Instructions

1. Please fill out, and/or update contact information on first page.

2. Read through the following pages and answer all the questions that pertain to your facility. (Not all sections will apply to your facility)

3. Be sure to include your stormwater maintenance agreement number and date at the top of all pages.

4. Please mail in or email report to:

Robby Wright
Public Works Department
City of Sumner
1104 Maple Street, Suite 260
Sumner, WA 98390

Email: RobertW@ci.sumner.wa.us

** For questions, please call 253-299-5708.

SWMA # _____ Year: _____

EXHIBIT 1: MAINTENANCE PROGRAM – COVER SHEET

TYPE OF DOCUMENT: Agreement to Maintain Stormwater Facilities
GRANTOR(S):
ABBREVIATED LEGAL DESCRIPTION:
ASSESSOR TAXPARCEL I.D. No.:
NAME OF PROJECT
ADDRESS OF PROJECT
PROJECT No.:
Recording No:

Inspection Period:	ANNUALLY by May 15
Number of Sheets Attached:	
Date Inspected:	
On-site Contact Name (print) (REQUIRED)	
Site Contact Mailing Address:	
Site Contact Telephone number: (REQUIRED)	
Site Contact email address:	
City inspection signature:	

SWMA # _____ Year: _____

EXHIBIT 1 MAINTENANCE PROGRAM

1. Maintenance checklist for Catch Basins and Inlets

Frequency	Drainage System Feature	Y	N	NA	Conditions to Check For	Problem	Conditions That Should Exist
M, S	General				Trash or debris in front of the catch basin opening. Is blocking capacity by more than 10%.	Trash, debris and sediment in or on basin	No trash or debris located immediately in front of catch basin opening. Grate is kept clean and allows water to enter.
M					Sediment or debris (in the basin) that exceeds 1/3 depth from the bottom of basin to invert of the lowest pipe into or out of the basin.		No sediment or debris in the catch basin. Catch basin is dug out and clean.
M, S					Trash or debris in any inlet or pipe blocking more than 1/3 of height.		Inlet and outlet pipes free of trash or debris.
M, S					Dead animals or vegetation that could generate odors that would cause complaints or dangerous gases (e.g., methane).		No dead animals or vegetation present within the catch basin.
M, S					Deposits of garbage exceeding 1 cubic foot in volume		No condition present which would attract or support the breeding of insects or rodents.
M					Corner of frame extends more than ¾ inch past curb face into the street (if applicable)	Structural damage to frame and/or top slab.	Frame is even with curb.
M					Top slab has holes larger than 2 square inches or cracks wider than ¼ inch (intent is to make sure all material is running into the basin)		Top slab is free of holes and cracks.
M					Frame is not sitting flush on top slab i.e., separation of more than ¾ inch of the frame from the top slab.		Frame is sitting flush on top slab.
A					Cracks wider than ½ inch and longer than 3 feet, any evidence of soil particles entering catch basin through cracks or maintenance person judges that structure is unsound.	Cracks in basin walls/bottom	Basin replaced or repaired to design standards. Contact a professional engineer for evaluation.
A					Cracks wider than ½ inch and longer than 1 foot at the joint of any inlet/outlet pipe or any evidence of soil particles entering catch basin through cracks.		No cracks more than ¼-inch wide at the joint of inlet/outlet pipe.
A					Basin has settled more than 1 inch or has rotated more than 2 inches out of alignment.	Settlement/ Misalignment	Basin replaced or repaired to design standards. Contact a professional engineer for evaluation.
M, S					Presence of chemicals such as natural gas, oil, or gasoline. Obnoxious color, odor, or sludge noted.	Fire hazard or other pollution	No color, odor, or sludge. Basin is dug out and clean.
M, S					Vegetation or roots growing in inlet/outlet pipe joints that are more than six inches tall and less than six inches apart.	Outlet pipe is clogged with vegetation.	No vegetation or root growth present.
M, S					Vegetation growing across and blocking more than 10% of the basin opening.	Vegetation	No vegetation blocking opening to basin.
M, S					Non-flammable chemicals of more than ½ cubic foot per three feet of basin length.	Pollution	No pollution present other than surface film.

Key:
A = Annual (March or April preferred)
M = Monthly
S = After major storms.

Comments:

1. Maintenance checklist for Catch Basins and Inlets (Continued)

Frequency	Drainage System Feature	Y	N	NA	Conditions to Check For	Problem	Conditions That Should Exist
M, S	Catch Basin Cover				Cover is missing or only partially in place. Any open catch basin requires maintenance.	Cover not in place	Catch basin cover is closed.
A					Mechanism cannot be opened by one maintenance person with proper tools. Bolts into frame have less than ½ inch of thread.	Locking Mechanism Not Working	Mechanism opens with proper tools.
A					One maintenance person cannot remove lid after applying 80 lbs of lift; intent is to keep cover from sealing off access to maintenance.	Cover Difficult to Remove	Cover can be removed by one maintenance person.
A	Ladder				Ladder is unsafe due to missing rungs, misalignment, rust, cracks, or sharp edges.	Ladder Rungs Unsafe	Ladder meets design standards and allows maintenance person safe access.
M, S	Metal Grates (if applicable)				Trash and debris that is blocking more than 20% of grate surface.	Trash and Debris	Grate free of trash and debris.
M, S					Grate missing or broken member(s) of the grate.	Damaged or Missing	Grate is in place and meets design standards.

Key:
A = Annual (March or April preferred)
M = Monthly
S = After major storms.

Comments:

2. Maintenance Checklist for Conveyance Systems

Frequency	Drainage System Feature	Y	N	NA	Conditions to Check For	Problem	Conditions That Should Exist
M, S	Pipes				Accumulated sediment that exceeds 20% of the diameter of the pipe.	Sediment & debris	Pipe cleaned of all sediment and debris.
M					Vegetation that reduces free movement of water through pipes.	Vegetation	All vegetation removed so water flows freely through pipes.
A					Protective coating is damaged; rust is causing more than 50% deterioration to any part of pipe.	Damaged (rusted, bent, or crushed) Trash & debris Sediment buildup	Pipe repaired or replaced.
M					Any dent that significantly impedes flow (i.e., decreases the cross section area of pipe by more than 20%)		Pipe repaired or replaced.
M					Pipe has major cracks or tears allowing groundwater leakage.		Pipe repaired or replaced.
M, S	Open Ditches				Dumping of yard waste such as grass clippings and branches into basin. Unsightly accumulation of non-degradable materials such as glass, plastic, metal, foam, and coated paper.	Trash & debris	Remove trash and debris and dispose as prescribed by city Waste Management Section.
M					Accumulated sediment that exceeds 20% of the design depth	Sediment buildup	Ditch cleaned of all sediment and debris so that it matches design.
A					Vegetation (e.g., weedy shrubs or saplings) that reduces free movement of water through ditches.	Vegetation	Water flows freely through ditches. Grassy vegetation should be left alone.
M					See "Ponds" Checklist	Erosion damage to slopes	See “Ponds” Checklist.
A					Maintenance person can see native soil beneath the rock lining.	Rock lining out of place or missing (if applicable)	Replace rocks to design standard.
Varies	Catch Basins				See "Catch Basins" Checklist		See “Catch Basins” Checklist.
M, S	Swales				See above for "Ditches"	Trash & debris	See above for “Ditches”.
M					See above for "Ditches"	Sediment Buildup	Vegetation may need to be replanted after cleaning.
M					Grass cover is sparse and weedy or areas are overgrown with woody vegetation.	Vegetation not growing or overgrown.	Aerate soils and reseed and mulch bare areas. Maintain grass height at minimum of 6 inches for best stormwater treatment or a minimum of 2 inches above the design flow depth. Remove woody growths, recontour, and reseed as necessary.
M, S					See Ponds Checklist	Erosion damage to slopes	See Ponds Checklist.
M					Swale has been filled in or blocked by shed, woodpile, shrubbery, etc.	Conversion by homeowner to incompatible use	If possible, speak with homeowner and request that swale be restored. Contact City to report a problem if not rectified voluntarily.
A					Water stands in swale or flow velocity is very slow. Stagnation occurs.	Swale does not drain.	A survey may be needed to check grades. Grades need to be in 1-5% range if possible. If grade is less than 1% underdrains may need to be installed.

Key:
A = Annual (March or April preferred)
M = Monthly
S = After major storms.

Comments:

3. Maintenance checklist for Ponds.

Frequency	Drainage System Feature	Y	N	NA	Conditions to Check For	Problem	Conditions That Should Exist
M, S	General				Any trash and debris which exceeds 1 cubic foot per 1000 square feet (this is about equal to the amount of trash it would take to fill up one standard size office garbage can). In general, there should be no visual evidence of dumping.	Trash & debris buildup in pond	Trash and debris cleared from site.
M, S					Bar screen over outlet more than 25% covered by debris or missing.	Trash rack plugged or missing	Replace screen. Remove trash and debris and dispose as prescribed by City Waste Management Section.
M					Any poisonous vegetation which may constitute a hazard to the public. Examples of poisonous vegetation include: tansy ragwort, poison oak, stinging nettles, devils club.	Poisonous Vegetation	Remove poisonous vegetation. Do not spray chemicals on vegetation without obtaining guidance from the Cooperative Extension Service and approval from the City.
M, S					Oil, gasoline, or other contaminants of one gallon or more or any amount found that could: 1) cause damage to plant, animal, or marine life; 2) constitute a fire hazard; or 3) be flushed downstream during rain storms. Presence of chemicals such as natural gas, obnoxious color, odor, or sludge noted.	Fire hazard or pollution	Find sources of pollution and eliminate them. Water is free from noticeable color, odor or contamination.
M					For grassy ponds, gross cover is sparse and weedy or is overgrown. For wetland ponds, plants are sparse or invasive species are present. Wetland ponds must be kept wet--water frequently in summer.	Vegetation not growing or is overgrown.	For grassy ponds, selectively thatch, aerate and reseed ponds. Grass cutting unnecessary unless dictated by aesthetics. For wetland ponds, hand-plant nursery-grown wetland plants in bare areas. Pond bottoms should have uniform dense coverage of desired plant species.
M					Any evidence of rodent holes if facility is acting as a dam or berm., or any evidence of water piping through dam or berm via rodent holes.	Rodent holes	Rodents destroyed and dam or berm repaired.
M					Dams resulting in a change or function of the facility	Beaver Dam	Rodents and dam/berm removed.
M					When insects such as wasps and hornets interfere with maintenance activities, or when mosquitoes become a nuisance.	Insects	Insects destroyed or removed from site.
A					Tree growth does not allow maintenance access or interfere with maintenance activity (i.e., slope mowing, silt removal, or equipment movements). If trees are not interfering with access, leave trees alone.	Tree growth	Trees do not hinder maintenance activities. Selectively cultivate trees such as alder for firewood.

Key:
A = Annual (March or April preferred)
M = Monthly
S = After major storms.

Comments:

3. Maintenance checklist for Ponds (Continued)

Frequency	Drainage System Feature	Y	N	NA	Conditions To Check For	Problem	Conditions That Should Exist
M	Side Slopes of Pond				Check around inlets and outlets for signs of erosion. Check berms for signs of sliding or settling. Action is needed where eroded damage over 2 inches deep and where there is potential for continued erosion.	Erosion on berms or at entrance/exit.	Find causes of erosion and eliminate them. Then slopes should be stabilized by using appropriate erosion control measure(s); e.g., rock reinforcement, planting of grass, compaction.
M	Storage Area				Accumulated sediment that exceeds 10% of the designed pond depth. Buried or partially buried outlet structure probably indicates significant sediment deposits.	Sediment buildup in pond.	Sediment cleaned out to designed pond shape and depth; pond reseeded if necessary to control erosion.
A	Pond Dikes				Any part of dike which has settled 4 inches lower than the design elevation.	Settlement	Dike should be built back to the design elevation.
A	Emergency overflow spillway				Only one layer of rock exists above native soil in area 5 square feet or larger, or any exposure of native soil.	Rock Missing	Replace rocks to design standards.

Key:
A = Annual (March or April preferred)
M = Monthly
S = After major storms.

Comments:

4. Maintenance Checklist for Infiltration Systems

Frequency	Drainage System Feature	Y	N	NA	Conditions to Check For	Problem	Conditions That Should Exist
M, S	General				See "Ponds" Standard No. 3	Trash & Debris	See "Ponds" Standard No. 3
M					See "Ponds" Standard No. 3	Poisonous Vegetation	See "Ponds" Standard No. 3
M, S					See "Ponds" Standard No. 3	Pollution	See "Ponds" Standard No. 3
M					See "Ponds" Standard No. 3	Unmowed Grass/ Ground Cover	See "Ponds" Standard No. 3
M					See "Ponds" Standard No. 3	Rodent Holes	See "Ponds" Standard No. 3
M					See "Ponds" Standard No. 3	Insects	See "Ponds" Standard No. 3
M	Storage Area				A percolation test-pit or test of facility indicates facility is only working at 90% of its designed capabilities.	Sediment	Sediment is removed and/or facility is cleaned so that infiltration system works according to design.
M					Sheet cover is visible and has more than three 1/4 – inch holes in it.	Sheet Cover (if applicable)	Sheet cover repaired or replaced.
M, S					Any sediment and debris filling vault to 10% of depth from sump bottom to bottom of outlet pipe or obstructing flow into the connector pipe.	Sump Filled with Sediment and Debris (if applicable)	Clean out sump to design depth.
M, S	Filter Bags				Sediment and debris fill bag more than ½ full.	Filled with Sediment and Debris	Replace filter bag or redesign system.
M, S	Rock Filters				By visual inspection, little or no water flows through the filter during heavy rain storms.	Sediment and Debris	Replace gravel in rock filter.

Key:
A = Annual (March or April preferred)
M = Monthly
S = After major storms.

Comments:

5. Access Roads/Easements

Frequency	Drainage System Feature	Y	N	NA	Conditions to Check For	Problem	Conditions That Should Exist
W	General				Road shall be swept weekly.	Trash and Debris	Trash and debris cleared from site.
W					Debris which could damage vehicle tires (glass or metal)	Blocked Roadway	Roadway free of debris which could damage tires.
M, S					Any obstructions which reduce clearance above road surface to less than 14 feet.		Roadway overhead clear to 14 feet high.
W, S					Any obstructions restricting the access to a 10-to-20 -foot width for a distance of more than 12 feet or any point restricting access to less than a 10-foot width.		Obstruction removed to allow at least a 12 foot access.
M	Road Surface				When any surface defect exceeds 6-inches in depth and 6 square feet in area. In general, any surface defect which hinders or prevents maintenance access.	Settlement, Potholes, Mush, Spots, Ruts	Road surface uniformly smooth with no evidence of settlement, potholes, mush spots or ruts.
					Weeds growing in the road surface that are more than 6 inches tall and less than 6 inches apart within a 400-square foot area.	Vegetation in Road Surface	Road surface free to weeds taller than 2 inches.
M, S	Shoulders and Ditches				Erosion within 1 foot of the roadway more than 8 inches wide and 6 inches deep.	Erosion Damage	Shoulder free of erosion and matching the surrounding road.
M					Weeds and brush exceed 18 inches in height or hinder maintenance access.	Weeds and Brush	Weeds and brush cut to 2 inches in height or cleared in such a way as to allow maintenance access.
SA	Pavement Markings				Pavement marks shall be painted yearly.	Faded Marks	All pavement markings to be obvious.

Key:

SA = Annual (March or April preferred)
M = Monthly
W = Weekly (see schedule)
S = After major storms.

Comments:

6. Maintenance Checklist for Closed Detention Systems (Pipes/Tanks)

Frequency	Drainage System Feature	Y	N	NA	Conditions to Check For	Problem	Conditions That Should Exist
M	Storage Area (Pipe/Tank)				One-half of the end area of a vent is blocked at any point with debris and sediment. Plugged vent can cause storage area to collapse.	Plugged air vents (small pipe that connects catch basin to storage pipe)	Vents free of debris and sediment.
M					Accumulated sediment depth exceeds 15% of diameter. Example: 72-inch storage tank would require cleaning when sediment reaches depth of 10 inches.	Debris and Sediment	All sediment and debris removed from storage area. Contact City Public Works for guidance on sediment removal and disposal.
A					Any crack allowing material to leak into facility.	Joints between tank/pipe sections.	All joints between tank/pipe sections are sealed.
A					Any part of tank/pipe is noticeably bent out of shape.	Tank/pipe bent out of shape.	Tank/pipe repaired or replaced to design. Contact a professional engineer for evaluation.
M, S	Manhole				Cover is missing or only partially in place. Any open manhole requires maintenance.	Cover not in place.	Manhole is closed.
A					Mechanism cannot be opened by one maintenance person with proper tools. Bolts into frame have less than ½-inch of thread (may not apply to self-locking lids).	Locking mechanism not working	Mechanism opens with proper tools.
A					Control device is not working properly due to missing, out of place, or bent orifice plate.	Damaged or Missing	Plate is in place and works as designed.
A					One maintenance person cannot remove lid after applying 80 pounds of lift. Intent is to keep cover from sealing off access to maintenance.	Cover difficult to remove.	Cover can be removed and reinstalled by one maintenance person.
A					Maintenance person judges that ladder is unsafe due to missing rungs, misalignment, not securely attached to structure, rust, or cracks.	Ladder rungs unsafe	Ladder meets design standards and allows maintenance persons safe access.

Key:

A = Annual (March or April preferred)
M = Monthly
S = After major storms.

Comments:

7. Maintenance Checklist for Control Structure/Flow Restrictor (structure that controls rate at which water exits facility)

Frequency	Drainage System Feature	Y	N	NA	Conditions to Check For	Problem	Conditions That Should Exist
M	Structure				Distance between debris buildup and bottom of orifice plate is less than 1 ½ feet	Trash and debris (includes sediment)	All trash and debris removed.
A					Structure is not securely attached to manhole wall and outlet pipe structure should support at least 1,000 pounds of up or down pressure.	Structural damage	Structure securely attached to wall and outlet pipe.
A					Structure is not in upright position (allow up to 10% from plumb).		Structure in correct position.
A					Connections to outlet pipe are not watertight and show signs of rust.		Connections to outlet pipe are watertight; structure repaired or replaced and works as designed.
M					Any holes (other than designed holes) in the structure.		Structure has no holes other than designed holes.
M, S	Cleanout Gate				Cleanout gate is not watertight or is missing.	Damaged or missing	Gate is watertight and works as designed.
A					Gate cannot be moved up and down by one maintenance person.		Gates moves up and down easily and is watertight.
M, S					Chain leading to gate is missing or damaged.		Chain is in place and works as designed.
A					Gate is rusted over 50% of its surface.		Gate is repaired or replaced to meet design standards.
M, S					Any trash, debris, sediment, or vegetation blocking the plate.	Obstructions	Plate is free of all obstructions and works as designed.
M, S	Overflow Pipe				Any trash or debris blocking (or having the potential of blocking) the overflow pipe.	Obstructions	Pipe is free of all obstructions and works as designed.

Key:

A = Annual (March or April preferred)
M = Monthly
S = After major storms.

Comments:

7a. Maintenance Checklist for Pump System

Frequency	Drainage System Feature	Y	N	NA	Conditions To Check For	Problem	Conditions That Should Exist
M	Pump Wetwell				Probe for sediment and check for floating debris.	Trash & Debris Includes sediment	All trash, debris, and sediment to be removed.
M	Pump float switches				Are the floats caught-up or intertwined.	Red alarm light	Floats should hang freely and at the proper spacing.
M	Pumps				Check amp draw. If high, pull pump.	Pumps are kicking out	Full load amps should be less than 6.9 amps.
A	Pumps				Pull pump and check oil reservoir to see if there is water.	Pumps are not pumping as they should.	Replace oil annually and seals and/or bearing if necessary.

Key:

A = Annual (March or April preferred)
M = Monthly
S = After major storms.

Comments:

SWMA # _____ Year: _____

8. Maintenance Checklist for Energy Dissipaters

Frequency	Drainage System Feature	Y	N	NA	Conditions to Check For	Problem	Conditions That Should Exist
A	Rock Pad				Only one layer of rock exists above native soil in area 5 square feet or larger, or any exposure of native soil.	Missing or moved rock	Replace rocks to design standard.
A	Rock-filled trench for the discharge from pond				Trench is not full of rock.	Missing or moved rock	Add large rock (+30 lb. Each) so that rock is visible above edge of trench.
M	Dispersion Trench				Accumulated sediment that exceeds 20% of the design depth.	Pipe plugged with sediment	Pipe cleaned/flushed.
M					Over ½ of perforations in pipe are plugged with debris and sediment.	Perforations plugged	Clean or replace perforated pipe.
M, S					Visual evidence of water at concentrated points along trench (normal condition is a "sheet flow" of water along trench). Intent is to prevent erosion damage.	Not discharging water properly	Trench must be redesigned or rebuilt to standard. Elevation of lip of trench should be the same (flat) at all points.
M, S					Maintenance person observes water flowing out during any storm less than the design storm or it is causing or appears likely to cause damage.	Water flows out top of "distribution" catch basin	Facility must be rebuilt or redesigned to standards. Pipe is probably plugged or damaged and needs replacement.
M, S					Water in receiving area is causing or has potential of causing landslide.	Receiving area over-saturated.	Stabilize slope with grass or other vegetation, or rock if conditions is severe.

Comments:

9. Maintenance Checklist for Fencing/Shrubbery Screen/Other Landscaping

Frequency	Drainage System Feature	Y	N	NA	Conditions To Check For	Problem	Conditions That Should Exist
M	General				Any debris in the fence or screen that permits easy entry to a facility.	Missing or broken parts/dead shrubbery	Fence is mended or shrubs replaced to form a solid barrier to entry.
M, S					Erosion has resulted in an opening under a fence that allows entry by people or pets.	Erosion	Replace soil under fence so that no opening exceeds 4 inches in height.
M					Shrubbery is growing out of control or is infested with weeds.	Unruly vegetation	Shrubbery is trimmed and weeded to provide appealing aesthetics. Do not use chemicals to control weeds.
A	Wire Fences				Posts out of plumb more than 6 inches.	Damaged parts	Posts plumb to within 1 ½ inches of plumb.
A					Top rails bent more than 6 inches.		Top rail free of bends greater than 1 inch
A					Any part of fence (including posts, top rails, and fabric) more than 1 foot out of design alignment.		Fence is aligned and meets design standards.
A					Missing or loose tension wire.		Tension wire in place and holding fabric.
A					Missing or loose barbed wire that is sagging more than 2 ½ inches between posts.		Barbed wire in place with less than ¾-inch sag between posts.
A					Extension arm missing, broken, or bent out of shape more than 1 ½ inches.		Extension arm in place with no bends larger than ¾ inch.
A					Part or parts that have a rusting or scaling condition that has affected structural adequacy.	Deteriorated paint or protective coating.	Structurally adequate posts or parts with a uniform protective coating.
M					Openings in fabric are such that an 8-inch diameter ball could fit through.	Opening in fabric.	No openings in fabric.

Key:

A = Annual (March or April preferred)
M = Monthly
S = After major storms.

Comments:

SWMA # _____ Year: _____

10. Maintenance Checklist for Grounds (Landscaping)

Frequency	Drainage System Feature	Y	N	NA	Conditions To Check For	Problem	Conditions That Should Exist
M	General				Weeds growing in more that 20% of the landscaped area (trees and shrubs only).	Weeds (nonpoisonous)	Weeds present in less than 5% of the landscaped area.
M					Any presence of poison ivy or other poisonous vegetation or insect nests.	Safety hazard	No poisonous vegetation or insect nests present in landscaped area.
M, S					See Ponds Checklist	Trash or litter	See Ponds Checklist
M, S					Noticeable rills are seen in landscaped areas.	Erosion of Ground Surface	Causes of erosion are identified and steps taken to slow down/spread out the water. Eroded areas are filled, contoured, and seeded.
A	Trees and shrubs				Limbs or parts of trees or shrubs that are split or broken which affect more than 25% of the total foliage of the tree or shrub.	Damage	Trim trees/shrubs to restore shape. Replace trees/shrubs with severe damage.
M					Trees or shrubs that have been blown down or knocked over.		Replant tree, inspecting for injury to stem or roots. Replace if severely damaged.
A					Trees or shrubs which are not adequately supported or are leaning over, causing exposure of the roots.		Place stakes and rubber-coated ties around young trees/shrubs for support.

Comments:

11. Maintenance Checklist for Bioretention Facilities

Frequency	Drainage System Feature	Y	N	NA	Conditions To Check For	Problem	Conditions That Should Exist
BA	General				Established vegetation with a minimum 80% survival rate.	Drought or drowning	Watering may be required during prolonged dry periods, even after plants are established. Replant vegetation for poor performing plants and/or barren soils.
BA, S					Maintain proper flow of stormwater from paved/impervious areas to bioretention facility.	Flow path blocked or detoured	Remove debris and re-direct water to inlet/entrance.
BA					Weeds growing in more that 20% of the landscaped area.	Evasive vegetation	Remove undesired weeds and vegetation.
A					Bare soils where mulch is missing.		Replace mulch to a depth of 2-3 inches.
BA					Any trash, debris, sediment, or vegetation blocking or clogging infrastructure.	Trash/debris	Remove all trash and debris from bioretention area.
A	Rock filled trench/pad				Vegetation clogging/blocking inlet and overflow infrastructures.		Remove vegetation within 1 foot of inlets and outfalls.
A					Sediment build up clogging infrastructure	Sediment	Remove sediment and replace soil, vegetation and mulch layer where erosion is visible.
A					Maintain proper infiltration rates and drainage. Check under-drains.		Clean/Jet under-drains.
BA					Check around inlets, outlets and sidewalls for signs of erosion. Check berms for signs of sliding or settling. Action is needed where eroded damage over 2 inches deep and where there is potential for continued erosion.		Remove sediment and re-grade side slopes. Replant and mulch where barren soils are exposed.

Key:

A = Annual (March or April preferred)
BA = Bi-Annual
M = Monthly
S = After major storms.

Comments:

12. Maintenance Checklist for Permeable Pavement

Frequency	Drainage System Feature	Y	N	NA	Conditions To Check For	Problem	Conditions That Should Exist
M	General				Accumulated sediment and debris deposits clogging pavement and reducing infiltration rate.	Sediment deposits	Plant vegetation or mulch on exposed soils. Use street sweeper with vacuum to clean surface or pressure washer.
M, S	Eco-Stone Pavers				Accumulated sediment and debris deposits clogging pavers and reducing infiltration rate.		Plant vegetation or mulch on exposed soils. Use street sweeper with vacuum to clean surface or pressure washer.
M					Pavers have cracks or are broken.	Damage	Replace individual broken pavers.
A					Weeds growing in between pavers	Weeds	Remove weeds manually. Do not apply herbicides.

Key:

A = Annual (March or April preferred)
BA = Bi-Annual
M = Monthly
S = After major storms.

Comments:

13. Maintenance Checklist for Vegetated Roof Surfaces

Frequency	Drainage System Feature	Y	N	NA	Conditions To Check For	Problem	Conditions That Should Exist
BA	Drainage				Accumulated sediment that exceeds 20% of the diameter of the pipe.	Trash and debris	Remove soil substrate, vegetation and debris.
BA					Vegetation that reduces free movement of water through pipes.		No vegetation blocking opening to basin. Remove all vegetation blocking flow.
BA	General				Inspect fire ventilation points for proper operation.	Fire & Safety	No damage to fire ventilation structures.
BA					Maintain easy access to ventilation points.		Access to ventilation and Fire & Safety structures is not blocked or damaged.
M					Presence of chemicals, fertilizers or contaminants from mechanical systems, weed control, or pet access.		Fix all damaged and leaking mechanisms and remove all pet waste.

Key:

A = Annual (March or April preferred)
BA = Bi-Annual
M = Monthly
S = After major storms.

Comments:

EXHIBIT 2

POLLUTION SOURCE CONTROL PROGRAM

WHAT ARE POLLUTION SOURCE CONTROLS, AND WHY ARE THEY NEEDED?

Pollution source controls are actions taken by a person or business to reduce the amount of pollution reaching surface and ground waters. Controls, also called "best management practices" (BMPs), include:

- Altering the activity (e.g., substitute non-toxic products, recycle used oil, reroute floor drains to sanitary sewer from storm sewer).
- Enclosing or covering the activity (e.g., building a roof)
- Segregating the activity (e.g., diverting runoff away from an area that is contaminated)
- Routing runoff from the activity to a treatment alternative (e.g., to a wastewater treatment facility, sanitary sewer, or stormwater treatment area).

Pollution source controls are needed because of the contamination found in runoff from commercial areas and the effect of this contamination on aquatic life and human health. Research on urban runoff in the Puget Sound area and elsewhere has found oil and grease, nutrients, organic substances, toxic metals, bacteria, viruses, and sediments at unacceptable levels. Effects of contaminated runoff include closure of shellfish harvesting areas and swimming areas, mortality of young fish and other aquatic organisms, tumors on fish, and impairment of fish reproduction.

PROFESSIONAL SERVICES

DESCRIPTION: Presented here are the remaining service businesses including theaters; hotels/motels; finance, banking, hospitals and medical services; nursing homes, schools and universities, and legal, financial and engineering services.

MATERIALS USED AND WASTES GENERATED: The primary concern is runoff from parking areas. Stormwater from parking lots will contain undesirable concentrations of oil and grease, suspended particulates, and metals such as lead, cadmium, and zinc. It will also contain the organic byproducts of engine combustion. Some also produce Dangerous Wastes, for example, hospitals, nursing homes, and other medical services. These materials are stored within the building until disposal.

REQUIRED ACTIONS: The following actions shall be taken to ensure that pollution generated on site shall be minimized:

1. Warning signs (e.g., "Dump No Waste--Drains to Stream") shall be painted or embossed on or adjacent to all storm drain inlets. They shall be repainted as needed.

2. Parking lots shall be swept when necessary to remove debris and, at a minimum, twice a year. Use of newer model high-velocity vacuum sweepers is recommended as they are more effective in removing the more harmful smaller particles from paved surfaces.

3. Sediment removed from ponds/catch basins shall be disposed of in a proper manner. Contact the City for instruction prior to completing this task.

4. No activities shall be conducted on site that is likely to result in short-term high-concentration discharge of pollution to the stormwater system. Such activities may include, but are not limited to; vehicle washing, vehicle maintenance, and cleaning of equipment used in the periodic maintenance of buildings and paved surfaces.

5. Employees shall receive basic instruction regarding the control of pollution from commercial operations. Contact the Public Works Department at (253) 863-8300.

6. Medical offices with high volume customer contacts have potential to influence individuals' water quality practices. Owners are encouraged to have informational brochures provided by the City (see Item 5 above) available in waiting rooms.