



CITY OF PORTLAND
Stormwater
Management
Manual

PUBLIC WORKS

2-YEAR MAINTENANCE WARRANTY FORM

FOR FUTURE BUREAU OF ENVIRONMENTAL SERVICES (BES) FACILITIES

This form is for green street facilities and regional or neighborhood facilities constructed as public works improvements.

PLEASE FILL THIS FORM OUT COMPLETELY.

Detailed information about submittal requirements is contained in Section 4.3. For assistance in completing this form, consult with the BES Revegetation Program at 503-823-1424.

A complete submittal consists of this form with a Site Plan, Planting Plan, and the Standard Plan for the 2-year Maintenance Warranty Period (if required).

(for official use only)

Received by: _____

Date: _____

Deemed complete on: _____

PROJECT INFORMATION

BES Job Number: _____

Job Description: _____

Job Location: _____

BES Construction Manager Name and Telephone Number: _____

PUBLIC WORKS PERMIT APPLICANT

(Applicant)

Name: _____

Phone: _____

Email: _____

Mailing Address: _____

City/State/Zip: _____

MAINTENANCE CONTRACTOR

(if different from the Applicant)

Name: _____

Phone: _____

Email: _____

Mailing Address: _____

City/State/Zip: _____

ATTACHMENTS *(ALL must be checked and attached)*

Site Plan (or reference BES Permit # _____, Sheet # _____)

Planting Plan (or reference BES Permit # _____, Sheet # _____)

Signed Standard Plan for the 2-year Maintenance and Warranty Period

PUBLIC WORKS 2-YEAR MAINTENANCE WARRANTY FORM

All structural components, including inlets, drain pipes, check dams, and liners, must freely convey stormwater and be repaired or replaced if damaged over the duration of the warranty period. I accept, agree to, and assume responsibility for compliance to the terms and conditions contained in this form and the Standard Plan for the 2-year Maintenance Warranty Period. I have provided a copy of the Maintenance Warranty Plan and Inspection and Maintenance Log to the contractor or representative responsible for the maintenance work.

Signature: *(Applicant)* _____ **Date:** _____

Print Name: _____

Signature: *(Applicant's Representative, if applicable)* _____

Print Name: _____

Phone: _____ **Date:** _____

STANDARD PLAN FOR THE 2-YEAR MAINTENANCE WARRANTY PERIOD

REGULAR INSPECTIONS

The Permit Applicant named on the Public Works 2-year Maintenance Warranty Form is responsible for inspecting each part of the system at least once every three months for the duration of the maintenance warranty period. Inspections must also be made within 48 hours after all major storm events, defined as greater than 1.0 inch of rain in a 24-hour period. Record activities on the Inspection and Maintenance Log.

VEGETATION COVER AND HEALTH

Vegetation must be healthy and vigorous at the time of installation. The goal of the two-year maintenance warranty period is to maintain this vigor and health, while controlling undesirable vegetation.

- A survival rate of 90% is required at all times over the two-year warranty period; plant replacement is required if the rate is less than 90%.
- Individual bare spots may be no larger than 10 square feet.
- Plant replacement must occur during the planting seasons (*see right*).
- Planting outside the listed planting seasons requires written approval by the City.
- Replant per the permitted plan, or seek approval for substitutions from the plant list in Section 4.2.3.
- Use of fertilizers is not allowed in stormwater management facilities during the maintenance warranty period.
- Remove dead or dying vegetation; standing dead (brown) stems of rushes and sedges can be “combed out” with a spring rake.
- Trimming or cutting of vegetation is allowed to maintain clearance along sidewalks and curb edges only.

PLANTING SEASONS	
SPRING	FEB 1 – MAY 1
FALL	OCT 1 – DEC 1

WEED CONTROL

A weed is any vegetation not listed on the permitted planting plan.

- Remove weeds entirely, including all roots and root fragments, by hand, before plants set seed.
- No more than 5% coverage by weeds is allowed in a facility at any given time.
- Use of herbicides is not allowed in stormwater management facilities during the maintenance warranty period.

TREE HEALTH

All trees must be healthy and vigorous, with trunk and limbs free from insects, disease, defects, injuries, and decay, throughout the maintenance warranty period.

- Dead, dying, diseased, injured, or otherwise defective trees must be replaced.
- Tree replacement must occur during the planting seasons (*see right*).
- Planting outside the listed planting seasons requires written approval by the City.

PLANTING SEASONS	
SPRING	FEB 1 – MAY 1
FALL	OCT 1 – DEC 1

IRRIGATION

Regular irrigation is required to keep vegetation healthy and vigorous. The irrigation schedule below is typical for most facilities in most years. Actual frequency required depends on season, weather, site conditions, and vegetation characteristics and may be more or less frequent than specified below.

- Irrigation is required once each week (minimum) during the summer irrigation season.
- Irrigation is required once every two weeks (minimum) during the spring and fall irrigation seasons (*see right*).
- Use portable tanks, truck water systems, or temporary above-ground irrigation devices. Temporary above ground irrigation must be approved by the City and removed at the conclusion of the 2-Year maintenance warranty period.
- Tree watering bags may be used from May 15th- October 1st, but must be removed every fall.

IRRIGATION MINIMUMS		
SPRING	MAY 15 – JUNE 30	once every two weeks
SUMMER	JULY 1–AUG 31	once every week
FALL	SEPT 1 –OCT 1	once every two weeks

INFILTRATION

Each facility is designed to drain within 48 hours after the end of a storm event.

A facility with standing water 48 hours after the end of a storm event must be reported to the BES Construction Manager immediately.

SEDIMENT REMOVAL

Sediment is mineral or organic matter deposited into the facility by stormwater runoff. Excess sediment in a facility can impede conveyance and infiltration, reduce storage capacity, and bury vegetation.

- Conveyance capacity must be maintained to at least 75% (minimum) at all times.
- Sediment must be removed from inlets and forebays during each inspection and after every major storm.
- Remove accumulated sediment from inside the facility during routine maintenance visits.

LEAF REMOVAL

Excess leaf material in a facility may impede conveyance and infiltration, reduce storage capacity, and increase nutrient loading.

- During regular maintenance visits, and more frequently during the fall season, remove leaf material from the facility, including inlets, outlets, forebays, overflow structures, and curbs.
- Clean the street gutter line to 10 feet upstream of the curb inlets, or the nearest driveway apron, to maintain open inlets between visits.

TRASH AND DEBRIS REMOVAL

Excess trash and debris in a facility may impede conveyance and infiltration.

- Trash and debris must be removed during every site visit.

EROSION

Erosion within a stormwater facility can reduce infiltration rates, expose plant roots and structures, and clog outlets.

- Maintain soil elevations and grades per plan.
- Significant erosion must be addressed immediately. Notify the BES Construction Manager for guidance.

MULCH

Mulch may be used to inhibit weed growth, retain moisture, reduce soil erosion and compaction, and add nutrients. Mulch may be allowed on a case-by case basis.

- Apply and maintain mulch per plan, or as directed.
- Ensure that no mulch covers plants or comes into contact with tree trunks or woody stems of plants.
- Keep mulch off structures, roadways, shoulders, walks, and lawns.
- Mulch must be fine to medium 100% natural hemlock bark free of dyes and pesticides.
- Submit detailed vendor and mulch product information for review and approval prior to placement.

Signature: *(Applicant)* _____ **Date:** _____

Print Name: _____

Signature: *(Applicant's Representative, if applicable)* _____

Print Name: *(and company, if applicable)* _____

Phone: _____ **Date:** _____

PUBLIC STORMWATER FACILITY INSPECTION LOG

BES Job # _____ Facility Location (intersection or postal address) _____

This log may be required for review by the City at any time during the 2-Year Maintenance Warranty Period.

INSPECTION DATE	DATE OF MAINTENANCE WORK	WORK PERFORMED BY	Inlet and outlet cleaning	Sediment, debris, trash Removal	Irrigation	PLANT REPLACEMENT: Type and quantity	NOTES	INITIALS OF PERMITTEE