BMP/design

BMP/design	Suspended Sediment	Total Phosphorus	Total Nitrogen	Oxygen Demand	Trace Metals	Bacteria	Overall Removal Capability
EXTENDED DETENTION POND							
DESIGN 1	●	◔	◔	◔	◑	⊗	MODERATE
DESIGN 2	●	◑	◕	◑	◕	⊗	MODERATE
DESIGN 3	●	◕	◑	◕	◕	⊗	HIGH
WET POND							
DESIGN 4	◔	◑	◔	◔	◔	⊗	MODERATE
DESIGN 5	◕	◑	◕	◕	◔	⊗	MODERATE
DESIGN 6	●	◕	◑	◑	◕	⊗	HIGH
INFILTRATION TRENCH							
DESIGN 7	◕	◑	◕	◕	◕	◕	MODERATE
DESIGN 8	●	◑	◑	●	●	●	HIGH
DESIGN 9	●	◕	●	●	●	●	HIGH
INFILTRATION BASIN							
DESIGN 7	◕	◑	◕	◕	◑	◕	MODERATE
DESIGN 8	●	◑	◑	◕	●	●	HIGH
DESIGN 9	●	◕	●	●	●	●	HIGH
POROUS PAVEMENT							
DESIGN 7	◑	◕	◑	◑	◑	◕	MODERATE
DESIGN 8	●	◕	◕	●	●	●	HIGH
DESIGN 9	●	◕	◕	●	●	●	HIGH
WATER QUALITY INLET							
DESIGN 10	○	⊗	⊗	⊗	⊗	⊗	LOW
FILTER STRIP							
DESIGN 11	◔	○	○	○	◔	⊗	LOW
DESIGN 12	●	◑	◑	◕	●	⊗	MODERATE
GRASSED SWALE							
DESIGN 13	○	○	○	○	○	⊗	LOW
DESIGN 14	◔	◔	◔	◔	○	⊗	LOW

KEY:

- ○   0 TO 20% REMOVAL
- ◔   20 TO 40% REMOVAL
- ◑   40 TO 60% REMOVAL
- ◕   60 TO 80% REMOVAL
- ●   80 TO 100% REMOVAL
- ⊗   INSUFFICIENT KNOWLEDGE

Design 1: First-flush runoff volume detained for 6-12 hours.
Design 2: Runoff volume produced by 1.0 inch, detained 24 hours.
Design 3: As in Design 2, but with shallow marsh in bottom stage.
Design 4: Permanent pool equal to 0.5 inch storage per impervious acre.
Design 5: Permanent pool equal to 2.5 (Vr); where Vr=mean storm runoff.
Design 6: Permanent pool equal to 4.0 (Vr); approx. 2 weeks retention.
Design 7: Facility exfiltrates first-flush; 0.5 inch runoff/imper. acre.
Design 8: Facility exfiltrates one inch runoff volume per imper. acre.
Design 9: Facility exfiltrates all runoff, up to the 2 year design storm.
Design 10: 400 cubic feet wet storage per impervious acre.
Design 11: 20 foot wide turf strip.
Design 12: 100 foot wide forested strip, with level spreader.
Design 13: High slope swales, with no check dams.
Design 14: Low gradient swales with check dams.

COMPARATIVE POLLUTANT REMOVAL OF URBAN BMP DESIGNS

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FIGURE 4.5-56

Source: Wildermuth Environmental, Inc.