



Operations & Maintenance Plan

Bioretention / Raingarden

BMP ID

Owner

Date

Minneapolis Public Schools

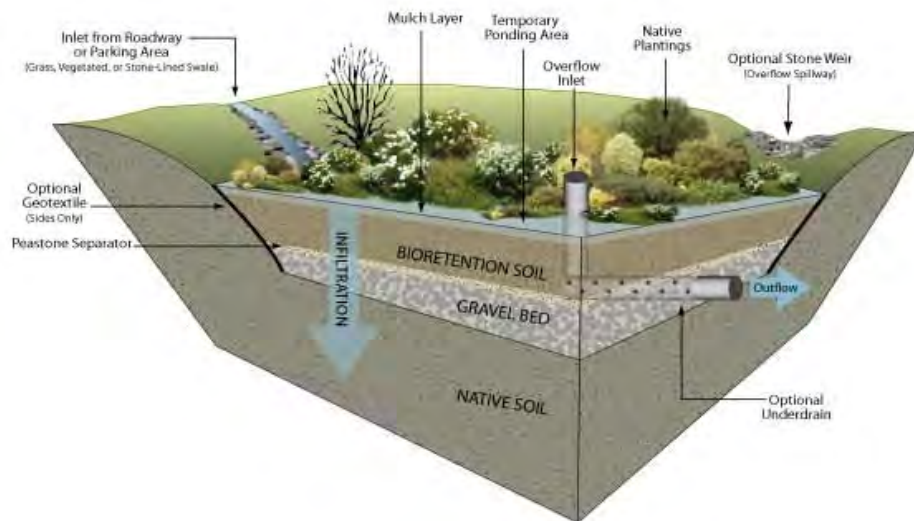
xxxxx

Location

Wilder Complex

Inspector

Metro Blooms



Overview of Bioretention / Raingardens

Raingarden Operations:

Bioretention works by routing stormwater runoff into shallow, landscaped depressions. These landscaped depressions are designed to hold and remove many of the pollutants in a manner similar to natural ecosystems. During storms, runoff ponds above the mulch and engineered soil mix in the system. Runoff from larger storms is generally diverted past the facility to the storm drain system. The runoff remaining in the bioretention facility filters through the Engineered Soil Mix. The filtered runoff can either be designed to enhance groundwater infiltration or can be collected in an under drain and discharged per local stormwater management requirements.

Raingarden Inspection:

Inspection of the rain garden is required after each major rain (more than 1" of rainfall) or at least 4 times per year during the growing season (March - November).

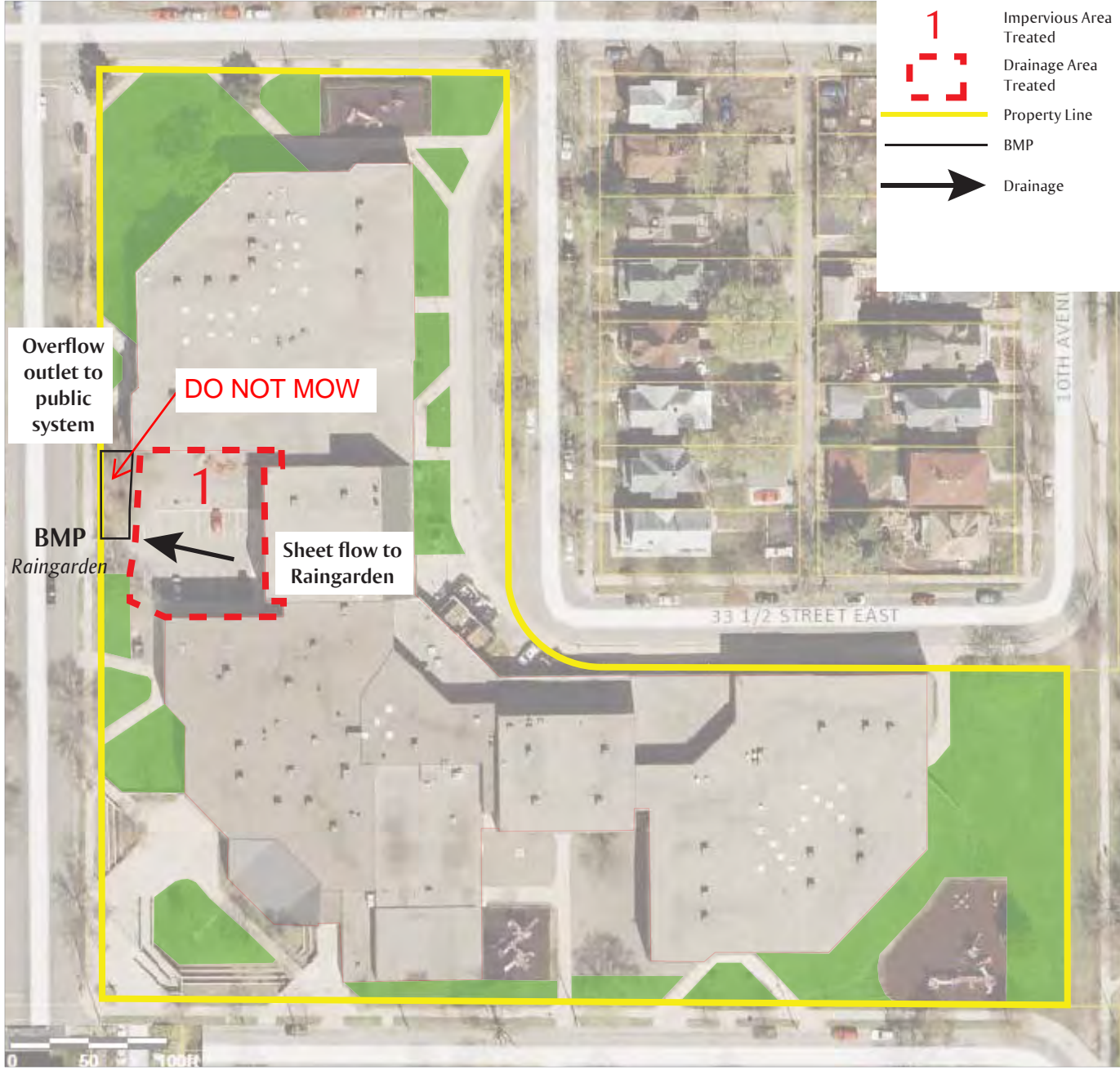
During inspection the following should be noted on the inspection form

- *Presence of any trash, debris and soil accumulation*
- *Presence of weeds*
- *Depth of mulch material present*
- *Condition of plants (note any plants that appear to be dead or dying)*
- *Condition of rain garden overflow structure.*
- *Visible indication of rain garden clogging or overtopping.*

Raingarden Maintenance:

Routine rain garden maintenance shall be done as prescribed in the approved plan, and when an inspection reveals any of the following conditions:

- *Trash, debris and soil accumulation*
- *Soil accumulation*
- *Rain Garden Design depth is not sufficient*
- *Presence of weeds*
- *Presence of invasive plants or weeds (Canada Thistle, Garlic Mustard and any tree seedlings)*
- *Mulch depth less than 3 inches (Use only shredded hardwood mulch material)*
- *Overflow structure in need of cleaning (ex: grate covered with grass/leaves)*
- *Any damage to the inlet structure exists.*
- *Any indication that rain garden has insufficient capacity (debris on pavement surrounding the rain garden, etc.).*



TOTAL PROPERTY - 233,508 sq ft / 5.36 acre	
TOTAL IMPERVIOUS: 178,049 / 4.08 acre	IMPERVIOUS to BMP: 8,898 sq ft / .2 acre
building - 118,020 sq ft / 2.71 acre	parking / drive - 5,512 sq ft / .13
parking / drive - 10,010 sq ft / .23 acre	sidewalk - 3,386 sq ft / .08
sidewalk / plaza - 39,412 sq ft / .9 acre	
playground - 10,607 / .24 acre	
TOTAL PERVIOUS:	TOTAL IMPERVIOUS TREATED: 5%
turf / landscaping - 55,459 sq ft / 1.27 acre	

Laura Ingalls Wilder School
 Stormwater Drainage Map
 prepared by: Metro Blooms
 for: Minneapolis Public Schools



City of Minneapolis Surface Waters and Sewers Stormwater Operation and Maintenance Plan

BMP ID: 7798 Wilder School		Rain Garden/Bioretenion		
Inspection Date -- / -- / 20--		Inspector: Metro Blooms Design+Build		
Inspection Activity	Observations/ Measurements	Maintenance	Maint. Required	Actions Required
Inlets & Contributing Areas Inspect scupper pipes, vegetated swale inlet and contributing areas for dirt, trash, leaves, sediment buildup, erosion and cracks or damage.		Sweep or remove litter/debris and sediment. Seed, mulch, replant, sod or repair any bare or eroded areas contributing to the BMP. Determine repair work needed or who to notify if concrete or piping is damaged.	Yes No Yes No Yes No	Date Completed: / / Responsible Party:
Basin Check for sediment buildup and any erosion or bare spots in the basin.		Remove accumulated sediment and debris. Seed, plant, mulch or blanket and stabilize any bare or denuded areas.	Yes No Yes No	Date Completed: / / Responsible Party:
Outlet Structure Inspect outlet edge of rain garden for debris or trash and to verify if operating as designed.		Remove debris or vegetation blocking water from surpassing the overflow edge.	Yes No	Date Completed: / / Responsible Party:
Vegetation Visual inspection of edge, basin bottom and all landscaping adjacent to or contributing to the basin for dead or diseased plants, weeds and open areas.		Remove dead plants. Remove cat tails, invasive plants, weeds and volunteer woody vegetation. Prevent soil loss by protecting bare soils after weeding. Replace dead plants and vegetate open areas.	Yes No Yes No Yes No	Date Completed: / / Responsible Party:
Mulch Inspect mulch condition and depth.		Add mulch whenever mulch levels are less than 3” using only a double-shredded hardwood mulch.	Yes No	Date Completed: / / Responsible Party:
Dewatering Visual inspection for any standing water present in the basin.		<i>If standing water present 72-hours after storm event notify maintenance contractor. If unable to drain basin contact City of Minneapolis 612-673-2406.</i> Maintenance Contractor: Metro Blooms	Yes No	



Basin condition in August



Pre-treatment inlet condition after clean-out in October, some remaining standing water



Condition of contributing parking lot in October

Basin in October - mature, healthy vegetation with very few weeds

