

Appendix B: Stormwater Facility Guidance

1. Planting Guide for Vegetated Stormwater Facilities

This appendix provides planting matrices categorized by SMF type. The matrices provide important information on plants approved for installation in each facility type and are intended to guide plant selection for planting plans.

All plants included in these matrices are intended to be drought tolerant but require irrigation temporarily during their establishment period. Even after the establishment period, native plants may require supplemental irrigation during periods of high heat or extended drought. The species listed are representative examples and are not to be considered exclusive or exhaustive for these facility types.

The City of Portland maintains a comprehensive Native Plant List for planting within the Portland metropolitan region that can be found on the City's website.

When a conflict exists between the representative species outlined within this publication and the Native Plant List, the Native Plant List will prevail.

An alternate plant selection may be proposed for review and approval by the District. No species adopted within the Portland Nuisance Plants List will be permitted.

Plant Type Information

A description of the type of information provided for each plant table is provided below.

Plant Name: Plants are listed by their botanical name first, in italics, followed by a generally accepted common name. Note that common names vary, so use of the botanical name is recommended to ensure proper plant selection

Zone: As noted in the zone section of the compiled plant lists, zone denotes the planting moisture zone in which it is appropriate to locate each respective plant. Zone A refers to the highest point on the slope (dry/upland), Zone B refers to the mid-section of the slope (moist/dry) and Zone S refers to the lowest part of the slope (saturated/wet). Refer to the Standard Detail Drawings for zones by facility type. Some plants work in multiple moisture zones, and others only in a particular dry, moist, or wet condition.

Origin: Plants approved for stormwater facilities can be grouped into three categories: NW Natives, NW Native Cultivars, and Non-Native Adaptive plants.

NW Native: These are plants that are indigenous to the Willamette Valley. They typically require minimal care once they are planted because they have evolved and adapted to the growing conditions and climate of the region. Because of their place in the local ecology, native plants also provide habitat value for birds and other local species. For these reasons, native plants are strongly recommended for stormwater facilities and should be used to the maximum extent practical. In designated vegetated buffers and sensitive areas only native plants are allowed in SMFs.

NW Native Cultivar: These species are cultivated varieties of native plants produced by horticultural techniques and are not normally found in wild populations. Cultivars are bred for certain desired characteristics that make them different from their native counterparts. Native cultivars may be selected over a native plant if it is more suitable for certain conditions, such as densely urbanized applications. For example, Kelsey

dogwood (*Cornus sericea* 'Kelsey') is a cultivar of the native red twig dogwood (*Cornus sericea*). Kelsey dogwood has been selectively bred to be much smaller at maturity than red twig dogwood, which can be advantageous in small scaled urban stormwater planters. In such instances, the native cultivar is preferred because it will not outgrow the facility or require frequent pruning maintenance, while still offering the same vegetative advantages as its native counterpart.

Non-Native Adaptive: These plants are not native to the Willamette Valley but have certain characteristics that make them very useful and well adapted to stormwater facilities. The non-native adapted plants included on the stormwater facility plant lists are considered non-invasive. The District prefers that native and native cultivars be used whenever practical but will allow non-native adapted plants where appropriate

Type/Size: The following factors provide guidance on individual plant characteristics:

(E)vergreen/(D)eciduous: Identifies the characteristic of a plant to keep or lose foliage during winter months. Evergreen plant materials are often preferred at the understory level for stormwater treatment through winter.

Potential Height: Identifies maximum size at maturity to use as a design guideline.

Typical On-Center Spacing: Identifies the optimum spacing for new plantings. This is to be used as a guideline and may vary slightly depending on site conditions.

Context Factors

The following factors should be considered when selecting vegetation. Consult the appropriate Plant List for guidance.

Sun/Shade: When developing planting plans, solar orientation is important to consider. This column identifies which plants are appropriate for full to part sun or shade.

Facility with underdrain: In facilities with underdrains, it is important to select plants appropriate for faster draining soils.

Facility less than 3 feet wide: Narrow conditions require plants that are not too large and will outgrow or have the potential for roots to be damaged in narrow planters. This column identifies which plants are appropriate for narrow planter widths.

Lined facility/on top of utilities: In lined facilities it is important to limit larger material or plants with aggressive and deep roots. This column identifies which plants are appropriate for this application.

Parking areas: This column identifies plants that are appropriate for facilities in most parking areas. Large shrubs selected for parking areas should have form and habit that are open and transparent. For portions of parking areas that have line of sight requirements, plants should be selected from the "Streets/Line of Sight" column.

Streets/line of sight: For street-side facilities and in parking areas where line of sight visibility is required, use plant materials that do not limit necessary lines of sight visibility. This column identifies which plants are appropriate for this application.

Adjacent to buildings: When planting adjacent to buildings, limit plant sizes for compatibility with building footings, windows, or other systems. This column identifies which plants are appropriate to use adjacent to buildings.

In Natural Resource Overlay District: If the stormwater facility is within the Natural Resource Overlay District, all plants shall be indigenous to the Willamette Valley.

Public Maintenance: For facilities that will be publicly maintained, plant palette shall be more limited and focused on lower maintenance plants. These facilities should also emphasize more hardy plants that can adapt to higher summer temperatures and extended drought.

Maintenance Legacy: The designer should carefully consider the long-term vegetation management strategy for the stormwater facility, with an emphasis on the anticipated maintenance requirements for the future Owners.

Native vs Blended Soils: Designers should select plants after a careful analysis of the facility's growing medium matrix. Plant material selection should take into account the site-specific characteristics of both blended and underlying native soils, including infiltration rates.

Planting Requirements

While planting sizes, densities, and irrigation requirements are not specified here, vegetation must be installed such that 100 percent vegetative cover is achieved through a mix of herbaceous, groundcover, and shrubs at the end of the warranty period, prior to acceptance. A dense vegetative cover at the ground level must be achieved for maximum water quality treatment.

Planter plant matrices and facility layout figures are provided in the following tables:

- Table 20. Stormwater Planter Plant List
- Table 22. Swale Plant List
- Table 23. Wetland Plant List
- Table 24. Pond Plant List
- Table 25. Green Roof Plant List

Table 20. Stormwater Planter Plant List

Plant Name Botanical Name Common Name	Zone	Origin			Type/Size			Context Factors						
		NW native	NW native cultivar	non-native adapted	(E)vergreen/(D)eciduous	Potential Height	Typical On Center Spacing	Sun/Shade	Narrow facility	Fully-lined facility	Parking areas	Streets	Adjacent to buildings	In buffer area
Herbaceous Plants														
<i>Carex densa</i> Dense sedge	x	x			E	24"	12"	Sun to Part Shade	x	x	x	x	x	x
<i>Eleocharis ovata</i> Ovate spike rush	x	x			E	30"	12"	Sun to Part Shade	x	x	x	x	x	x
<i>Juncus ensifolius</i> Dagger-leaf rush	x			x	D	10"	12"	Sun to Part Shade	x	x	x	x	x	
<i>Juncus patens</i> Spreading rush	x	x			E	36"	12"	Sun, Part Shade, Shade	x	x	x	x	x	x
Small Shrubs/Groundcover														
<i>Cornus sericea</i> 'Kelsey' Kelsey dogwood	x		x		D	24"	24"	Sun to Part Shade	x	x	x	x	x	
<i>Mahonia repens</i> Creeping Oregon Grape	x	x			E	2'	3'	Sun, Part Shade, Shade		x	x	x	x	x
<i>Fragaria chiloensis</i> Coastal strawberry	x	x			E	6"	12"	Sun to Part Shade	x	x	x	x	x	x
<i>Polystichum munitum</i> Sword fern	x	x			E	2'	2'	Sun, Part Shade, Shade	x	x	x	x	x	x

Table 21. Rain Garden Plant List

Plant Name Botanical Name Common Name	Zone			Origin			Type/Size			Context Factors						
	A	B	S	NW native	NW native cultivar	non-native adapted	(E)vergreen/(D)eciduous	Potential Height	Typical On Center Spacing	Sun/Shade	Narrow facility	Publicly maintained	Fully-lined facility	Parking areas	Streets	Adjacent to buildings
Herbaceous Plants																
<i>Carex obnupta</i> Slough sedge	x		x	x			E	48"	12"	Part to Full Shade		x	x	x	x	x
<i>Carex stipata</i> Sawbeak sedge	x	x	x	x			D	36"	12"	Sun to Part Shade	x	x	x	x	x	x
<i>Deschampsia cespitosa</i> Tufted hair grass	x			x			D	36"	12"	Part Shade	x		x	x	x	x
<i>Elymus glaucus</i> Blue wild rye	x	x		x			E	24"	12"	Part Shade	x		x	x	x	x
<i>Juncus balticus</i> Baltic rush		x	x	x			E	24"	12"	Sun	x	x	x	x	x	x
<i>Juncus patens</i> Spreading rush	x	x	x			x	E	36"	12"	Sun to Part Shade	x	x	x	x	x	x
<i>Scirpus microcarpus</i> Small Fruited Bulrush	x		x	x			E	24"	12"	Sun	x		x	x	x	x
Small Shrubs/Groundcover																
<i>Athyrium filix-femina</i> Lady fern	x	x		x			E	3'	2'	Part Shade to Shade	x		x	x	x	x
<i>Arctostaphylos uva-ursi</i> Kinnickinnick	x	x		x			E	5"	3'	Sun to Part Shade	x	x	x	x	x	x
<i>Mahonia repens</i> Creeping Oregon Grape	x	x		x			E	2'	3'	Part Shade to Shade	x	x	x	x	x	x
<i>Philadelphus lewisii</i> Mock orange	x		x	x			D	6'	4'	Sun to Part Shade			x	x	x	x
<i>Polystichum munitum</i> Sword fern	x	x		x			E	2'	2'	Part Shade to Shade	x		x	x	x	x
<i>Symphoricarpos albus</i> Snowberry	x	x		x			D	3'	3'	Sun, Part Shade, Shade	x	x	x	x	x	x

Plant Name Botanical Name Common Name	Zone			Origin			Type/Size			Context Factors						
	A	B	S	NW native	NW native cultivar	non-native adapted	(E)vergreen/(D)eciduous	Potential Height	Typical On Center Spacing	Sun/Shade	Narrow facility	Publicly maintained	Fully-lined facility	Parking areas	Streets	Adjacent to buildings
Large Shrubs/Small Trees																
<i>Cornus sericea</i> Red twig dogwood	x	x	x	x			D	6'	4'	Part Shade						
<i>Physocarpus capitatus</i> Pacific ninebark	x		x	x			D	9'	3'	Sun to Part Shade			x	x	x	x
<i>Rosa nutkana</i> Nootka rose	x	x		x			D	8'	4'	Sun, Part Shade, Shade			x		x	
<i>Ribes sanguineum</i> Red flowering currant	x	x		x			D	8'	4'	Sun, Part Shade, Shade		x	x	x	x	x
<i>Salix sitchensis</i> Sitka willow	x		x	x			D	15'	5'	Sun, Part Shade, Shade						
Trees*																
<i>Cornus nuttallii</i> Pacific dogwood	x	x		x			D	20'	10'	Sun, Part Shade, Shade	x		x	x	x	x
<i>Rhanmus purshiana</i> Cascara	x	x		x			D	30'	20'	Part Sun to Shade						
<i>Calocedrus decurrens</i> Incense cedar	x	x	x	x			E	90'	15'	Part Shade to Shade				x		

* Trees are not required but are allowed with adequate soil volume and root space for healthy growth and maturity. Provide minimum 2 cubic feet of soil volume per square foot of mature canopy size.

Table 22. Swale Plant List

Plant Name <i>Botanical Name</i> <i>Common Name</i>	Zone			Origin			Type/Size			Context Factors						
	A	B	S	NW native	NW native cultivar	non-native adapted	(E)vergreen/(D)eciduous	Potential Height	Typical On Center Spacing	Sun/Shade	Narrow facility	Publicly maintained	Fully-lined facility	Parking areas	Streets	Adjacent to buildings
Herbaceous Plants																
<i>Carex obnupta</i> Slough sedge	x		x	x			E	48"	12"	Part Shade		x	x	x	x	x
<i>Carex stipata</i> Sawbeak sedge	x		x	x			D	36"	12"	Sun to Part Shade	x	x	x	x	x	x
<i>Deschampsia cespitosa</i> Tufted hair grass	x			x			D	36"	12"	Part Shade	x		x	x	x	x
<i>Elymus glaucus</i> Blue wild rye	x	x		x			E	24"	12"	Part Shade	x		x	x	x	x
<i>Juncus balticus</i> Baltic rush		x	x	x			E	24"	12"	Sun	x		x	x	x	x
<i>Juncus patens</i> Spreading rush	x	x	x			x	E	36"	12"	Sun to Part Shade	x	x	x	x	x	x
<i>Scirpus microcarpus</i> Small fruited bulrush	x		x	x			E	24"	12"	Sun	x	x	x	x	x	x
Small Shrubs/Groundcover																
<i>Athyrium filix-femina</i> Lady fern	x	x		x			E	3'	2'	Sun to Part Shade	x		x	x	x	x
<i>Arctostaphylos uva-ursi</i> Kinnickinnick	x	x		x			E	5"	3'	Sun to Part Shade	x		x	x	x	x
<i>Fragaria chiloensis</i> Coastal strawberry	x	x		x			E	6"	12"	Sun to Part Shade	x	x	x	x	x	x
<i>Mahonia repens</i> Creeping Oregon grape	x	x		x			E	2'	3'	Part Shade to Shade	x	x	x	x	x	x
<i>Philadelphus lewisii</i> Mock orange	x	x		x			D	6'	4'	Sun to Part Shade			x	x	x	x
<i>Polystichum munitum</i> Sword fern	x	x		x			E	2'	2'	Part Shade to Shade	x		x	x	x	x
<i>Symphoricarpos alba</i> Snowberry	x	x		x			D	3'	3'	Sun, Part Shade, Shade	x	x	x	x	x	x
Large Shrubs/Small Trees																
<i>Cornus sericea</i> Red twig dogwood	x	x	x	x			D	8'	4'	Part Shade						
<i>Physocarpus capitatus</i> Pacific ninebark	x		x	x			D	6'	3'	Sun to Part Shade			x	x	x	x
<i>Rosa nutkana</i> Nootka rose	x	x		x			D	8'	4'	Sun, Part Shade, Shade			x		x	

Plant Name Botanical Name Common Name	Zone			Origin			Type/Size			Context Factors						
	A	B	S	NW native	NW native cultivar	non-native adapted	(E)vergreen/(D)eciduous	Potential Height	Typical On Center Spacing	Sun/Shade	Narrow facility	Publicly maintained	Fully-lined facility	Parking areas	Streets	Adjacent to buildings
<i>Ribes sanguineum</i> Red flowering currant	x	x		x			D	8'	4'	Sun, Part Shade, Shade			x	x	x	x
<i>Salix sitchensis</i> Sitka willow	x		x	x			D	15'	5'	Sun, Part Shade, Shade						
Trees*																
<i>Cornus nuttallii</i> Pacific dogwood	x	x		x			D	20'	10'	Sun, Part Shade, Shade	x		x	x	x	x
<i>Rhamnus purshiana</i> Cascara	x	x		x			D	30'	20'	Part Shade to Shade				x		
<i>Calocedrus decurrens</i> Incense cedar	x	x	x	x			E	90'	15'	Part Shade to Shade				x		

*Trees are not required but are allowed with adequate soil volume and root space for healthy growth and maturity. Provide minimum 2 cubic feet of soil volume per square foot of mature canopy size.

Table 23. Wetland Plant List

Plant Name Botanical Name Common Name	Zone			Origin			Type/Size			Context Factors					
	A	B	S	NW native	NW native cultivar	non-native adapted	(E)vergreen/(D)eciduous	Potential Height	Typical On Center Spacing	Sun/Shade	Narrow facility	Fully-lined facility	Parking areas	Streets	Adjacent to buildings
Herbaceous Plants															
<i>Alisma plantago-aquatica</i> Water plantain			x	x			D	24"	12"	Sun	x	x			
<i>Carex obnupta</i> Slough sedge	x		x	x			E	48"	12"	Part Shade		x	x	x	x
<i>Deschampsia cespitosa</i> Tufted hair grass	x			x			D	36"	12"	Part Shade	x	x	x	x	x
<i>Elymus glaucus</i> Blue wild rye	x	x		x			E	24"	12"	Part Shade	x	x	x	x	x
<i>Juncus ensifolius</i> Dagger-leaf rush	x		x			X	D	10"	12"	Sun to Part Shade	x	x	x	x	x
<i>Juncus patens</i> Spreading rush	x	x	x			X	E	36"	12"	Sun to Part Shade	x	x	x	x	x
<i>Scirpus microcarpus</i> Small fruited bulrush	x		x	x			E	24"	12"	Sun	x	x	x	x	x
Small Shrubs/Groundcover															
<i>Mahonia repens</i> Creeping Oregon grape	x	x		x			E	2'	3'	Part Shade to Shade	x	x	x	x	x
<i>Rosa pisocarpa</i> Swamp rose		x	x	x			D	6'	3'	Sun to Part Shade		x	x	x	x
<i>Polystichum munitum</i> Sword fern	x	x		x			E	2'	2'	Part Shade to Shade	x	x	x	x	x
<i>Symphoricarpos albus</i> Snowberry	x	x		x			D	3'	3'	Sun, Part Shade, Shade	x	x	x	x	x
Large Shrubs/Small Trees															
<i>Cornus sericea</i> Red twig dogwood	x	x	x	x			D	8'	4'	Part Shade					
<i>Physocarpus capitatus</i> Pacific ninebark	x		x	x			D	6'	3'	Sun to Part Shade		x	x	x	x
<i>Rosa nutkana</i> Nootka rose	x	x		x			D	8'	4'	Sun, Part Shade, Shade		x		x	
<i>Ribes sanguineum</i> Red flowering currant	x	x		x			D	8'	4'	Sun, Part Shade, Shade		x	x	x	x
<i>Salix sitchensis</i> Sitka willow	x		x	x			D	15'	5'	Sun, Part Shade, Shade					
<i>Ceanothus velutinus</i> Snowbrush	x	x		x			E	6'	3'	Sun, Part Shade, Shade		x	x	x	x

Plant Name <i>Botanical Name</i> Common Name	Zone			Origin			Type/Size			Context Factors					
	A	B	S	NW native	NW native cultivar	non-native adapted	(E)vergreen/(D)eciduous	Potential Height	Typical On Center Spacing	Sun/Shade	Narrow facility	Fully-lined facility	Parking areas	Streets	Adjacent to buildings
Trees															
<i>Acer circinatum</i> Vine maple	x	x		x			D	15'	8'	Part Shade to Shade	x	x	x	x	x
<i>Cornus nuttalii</i> Pacific dogwood	x	x		x			D	20'	10'	Sun, Part Shade, Shade	x	x	x	x	x
<i>Fraxinus latifolia</i> Oregon ash	x		x	x			D	30'	25'	Sun					
<i>Calocedrus decurrens</i> Incense cedar	x	x	x	x			E	90'	16'	Part Shade to Shade			x		

Table 24. Pond Plant List

Plant Name	Zone			Origin			Type/Size			Context Factors						
	A	B	S	NW native	NW native cultivar	non-native adapted	(E)vergreen/(D)eciduous	Potential Height	Typical On Center Spacing	Sun/Shade	Facility width	Publicly maintained	Fully-lined facility	Parking areas	Streets	Adjacent to buildings
Herbaceous Plants																
<i>Alisma plantago-aquatica</i> Water plantain			x	x			D	24"	12"	Sun	x		x			
<i>Carex obnupta</i> Slough sedge	x		x	x			E	48"	12"	Part Shade		x	x	x	x	x
<i>Deschampsia cespitosa</i> Tufted hair grass	x			x			D	36"	12"	Part Shade	x	x	x	x	x	x
<i>Elymus glaucus</i> Blue wild rye	x	x		x			E	24"	12"	Part Shade	x		x	x	x	x
<i>Juncus ensifolius</i> Dagger-leaf rush	x		x			x	D	10"	12"	Sun to Part Shade	x	x	x	x	x	x
<i>Juncus patens</i> Spreading rush	x	x	x			x	E	36"	12"	Sun to Part Shade	x	x	x	x	x	x
<i>Scirpus microcarpus</i> Small fruited bulrush	x		x	x			E	24"	12"	Sun	x	x	x	x	x	x
Small Shrubs/Groundcover																
<i>Athyrium filix-femina</i> Lady fern	x	x		x			E	3'	2'	Part Shade to Shade	x		x	x	x	x
<i>Mahonia repens</i> Creeping Oregon grape	x	x		x			E	2'	3'	Part Shade to Shade	x		x	x	x	x
<i>Polystichum munitum</i> Sword fern	x	x		x			E	2'	2'	Part Shade to Shade	x		x	x	x	x
<i>Symphoricarpos albus</i> Snowberry	x	x		x			D	3'	3'	Sun, Part Shade, Shade	x	x	x	x	x	x
Large Shrubs/Small Trees																
<i>Cornus sericea</i> Red twig dogwood	x	x	x	x			D	8'	4'	Part Shade		x				
<i>Physocarpus capitatus</i> Pacific ninebark	x		x	x			D	6'	3'	Sun to Part Shade		x	x	x	x	x
<i>Philadelphus lewisii</i> Mock Orange	x	x		x			D	6'	4'	Sun to Part Shade		x	x	x	x	x

Plant Name Botanical Name Common Name	Zone			Origin			Type/Size			Context Factors						
	A	B	S	NW native	NW native cultivar	non-native adapted	(E)vergreen/(D)eciduous	Potential Height	Typical On Center Spacing	Sun/Shade	Facility width	Publicly maintained	Fully-lined facility	Parking areas	Streets	Adjacent to buildings
<i>Rosa Nutkana</i> Nootka rose	x	x		x			D	8'	4'	Sun, Part Shade, Shade			x		x	
<i>Ribes sanguineum</i> Red flowering currant	x	x		x			D	8'	4'	Sun, Part Shade, Shade		x	x	x	x	x
<i>Salix sitchensis</i> Sitka willow	x		x	x			D	15'	5'	Sun, Part Shade, Shade						
<i>Ceanothus velutinus</i> Snowbrush	x	x		x			E	6'	3'	Sun, Part Shade, Shade		x	x	x	x	x
Trees																
<i>Acer circinatum</i> Vine maple	x	x		x			D	15'	8'	Part Shade to Shade	x		x	x	x	x
<i>Cornus nuttallii</i> Pacific dogwood	x	x		x			D	20'	10'	Sun, Part Shade, Shade	x		x	x	x	x
<i>Rhamnus purshiana</i> Cascara	x	x		x			D	30'	20'	Part Sun to Shade						
<i>Calocedrus</i> Incense cedar	x	x	x	x			E	90'	15'	Part Shade to Shade				x		

Table 25. Green Roof Plant List

Plant Name Botanical Name Common Name	Zone		Origin			Type/Size			Context
	C	D	NW native	NW native cultivar	non-native adapted	(E)vergreen/(D)eciduous	Potential Height	Typical On Center Spacing	Sun/Shade
Sedums and Succulents									
<i>Delosperma</i> ssp. Ice plant	x	x			x	E	4"	6"-12"	Sun
<i>Malephora crocea</i> v. <i>purpurea</i> Coppery mesemb	x	x			x	E	10"	6"-12"	Sun to Part Shade
<i>Sedum album</i> White stonecrop	x				x	E	3"	6"-12"	Sun
<i>Sedum oreganum</i> Oregon stonecrop	x	x	x			E	4"	6"-12"	Sun to Part Shade
<i>Sedum spathulifolium</i> Stonecrop	x	x			x	E	4"	6"-12"	Sun to Part Shade
<i>Sedum spurium</i> Two-row stonecrop	x	x			x	E	6"	6"-12"	Sun
<i>Sempervivum tectorum</i> Hens and chicks	x				x	E	3"	6"-12"	Sun to Part Shade
Herbaceous Plants									
<i>Achillea millefolium</i> Common yarrow	x	x			x	D	24"	24"	Sun to Part Shade
<i>Artemesia 'Silver Mound'</i> <i>Silver mound artemesia</i>	x	x			x	D	12"	12"	Sun to Part Shade
<i>Castilleja foliosa</i> Indian paintbrush	x	x	x			D	10"	12"	Sun
<i>Festuca glauca 'Elijah's Blue'</i> Elijah's blue fescue	x	x			x	E	12"	12"	Sun
<i>Fragaria chiloensis</i> Coastal strawberry	x	x	x			E	6"	12"	Sun to Part Shade
<i>Polystichum munitum</i> Sword fern	x	x	x			E	24"	24"	Sun, Part Shade, Shade
<i>Thymus serpyllum</i> Creeping thyme	x				x	D	3"	6"	Sun, Part Shade, Shade

2. Stormwater Facility Operations and Maintenance Guidance

Stormwater Planter

Rain Garden

Vegetated Swale

Filter Strip

Drywell

Infiltration Trench

Detention Pond

Constructed Wetlands

Structural Detention

Pervious Pavement

Green Roof

Stormwater Facility inspection and Maintenance Log

Stormwater Planters

NO pesticide, herbicide, or fungicide use is allowed.

Clean up spills immediately. Remove and replace contaminated soil. Call Metro to determine proper disposal requirements of spill response materials and contaminated soil. Record the date and spill response measures in the inspection log.

Structural Component	Spring	Summer	Fall	Winter	24-hr Precip > 1"
Replace or repair inlets if they are cracked or broken. Reseal inlet pipes if they are not watertight.	X		X		
Check overflow caps and replace if cracked or missing.	X		X		X
Check flow spreader, if present, and repair as necessary. Check inlet protection and replace or replenish rock, as necessary.	X		X		
Check liner, if present, and repair tears or holes, as necessary. Replace liner, as necessary.	X		X		
Patch concrete.		X	X		

Ponding Area	Spring	Summer	Fall	Winter	24-hr Precip > 1"
Remove trash.	X	X	X	X	X
Remove sediment from ponding area, forebays, and inlets.	X		X		X
Repair any erosion around edges of concrete forebay if erosion is occurring.		X	X		X
Check trench drains discharging to the facility and remove any soil or debris.	X	X	X	X	X
Check for channeled flow in facility; fill in channels with soil and add plants to disperse flow.		X	X		X
Add 3 inches of mulch or topsoil to bare areas and reseed or replant to achieve 100% coverage at maturity. Do not add bark dust or bark chips; they will float and then clog the outlet or create bare spots.	X				
Remove weeds, invasive plants, and dead plants. Replant or reseed to achieve 100% coverage at maturity	X	X	X		
Thin grasses (remove dead blades) or remove top third of previous year's growth.	X				
Prune shrubs.	X			X	
If facility drains slowly, rake soil to stop crusting. Replace or amend soil if ponding occurs more than 24 hours	X		X	X	X
Ponding should not occur for more than 48 hours.	X		X	X	X

Rain Gardens

NO pesticide, herbicide, or fungicide use is allowed.

Clean up spills immediately. Remove and replace contaminated soil. Call Metro to determine proper disposal requirements of spill response materials and contaminated soil. Record the date and spill response measures in the inspection log.

Structural Repairs	Spring	Summer	Fall	Winter	24-hr Precip > 1"
Replace or repair inlets if they are cracked or broken. Reseal inlet pipes if they are not watertight.	X		X		
Check overflow caps and replace if cracked or missing.	X		X		X
Check flow spreader, if present, and repair, as necessary. Check inlet protection and replace or replenish rock, as necessary.	X		X		

Ponding Area	Spring	Summer	Fall	Winter	24-hr Precip > 1"
Remove trash.	X	X	X	X	X
Remove sediment from ponding area, forebays, and inlets.	X		X		X
Repair any erosion around edges of concrete forebay if erosion is occurring.		X	X		X
Check trench drains discharging to the facility and remove any soil or debris.	X	X	X	X	X
Check for channeled flow in facility; fill in channels with soil and add plants to disperse flow.		X	X		X
Add 3 inches of mulch or topsoil to bare areas and reseed or replant to achieve 100% coverage at maturity. Do not add bark dust or bark chips; they will float and then clog the outlet or create bare spots.	X				
Remove weeds, invasive plants, and dead plants. Replant or reseed to achieve 100% coverage at maturity	X	X	X		
Thin grasses (remove dead blades) or remove top third of previous year's growth.	X				
Prune shrubs and trees.	X			X	
If facility drains slowly, rake soil to stop crusting. Replace or amend soil if ponding occurs more than 24 hours.	X		X	X	X
Ponding should not occur for more than 48 hours.	X		X	X	X

Vegetated Swales

NO pesticide, herbicide, or fungicide use is allowed.

Clean up spills immediately. Remove and replace contaminated soil. Call Metro to determine proper disposal requirements of spill response materials and contaminated soil. Record the date and spill response measures in the inspection log.

Structural Repairs	Spring	Summer	Fall	Winter	24-hr Precip > 1"
Replace or repair inlets if they are cracked or broken. Reseal inlet pipes if they are not watertight.	X		X		
Check overflow caps or grates and repair, as necessary. Replace if they are missing.	X		X		X
Check flow spreader, if present, and repair, as necessary. Check inlet protection and replace or replenish rock, as necessary.	X		X		

Ponding Area	Spring	Summer	Fall	Winter	24-hr Precip > 1"
Remove trash.	X	X	X	X	X
Remove sediment from ponding area, forebays, and inlets.	X		X		X
Repair any erosion around edges of concrete forebay if erosion is occurring.		X	X		X
Check trench drains discharging to the facility and remove any soil or debris.	X	X	X	X	X
Check for channeled flow in facility; fill in channels with soil and add plants to disperse flow.		X	X		X
Add 3 inches of mulch or topsoil to bare areas and reseed or replant to achieve 100% coverage at maturity. Do not add bark dust or bark chips; they will float and then clog the outlet or create bare spots.	X				
Remove weeds, invasive plants, and dead plants. Replant or reseed to achieve 100% coverage at maturity	X	X	X		
Thin grasses (remove dead blades) or remove top third of previous year's growth.	X				
Prune shrubs and trees.	X			X	
If facility drains slowly, rake soil to stop crusting. Replace or amend soil if ponding occurs more than 24 hours.	X		X	X	X
Ponding should not occur for more than 48 hours.	X		X	X	X

Filter Strips or Landscaped Areas Receiving Sheetflow from Impervious Areas

NO pesticide, herbicide, or fungicide use is allowed.

Clean up spills immediately. Remove and replace contaminated soil. Call Metro to determine proper disposal requirements of spill response materials and contaminated soil. Record the date and spill response measures in the inspection log.

Maintenance Component	Spring	Summer	Fall	Winter	24-hr Precip > 1"
Remove trash.	X	X	X	X	X
Remove accumulated sediment.	X		X		X
Replace or replenish rock bordering filter strip or sheet flow area, as necessary.		X	X		X
Check flow spreader, if present, and repair, as necessary. Check inlet protection and replace or replenish rock, as necessary.	X			X	X
Check trench drains leading to the facility and remove any soil or debris.	X	X	X	X	X
Check for channeled flow; fill in channels with soil and add plants to disperse flow.	X		X		X
Remove weeds, invasive plants, and dead plants. Replant or reseed to achieve 100% coverage at maturity	X	X	X		
Thin grasses (remove dead blades) or remove top third of previous year's growth.	X				
Prune shrubs and trees.	X			X	
If moss is present, aerate the area or add 1/2-inch of 3/4-inch clean (no fines) rock.	X		X		
If facility drains slowly, aerate grasses or rake soil to stop crusting. Replace or amend soil if ponding occurs more than 24 hours.	X		X	X	X
Ponding should not occur for more than 48 hours.	X		X	X	X

Dry Wells

NO pesticide, herbicide, or fungicide use is allowed.

Clean up spills immediately. Have drywell professionally cleaned and notify DEQ. Record the date and spill response measures in the inspection log.

Maintenance Component	Spring	Summer	Fall	Winter	24-hr Precip > 1"
Replace or repair inlets if they are cracked or broken. Reseal inlet pipes if they are not watertight.		X	X		
Remove sediment from catch basin.	X		X		X
Remove leaf litter/debris from gutters.	X		X		
Check trench drains leading to the facility and remove any soil or debris.	X	X	X	X	X
Remove inspection portal lid and check for spalling or cracking of walls and for root intrusions. Repair, as necessary.		X	X		
Remove inspection portal lid and check sediment depth. Have professionally cleaned when depth of sediment or debris is 6 inches or greater.		X	X		
Ponding should not occur for more than 48 hours.	X		X	X	X

Infiltration Trenches

NO pesticide, herbicide, or fungicide use is allowed.

Clean up spills immediately. Have drywell professionally cleaned and notify DEQ. Record the date and spill response measures in the inspection log.

Maintenance Component	Spring	Summer	Fall	Winter	24-hr Precip > 1"
Replace or repair inlets if they are cracked or broken. Reseal inlet pipes if they are not watertight.		X	X		
Remove sediment from catch basin.	X		X		X
Remove leaf litter/debris from gutters.	X		X		
Check trench drains leading to the facility and remove any soil or debris.	X	X	X	X	X
Remove inspection portal lid. Check for cracking of walls and root intrusion. Remove roots and repair walls, as necessary. Have professionally cleaned when depth of sediment or debris is 3 inches or greater.		X	X		X
Ponding should not occur for more than 48 hours.	X		X	X	X

Detention Pond

NO pesticide, herbicide, or fungicide use is allowed.

Clean up spills immediately. Remove and replace contaminated soil. Call Metro to determine proper disposal requirements of spill response materials and contaminated soil. Record the date and spill response measures in the inspection log.

Structural Repairs	Spring	Summer	Fall	Winter	24-hr Precip > 1"
Replace or repair inlets if they are cracked or broken. Reseal inlet pipes if they are not watertight.	X		X		
Remove sediment in catch basins discharging to pond.	X		X		
Inspect outlet structure. Clean clogged orifices. Repair cracked or broken shear gate and handles.		X	X		
Check spillway and berms. Add erosion control matting to areas of slight or moderate erosion.		X	X		X
Check spillway and berms. Contact WES at 503.742.4567 if the erosion is severe or there is evidence of concrete cracking or spalling.		X	X		X

Ponding Area	Spring	Summer	Fall	Winter	24-hr Precip > 1"
Remove trash.	X	X	X	X	X
Remove sediment from ponding area and inlets.		X	X		X
Replace or replenish rock at inlets if erosion is occurring.		X	X		X
Check flow dissipaters. Repair or replace diffuser, as necessary. Replace or replenish rock, as necessary.		X	X		
Add 3 inches of mulch or topsoil to bare areas and reseed or replant to achieve 100% coverage. Do not add bark dust or bark chips; they will float as the wetland refills and either clog the outlet or create bare spots in the ponding area.	X	X	X		
Remove weeds, invasive plants, and dead plants. Replant or reseed to achieve 100% coverage at maturity	X	X	X		
Thin grasses (remove dead blades) or remove top third of previous year's growth if desired.	X				
Prune shrubs and trees.	X			X	
Check depth or high-water mark in several areas. If depth is less than 50% of design depth, dredge area and replant. If depth is more than 150% of the design depth, add soil and replant in channeled area.	X		X		

Constructed Wetlands

NO pesticide, herbicide, or fungicide use is allowed.

Clean up spills immediately. Remove and replace contaminated soil. Call Metro to determine proper disposal requirements of spill response materials and contaminated soil. Record the date and spill response measures in the inspection log.

Structural Repairs	Spring	Summer	Fall	Winter	24-hr Precip > 1"
Replace or repair inlets if they are cracked or broken. Reseal inlet pipes if they are not watertight.	X		X		
Remove sediment in catch basins discharging to wetlands.	X		X		
Inspect outlet structure. Clean clogged orifices. Repair cracked or broken shear gate and handles.		X	X		
Check spillway and berms. Add erosion control matting to areas of slight or moderate erosion.		X	X		X
Check spillway and berms. Contact WES at 503.742.4567 if the erosion is severe or there is evidence of concrete cracking or spalling.		X	X		X

Ponding Area	Spring	Summer	Fall	Winter	24-hr Precip > 1"
Remove trash.	X	X	X	X	X
Remove sediment from ponding area and inlets.		X	X		X
Replace or replenish rock at inlets if erosion is occurring.		X	X		X
Check flow dissipaters. Repair or replace diffuser, as necessary. Replace or replenish rock, as necessary.		X	X		
Add 3 inches of mulch or topsoil to bare areas and reseed or replant to achieve 100% coverage. Do not add bark dust or bark chips; they will float as the wetland refills and either clog the outlet or create bare spots in the ponding area.	X	X	X		
Remove weeds, invasive plants, and dead plants. Replant or reseed to achieve 100% coverage at maturity	X	X	X		
Thin grasses (remove dead blades) or remove top third of previous year's growth if desired.	X				
Prune shrubs and trees.	X			X	
Check depth or high-water mark in several areas. If depth is less than 50% of design depth, dredge area and replant. If depth is more than 150% of the design depth, add soil and replant in channeled area.	X		X		

Structural Detention

NO pesticide, herbicide, or fungicide use is allowed.

Clean up spills immediately. Call Metro to determine proper disposal requirements of spill response materials. Record the date and spill response measures in the inspection log.

Structural Component	Spring	Summer	Fall	Winter	24-hr Precip > 1"
Replace or repair inlets if they are cracked or broken. Reseal inlet pipes if they are not watertight.	X		X		
Remove sediment in catch basins discharging to tank or vault.	X		X		X
Remove inspection portal lid, check for root intrusion, and remove roots and repair facility, as necessary. Check sediment depth and have professionally cleaned when depth of sediment and debris is > 15 percent of diameter at any point or > 6 inches below pipe invert.		X	X		X

Pavers and Pervious Pavement

NO pesticide, herbicide, fungicide, or moss inhibitor use is allowed.

NO sand or deicer should be used on paver area.

Clean up spills immediately. Call Metro to determine proper disposal requirements of spill response materials. Record the date and spill response measures in the inspection log.

Maintenance Component	Spring	Summer	Fall	Winter	24-hr Precip > 1"
Check for moss growth. Use baking soda to kill moss and then scrape dead moss off and throw in yard waste bin.	X			X	
Sweep leaf litter and debris off pavement. Use a professional pavement sweeper or wet/dry vacuum, as necessary. NO pressure washing; it clogs the pavement.	X		X		X
Remove overhanging plants or grass near pavers.		X	X		
During rainstorms, check for water running onto surface and divert water away from pavement.			X	X	X
Repair cracks and settling, as necessary.	X	X			
No ponding or runoff should occur on the pavement.	X		X	X	X

Green Roofs

NO pesticide, herbicide, or fungicide use is allowed.

Clean up spills immediately. Call Metro to determine proper disposal requirements of spill response materials. Record the date and spill response measures in the inspection log.

Maintain system per manufacturer's requirements

Stormwater Facilities Inspection and Maintenance Log



OWNER:

CONTACT INFO:

FACILITY LOCATION/ADDRESS:

FACILITY TYPE:

ACCESS NOTES:

Refer to the facility's quarterly inspection requirements in the O&M Plan before conducting inspections and maintenance actions.

INSPECTION YEAR:

<i>WINTER INSPECTION LOG</i>	<i>SPRING INSPECTION LOG</i>	<i>SUMMER INSPECTION LOG</i>	<i>FALL INSPECTION LOG</i>
DATE:	DATE:	DATE:	DATE:
INSPECTOR NAME:	INSPECTOR NAME:	INSPECTOR NAME:	INSPECTOR NAME:
COMPONENTS INSPECTED*:	COMPONENTS INSPECTED*:	COMPONENTS INSPECTED*:	COMPONENTS INSPECTED*:
STRUCTURAL: <input type="checkbox"/>	STRUCTURAL: <input type="checkbox"/>	STRUCTURAL: <input type="checkbox"/>	STRUCTURAL: <input type="checkbox"/>
PONDING AREA: <input type="checkbox"/>	PONDING AREA: <input type="checkbox"/>	PONDING AREA: <input type="checkbox"/>	PONDING AREA: <input type="checkbox"/>
VEGETATION: <input type="checkbox"/>	VEGETATION: <input type="checkbox"/>	VEGETATION: <input type="checkbox"/>	VEGETATION: <input type="checkbox"/>
MAINTENANCE ACTIONS PERFORMED:	MAINTENANCE ACTIONS PERFORMED:	MAINTENANCE ACTIONS PERFORMED:	MAINTENANCE ACTIONS PERFORMED:

** Structural Components include all 'hard' elements of the facility (inlets, flow spreaders, liners, overflow caps, etc.).*

Ponding Area includes areas on the surface or underground where stormwater accumulates. Inspect for blockages, sediment, and trash.

Vegetation includes maintaining vegetation, so the facility can function as designed (i.e., tree pruning, weed removal, mowing, grass management).