (e.g. weeds, invasive) or not the	Comments/Measurements:		Action:
	species specified in the planting plan	Pass:	Fail:	Timeframe:
OUTLET	Overflow outlet obstruction: Structural damage, sediment/trash/debris is obstructing outflow, structure is full of water or grate is missing	Water level (cm): Pass:	nts:	Action: Timeframe:
	- 0 0			

### Codes

Inspection type: C = Construction; A = Assumption; RO = Routine Operation; MV = Maintenance Verification; PV = Performance Verification

**Comments:** NA = not applicable; NI = not inspected.

**Actions:** 0 = no action necessary; 1 = routine maintenance needed; 2 = structural repair needed; 3 = further investigation needed.

Photographs:	
Notes and Sketches:	

# **SOIL CHARACTERIZATION TESTING:**

BMP Identifier	Inspection Type:
Sampling date and time:	Weather (24 hours prior to sampling):
Sampled by:	Sampling duration (minutes):

Sampling Location	Sample Collected? (Y/N)	Topsoil Depth (cm)	Maximum Penetrometer Reading (PSI, kg/cm² or kPa)	Sample Location	Sample Collected? (Y/N)	Topsoil Depth (cm)	Maximum Penetrometer Reading (PSI, kg/cm² or kPa)

**Notes and Sketches:** 

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#### **NATURAL OR SIMULATED STORM EVENT TESTING:**

BMP Id	lentifier:		Inspection Type:			
			Check dam invert height (cm, between check dam invert and the soil or sediment surface on the upstream side):			
Tested by:			Test duration (hours):			
Term	Parameter	Test 1		Test 2	Test 3	Mean
A	Volume of water directed to the BMP (L or m <sup>3</sup> , estimated from CDA and rainfall depth for natural storm events, measured by magnetic flow meter for simulated storm events):					
В	Maximum post-storm filter bed surface water level (mm, at end of rainfall or delivery of water to the BMP):					
С	Date/time (mm/dd/yyyy hh:mm:ss) of maximum post-storm filter bed surface water level:					
D	Date/time (mm/dd/yyyy hh:mm:ss) when filter bed surface water level reaches 50 mm:					
E	Minimum post-storm filter bed surface water level (mm, zero or static reading or level just prior to onset of next rain storm):					
F	Date/time (mm/dd/yyyy hh:mm:ss) of minimum post-storm filter bed surface water level (zero or static reading or level just prior to onset of next rain storm):					
G	Date/time (mm/dd/yyyy hh:mm:ss) when filter bed surface is fully drained (zero or static water level reading):					
Н	Filter bed surface ponding event duration (h, (G-C)*24):					
ı	Filter bed surface infiltration rate estimate (mm/h, (F-D)*24):					

# **Acceptance Criteria:**

Water flows into BMP as intended; Filter bed (i.e., swale) surface infiltration rate ≥15 mm/h and ≤203 mm/h, or consult manufacturer orvendor for an acceptable range specific to the product; Surface water storage reservoir (i.e., surface ponding behind check dams) fully drains within 24 hours of the end of the storm.