Site ID/Name: _____ Location: _____ Inspector: _____ Date: _____

BIORETENTION

Applies to Bioinfiltration, Bioswales (Dry Enhanced Swales) and Rain Gardens.

GOOD EXAMPLES

GENERAL INSPECTION QUESTIONS

Note: 'Yes' indicates a maintenance need and action

General:

1. Is access to the site inadequately maintained for inspection and maintenance? **YES / NO**
2. Are grass clippings present in the drainage area or within the system [inlet structure, pretreatment (filter strip and grass channel), main treatment, or outlet/overflow structure]? *(Note: grass clippings should be removed)* **YES / NO**

Drainage Area: *(pertains to the surrounding landscape that will contribute runoff to the practice)*

3. Is there any exposed or unstable soil that could cause sediment accumulation within the practice? **YES / NO**
4. Do the drainage ways (overland flow or pipes) to the practice have trash, debris, grass clippings, large branches, etc. present? **YES / NO**

Inlet Structure / Pretreatment: (Choose One)

A. *Forebay* **B.** *Weir* **C.** *Filter Strip / Grass Channels* **D.** *Rock-Lined Plunge Pools*

5. Does this area have trash, debris, or sediment present? **YES / NO**
6. Condition of **A-D** listed above:
   - **A/C:** Is there any undesirable vegetation or unhealthy grass *(bare or dying)?* **YES / NO**
   - **B:** Is the sediment more than 25% of the total depth of the weir? **YES / NO**
   - **D:** Is the rock thickness in the pool inadequate? **YES / NO**
7. Is there evidence of runoff short-circuiting (going around) the inlet structure? **YES / NO**
8. Is there evidence of gullies, rills, or erosion around the inlet or pre-treatment structure? **YES / NO**

COMMENTS: _____

_____

9. Does the area around the inlet structure (including filter strip and grass channels) need to be mowed? **YES / NO**
10. If a diversion structure (high flow bypass structure or underdrain) is present, is there presence of trash, debris, on sediment? **YES / NO**

Main Treatment:

11. Is there evidence of long-term ponding or standing water in the practice (more than 48 hours after a rain event)? (e.g., stains, odors, mosquito larvae, etc.) **YES / NO**
12. Is there any evidence of fertilizer use on plants? (e.g., fertilizer crusting on surface of soil, tips of leaves turning brown or yellow, blackened roots, etc.) **YES / NO**
13. For practices with internal check dams to allow for surface ponding on a slope, is there erosion present around the side of the check dams? **YES / NO**
14. Is the mulch depth inadequate or too deep? Note: target depth is 2 to 4 inches **YES / NO**

Underdrain: (if installed)

15. If cleanouts are included, are caps missing? **YES / NO**
16. Are cleanout caps in poor condition? (e.g., inadequately sealed or set below maximum ponding depth) **YES / NO**
17. Are there any signs of the underdrain being clogged or a blockage? **YES / NO**

Emergency Overflow / Outlet Structure:

18. Do these structures have trash, debris, sediment or structural damage present? **YES / NO**
19. Is there evidence of erosion, scour, or flooding around the structure? **YES / NO**

QUALITATIVE INSPECTION QUESTIONS (GOOD/MARGINAL/POOR)

Note: 'Poor' indicates a maintenance need and action

20. Rate the presence of sediment accumulation in the bioretention surface area.	**GOOD** (<25% of area)	**MARGINAL** (25-50%)	**POOR** (>50%)
21. Rate the presence of debris (e.g., leaves, trash, grass clippings) in the bioretention surface area.	**GOOD** (<25% of area)	**MARGINAL** (25-50%)	**POOR** (>50%)
22. Rate the presence of undesirable vegetation.	**GOOD** (<25% of area)	**MARGINAL** (25-50%)	**POOR** (>50%)
23. Rate the condition of plant health per landscaping plan and site objectives.*	**GOOD** (<25% dying/stressed)	**MARGINAL** (25%-50% dying/stressed)	**POOR** (>50% dying/stressed)
24. Rate the condition of plant density per landscaping plan and site objectives.*	**GOOD** (>50% vegetation coverage)	**MARGINAL** (25%-50% vegetation)	**POOR** (overgrown or <25% vegetation)

** General percentages provided if landscaping plan and site objectives are not available*

EXAMPLES OF POTENTIAL ISSUES:

5 **INLET SEDIMENT**

5 **INLET STRUCTURE DEBRIS & SEDIMENT**

8 **INLET EROSION** (GRASS CHANNEL)

8 **INLET EROSION** (ROCK PLUNGE POOL)

8 **PRETREATMENT EROSION** (FILTER STRIPS), 14 **MULCH** (NONE), & 24 **PLANT DENSITY** (POOR)

8 **PRETREATMENT EROSION** (SLIDE SLOPES) & 22 **UNDESIRABLE VEGETATION** (POOR)

11 **EXCESSIVE PONDING** (CATTAILS & STAINING)

14 **MULCH** (NONE), 18 **OUTLET DEBRIS, & 22 UNDESIRABLE VEGETATION** (MARGINAL)

14 **MULCH** (NONE) & 22 **UNDESIRABLE VEGETATION** (POOR)

14 **MULCH** (NONE) & 24 **PLANT DENSITY** (POOR)

14 **MULCH** (<2"), 22 **UNDESIRABLE VEGETATION** (MARGINAL) & 24 **PLANT DENSITY** (MARGINAL)

18 **OUTLET DEBRIS**

19 **OUTLET STRUCTURE EROSION**

23 **PLANT HEALTH** (POOR - EXPOSED ROOTS AND UNSTABLE)

23 **PLANT HEALTH** (GOOD) & 24 **PLANT DENSITY** (POOR - OVERGROWN)

Site ID/Name: _____ Location: _____ Inspector: _____ Date: _____

PERMEABLE PAVEMENT

Pervious Concrete (PC)
(applicable to Porous Asphalt)

GOOD EXAMPLES

GENERAL INSPECTION QUESTIONS

Note: 'Yes' indicates a maintenance need and action

General:

1. Is access to the site inadequately maintained for inspection and maintenance? **YES / NO**
2. Is there evidence of runoff short-circuiting (going around) the practice? **YES / NO**
3. Is there evidence of gullies, rills, or erosion around the practice? **YES / NO**

Drainage Area: *(pertains to the surrounding landscape that will contribute runoff to the practice)*

4. Does the vegetation around the practice need to be pruned/mowed? Is vegetation unhealthy? (e.g., signs of bare/dead grass) **YES / NO**
   Note: grass clippings should be removed.
5. Is there any exposed or unstable soil around the practice that could cause sediment accumulation within the practice? **YES / NO**

Permeable Pavement Surface:

6. Is there evidence of long-term ponding or standing water in the practice? **YES / NO**
7. Are there signs of the pervious concrete settling or cracking? **YES / NO**

Inlets/Outlets:

8. Do drainage ways (overland flow or pipes) to the practice have trash, debris, large branches, etc. present? **YES / NO**
9. If cleanouts are included, are caps missing? **YES / NO**
10. If an underdrain system is included, are there signs of it clogging or a blockage? **YES / NO**
11. Does the emergency overflow have trash, debris, sediment or structural damage present? **YES / NO**

QUALITATIVE INSPECTION QUESTIONS (GOOD/MARGINAL/POOR)

Note: 'Poor' indicates a maintenance need and action

12. Rate the presence of undesirable vegetation.	**GOOD (<25% of area)**	**MARGINAL (25-50%)**	**POOR (>50%)**
13. Rate the presence of sediment accumulation in pore spaces.	**GOOD (<25% of area)**	**MARGINAL (25-50%)**	**POOR (>50%)**
14. Rate the presence of debris (e.g., leaves, trash, grass clippings) on the permeable pavement surface.	**GOOD (<25% of area)**	**MARGINAL (25-50%)**	**POOR (>50%)**
15. Rate the presence of concrete raveling. (e.g., aggregate becoming loose)	**GOOD (<25% of area)**	**MARGINAL (25-50%)**	**POOR (>50%)**
16. Is there visible smearing of pervious concrete? (e.g., no visible pore space)	**GOOD (<25% of area)**	**MARGINAL (25-50%)**	**POOR (>50%)**

COMMENTS: _____

EXAMPLES OF POTENTIAL ISSUES:

5 UNSTABLE DRAINAGE AREA & 13 SEDIMENT (POOR)

5 UNSTABLE DRAINAGE AREA & 14 DEBRIS (MARGINAL)

6 STANDING WATER, 12 VEGETATION (POOR) **& 13 SEDIMENT** (POOR)

6 PONDING / STANDING WATER

7 CRACKING–STRUCTURAL

7 CRACKING & 15 RAVELING (POOR)

7 CRACKING–STRUCTURAL

13 SEDIMENT (POOR)

13 SEDIMENT (POOR)

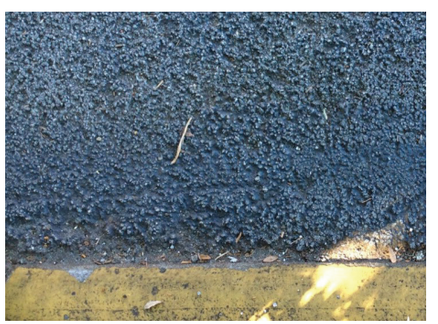
14 DEBRIS (MARGINAL)

15 RAVELING (POOR)

15 RAVELING (MARGINAL)

16 SMEARING (POOR)

16 SMEARING (POOR)

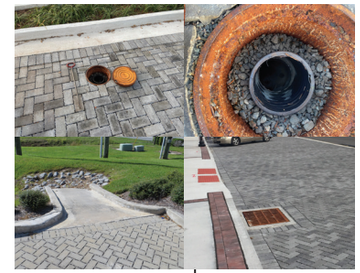


16 SMEARING (POOR)
(COVERED WITH ASPHALT SEALER)

Site ID/Name: _____ Location: _____ Inspector: _____ Date: _____

PERMEABLE PAVEMENT

Permeable Interlocking Concrete Pavement (PICP)



GOOD EXAMPLES

GENERAL INSPECTION QUESTIONS

Note: 'Yes' indicates a maintenance need and action

General:

1. Is access to the site inadequately maintained for inspection and maintenance? **YES / NO**
2. Is there evidence of runoff short-circuiting (going around) the practice? **YES / NO**
3. Is there evidence of gullies, rills, or erosion around the practice? **YES / NO**

Drainage Area: *(pertains to the surrounding landscape that will contribute runoff to the practice)*

4. Does the vegetation around the practice need to be pruned/mowed? Is vegetation unhealthy? (e.g., signs of bare/dead grass) **YES / NO**
   Note: grass clippings should be removed.
5. Is there any exposed or unstable soil around the practice that could cause sediment accumulation within the practice? **YES / NO**

Permeable Pavement Surface:

6. Is there evidence of long-term ponding or standing water in the practice? **YES / NO**
7. Are there signs of the bricks/pavers settling? **YES / NO**
8. Do the bricks/pavers show signs of cracks, splitting or structural damage? **YES / NO**
9. Is there aggregate missing between the bricks/pavers? **YES / NO**

Inlets/Outlets:

10. Do drainage ways (overland flow or pipes) to the practice have trash, debris, large branches, etc. present? **YES / NO**
11. If cleanouts are included, are caps missing? **YES / NO**
12. If an underdrain system is included, are there signs of it clogging or a blockage? **YES / NO**
13. Does the emergency overflow have trash, debris, sediment or structural damage present? **YES / NO**

Special Scenario (Concrete Grid Pavers with Vegetation):

A. Is the grass in the concrete grid unhealthy? (e.g., dead grass or bare spots) **YES / NO**

B. Is the grass in the concrete grid unmowed or are grass clippings present? **YES / NO**

QUALITATIVE INSPECTION QUESTIONS (GOOD/MARGINAL/POOR)

Note: 'Poor' indicates a maintenance need and action

14. Rate the presence of undesirable vegetation. **GOOD (<25% OF AREA)** **MARGINAL (25-50%)** **POOR (>50%)**
15. Rate the presence of sediment accumulation in pore spaces/aggregate between pavers. **GOOD (<25% OF AREA)** **MARGINAL (25-50%)** **POOR (>50%)**
16. Rate the presence of debris (e.g., leaves, trash, grass clippings) on the permeable pavement surface. **GOOD (<25% OF AREA)** **MARGINAL (25-50%)** **POOR (>50%)**

COMMENTS: _____

EXAMPLES OF POTENTIAL ISSUES:

5 UNSTABLE DRAINAGE AREA

5 UNSTABLE DRAINAGE AREA

7 SETTLING & 15 SEDIMENT

7 SETTLING

8 STRUCTURAL

8 STRUCTURAL &
15 SEDIMENT (POOR)

9 AGGREGATE

9 AGGREGATE

14 VEGETATION (POOR)

14 VEGETATION (POOR)

14 VEGETATION (MARGINAL)

15 SEDIMENT (POOR)

15 SEDIMENT (POOR)

16 DEBRIS (POOR)

16 DEBRIS (POOR)