2009 Stormwater Code – GSI BMPs (Implement GSI to MEF)

<u>Threshold:</u>

All Single-family residential projects and all other projects with 2,000 square feet or more of new plus replaced impervious surface or 7,000 square feet or more of land disturbing activity must implement green stormwater infrastructure he maximum extent feasible.

City of Seattle GSI to MEF Requirement Calculator (2013-03-01)

Building Permit No. → [ ]
Project Address → [ ]

Project Type → [ ]
Project Area → [ ] sf
New plus Replaced Impervious Area → [ ] sf
Area Requiring Mitigation → [ ] sf

Runoff Reduction Methods	Facility Size			Credit	Area Mitigated
Retained Trees					
Existing Evergreen # Trees [ ]	Total Canopy Area of Trees [ ] sf	x	20% Canopy (or min 100 sf/tree) =		
Existing Deciduous # Trees [ ]	Total Canopy Area of Trees [ ] sf	x	10% Canopy (or min 50 sf/tree) =		
New Trees					
New Evergreen	# Trees [ ]	x	50 sf/tree =		
New Deciduous	# Trees [ ]	x	20 sf/tree =		
			Total Area Mitigated by Trees =		[ ] sf
Dispersion [1]					
Downspout or Sheet Flow Dispersion	Dispersed Impervious Area [ ] sf	x	100.0%	=	[ ] sf

Infiltration and Reuse Facilities	Facility Size	Sizing Factor	Area Mitigated
Infiltrating Facilities			
Bioretention Cell (without Underdrain)			
1 Contributing Area [ ] sf	Bioretention Bottom Area [ ] sf	Select Project Type	[ ] sf
Ponding Depth [ ] in			
Design Infiltration Rate [ ] in/hr			
2 Contributing Area [ ] sf	Bioretention Bottom Area [ ] sf	Select Project Type	[ ] sf
Ponding Depth [ ] in			
Design Infiltration Rate [ ] in/hr			
3 Contributing Area [ ] sf	Bioretention Bottom Area [ ] sf	Select Project Type	[ ] sf
Ponding Depth [ ] in			
Design Infiltration Rate [ ] in/hr			
Detention Cistern to Bioretention Cell (BC) (without Underdrain) [2]			
Contributing Area [ ] sf	Bioretention Bottom Area [ ] sf	Select Project Type	[ ] sf
Number Cisterns [ ]			
BC Ponding Depth [ ] in			
BC Design Infilt Rate [ ] in/hr			
Permeable Pavement Facility (may receive run-on) [3]			
Contributing Area [ ] sf	Permeable Pavement Area [ ] sf	Enter Contributing Area	[ ] sf
Ponding Depth [4] [ ] in		Plus Permeable Pavement Facility Area =	[ ] sf
Design Infiltration Rate [ ] in/hr			
Reuse Facilities [1]			
Rainwater Harvesting	Applicant must provide documentation of area mitigated by rainwater harvesting		[ ] sf

Impervious Surface Reduction Methods	Facility Size			Credit	Area Mitigated
Alternative Pavement Surfaces					
Permeable Pavement Surface (Subgrade Slope ≤2%)	Permeable Pavement Area [ ] sf	x	100.0%	=	[ ] sf
Permeable Pavement Surface (Subgrade Slope >2-5%)	Permeable Pavement Area [ ] sf	x	55.0%	=	[ ] sf
Alternative Roof Surfaces [1]					
Green Roof (Single/Multi-Course / 4" Growth Medium)	Green Roof Area [ ] sf	x	55.0%	=	[ ] sf
Green Roof (Multi-Course / 8" Growth Medium)	Green Roof Area [ ] sf	x	84.0%	=	[ ] sf
Partial Infiltration [1]					
Bioretention Cell with Detention (without Underdrain)					
Contributing Area [ ] sf					
Ponding Depth [ ] in	Bioretention Bottom Area [ ] sf			Select Project Type →	[ ] sf
Design Infiltration Rate [ ] in/hr					

Non-Infiltrating Facilities	Facility Size	Credit	Area Mitigated
Non Infiltrating Facilities			
Bioretention Planter (with underdrain)			
Contributing Area [ ] sf			
Ponding Depth [ ] in	Bioretention Bottom Area [ ] sf	Select Project Type	[ ] sf
Detention Cistern with Harvesting Capacity [5,6]			
Contributing Area [ ] sf	Min Cistern Area [ ] sf	Select Project Type	[ ] sf
	Min Live Cistern Volume [ ] gal		

Total Area Mitigated → [ ] 0 sf
Area Requiring Mitigation → [ ] sf
% Impervious Area Mitigated → [ ] %
GSI to MEF Target Achieved? → [ ]

PROPOSED 2015 Stormwater Code – GSI BMPs (On-Site Stormwater Management)

<u>Threshold:</u>
All projects with 2,000 square feet or more of new plus replaced impervious surface or 7,000 square feet or more of land disturbing activity shall meet the minimum requirements for On-site Stormwater Management.

Table 805.3   On-site List for Parcel-Based Projects

Category	GSI BMPs	All Basins
1	Full Dispersion	R, S
	Infiltration trenches	R, S
	Dry wells	R, S
2	Rain Gardens [c]	R [c], S [c]
	Infiltrating Bioretention	R, S
	Rainwater Harvesting	R [d]
	Permeable Pavement Facilities	R, S
	Permeable Pavement Surfaces	S
3	Sheet flow Dispersion	S
	Concentrated Dispersion	S
	Splashblock Downspout Dispersion	R
	Trench Downspout Dispersion	R
	Non-Infiltrating Bioretention	R, S
	Vegetated Roofs	R [e]
4	Perforated Stub-out Connections	R
	Newly Planted Trees	S

R   Evaluation required for all roof runoff from parcel-based projects unless otherwise noted below.

S   Evaluation required for all surfaces of Parcel-based projects, unless otherwise noted below.

[a]   Flow Control Basins include: Wetland, Creek, Public Combined Sewer, Small Lake, Capacity-Constrained System

[b]   Non-Flow Control Basins include: Designated Receiving Water.

[c]   Installation only allowed for projects not required to meet Section 22.805.080 (Minimum Requirements for Flow Control) or Section 22.805.090 (Minimum requirements for Treatment) and with less than 5,000 sf of impervious surface infiltrating on site.

[d]   Evaluation not required for projects in Non-Flow Control Basins [b] or for projects with less than 10,000 sf of new plus replaced rooftop surface in Flow Control Basins [a].

[e]   Evaluation not required for projects in Non-Flow Control Basins [b] or for projects with less than 5,000 sf of new plus replaced rooftop surface in Flow Control Basins [a].