

EXHIBIT B OPERATIONS & MAINTENANCE AGREEMENT : RAINWATER GARDEN

[Project Name]



Technical assistance provided by:



**Brown's Creek
Watershed District**



**WASHINGTON
CONSERVATION
DISTRICT**

I. PROJECT GOAL

The main goal of the project is to create a vegetated temporary ponding area for intercepting and treating the stormwater runoff before it gets to our nearby lakes and streams, by making the intercepted stormwater either able to be used by plants or cleaned and returned to the groundwater system. Although utilizing native plants is emphasized in these vegetated basins, the main goal is to create a sustainable plant community that aids in treating this polluted runoff before it enters our sensitive groundwater systems. The planting should provide a model to demonstrate to the public the ability of vegetation and small depressions to aid in overall stormwater management.

II. MAINTENANCE CALENDAR

A. YEAR 1 – INSTALLATION YEAR

TASK TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Installation of BMP Design					■	■	■	■	■	■		
Post-Installation Watering					■	■	■	■	■	■		
Chemical Weed Treatment					■	■	■	■	■	■		
- Buckthorn					■	■	■	■	■	■	■	
- Reed Canary					■	■	■	■	■	■		
Site Inspection w/ Weed ID					■	■	■	■	■	■		

■ – Indicates acceptable time for task, ■ – Optimal time for task

B. YEARS 2 - 10 – CONTRACT BMP MAINTENANCE PERIOD

TASK TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Watering (Only If Necessary)					■	■	■	■	■	■		
Chemical Weed Spot Treatment					■	■	■	■	■	■		
- Buckthorn					■	■	■	■	■	■	■	
- Reed Canary					■	■	■	■	■	■		
Site Inspection w/ Weed ID					■	■	■	■	■	■		
Contact BCWD Staff w/ Issues	■	■	■	■	■	■	■	■	■	■	■	■

■ – Indicates acceptable time for task, ■ – Optimal time for task

III. BROWN'S CREEK WATERSHED DISTRICT STAFF RESPONSIBILITIES

The following outlines the responsibilities of Brown's Creek Watershed District (BCWD) staff in the operations and maintenance of the installed stormwater management project during the contracted 10-year operations period. BCWD staff responsibilities can be amended by the BCWD Board on an as-needed basis and with landowner consent.

BCWD—A. SITE PREPARATION

Site preparation is a very important part of a successful native planting. Eliminating invasive weeds and preparing the design area in advance can potentially greatly reduce future maintenance requirements. BCWD is responsible for the following items when preparing the site:

Area survey & flagging. The BCWD Board-approved design will be flagged and/or staked and surveyed to meet design criteria prior to initiation of construction.

BCWD—B. CALL FOR GOPHER STATE ONE-CALL UTILITIES LOCATES

Gopher State One-Call must be contacted at 1-800-252-1166 to obtain a utilities locate for the construction area for the rainwater garden. This must be done at least 48 hours prior to initiating any construction. BCWD is only responsible for making the initial phone call to Gopher State, and it is ultimately the responsibility of the landowner to ensure that all utilities, both public and private, have been located prior to construction.

BCWD—C. CONSTRUCTION OVERSIGHT

The construction may commence once the landowner has prepared the site, secured the necessary permits, prepared bids and secured the contractor, marked the utilities, and signed all the necessary forms and provided copies to the BCWD. A BCWD representative will oversee the construction of the Best Management Practice to ensure that the design is properly installed according to plan specifications.

The BCWD is responsible for the following items when overseeing the installation:

Divide the planting into zones. Use stakes or flags to mark the line between the transition zone into the wetter area and the drier area. Some transition zone species require very moist conditions.

Designate planting area and organize plants. Mark the plots using stakes or flags. Oversee that the plants are planted in plots and spaced approximately 12 to 18 inches apart, or as specified according to their specific spacing on the design.

Ensuring proper installation of plants and erosion control measures. This includes overseeing the installation of erosion control measures including, but not limited to, erosion control blankets and pinning systems, live staking, seeding, mulching, and disking. This also includes overseeing the installation of plants in all designated zones.

Ensuring proper vegetation re-installation of plants and erosion control measures. If replanting any areas is necessary due to neglect or other factors, the re-installation will be overseen by BCWD staff. Any revegetation efforts performed by contractor or landowner should be evaluated prior to any reimbursement as well.

BCWD—D. POST-CONSTRUCTION MONITORING

One month post-construction site visit. A BCWD staff member will evaluate the Best Management Practice (BMP) *within a month* after site construction and plantings are completed to ensure that the project has been completed and installed properly. The landowner should be present during this evaluation to ensure that any unfinished areas or additions to the BMP may be addressed directly to allow the landowner to fix and/or finish them in a timely manner. All final cost-share reimbursement distributions cannot occur until this evaluation is completed.

Annual site visit. A BCWD staff member will evaluate the Best Management Practice (BMP) *annually* after the year of completion to ensure that the project is properly functioning. The landowner should be present during each of these evaluations to ensure that they are aware of the functioning of the BMP and any problem areas that the BCWD staff sees may be addressed in a timely manner.. The landowner may inform the BCWD staff of any on-going issues.

BCWD—E. SIGNAGE

BCWD requires the right to install and maintain signage at all BMP sites. The signage will be provided at cost to BCWD, not to the landowner, for the life of the contract period, unless loss of or damage to the signage is due to landowner neglect or abuse.

BCWD—F. COST-SHARE REIMBURSEMENT

BCWD will reimburse the landowner for the agreed-upon costs, up to the amount determined by the BCWD Board of Managers at a 50% match to landowner investment amount, or **\$5,000** reimbursement maximum, whichever is less, provided that the BMP is installed by the time set forth by the BMP Subcommittee and/or BCWD Board of Managers. The landowner is required to submit copies of all receipts and in-kind labor hours to BCWD staff in order to receive reimbursement for materials and/or labor. In-kind labor done by landowner or otherwise will be reimbursed at a rate of \$10/hour, unless otherwise approved by the BCWD Board of Managers. BCWD reimbursement payouts shall not exceed total landowner monetary investments. BCWD reserved the right to withhold full or partial funding until project completion and installation quality are evaluated and approval given by BCWD staff.

BCWD—G. LOSSES & AVAILABLE REPLACEMENT COST FUNDING

If the landowner has experienced an unusual or excessive loss due not in part to their negligence, BCWD will reimburse the landowner the materials replacement cost, up to 5% of the total project cost. This funding reimbursement is contingent upon approval by the BCWD Board of Managers.

IV. LANDOWNER RESPONSIBILITIES

The following outlines the responsibilities of each landowner whose property is involved in the operations and maintenance of the installed stormwater management project during the contracted 10-year operations period. Landowner (LO) responsibilities can be altered or amended by the BCWD board on an as-needed basis and with landowner consent. Should a subcontractor be designated to perform any of the designated landowner responsibilities as follows, the landowner is ultimately responsible for work performed by the subcontractor.

LO—A. OBTAIN ANY REQUIRED PERMITS

Permits may be required from the local units of government and/or Washington County and/or Brown's Creek Watershed District for modifications made to property (e.g., grading, filling in erosion prone areas) and/or installing structures (e.g., retaining walls, inlets). If you are not sure whether or not you need permits call the Brown's Creek Watershed District office. The project landowner and/or contractor are responsible for obtaining the required permits. **Permits must be obtained and copies submitted to BCWD staff before any work can begin.**

LO—B. ENSURE THAT A COMPREHENSIVE UTILITIES LOCATE HAS BEEN PERFORMED

Although the BCWD staff will contact Gopher State One-Call, it is ultimately the responsibility of the landowner to ensure that all underground utilities have been demarked prior to construction. To note, many utilities are private (cable, etc.) and will not be contacted by Gopher State, and it is the responsibility of the landowner to contact them directly for a locate. This must be done at least 48 hours prior to initiating any construction.

LO—C. SITE PREPARATION

Eliminate the turf and control invasive species. Herbicide may be used to treat turf grass and/or control invasive species growing in the area designated for restoration. Herbicides expedite the restoration process. In most cases, the chemical glyphosate will be used (known by the trade name of Roundup or Rodeo, which is the aquatic formulation). Always follow the instructions on the label.

Once the final design is marked out, apply herbicides only to turf and invasive plants. Follow label instructions. Take care in spraying – herbicides kill every plant with which they come in contact. Below the OHW* or within 10 feet of the water, use only the aquatic formulation of an herbicide, which is considered nontoxic to fish. Allow 10 to 14 days for turf to die (become yellow). If green spots remain, spray again at least 2 days before planting and cut back any weeds.

* The ordinary high water mark (OHW) for lakes and wetlands is an elevation delineating the highest water level that has been maintained for a sufficient period of time to leave evidence on the landscape, commonly that point where the vegetation changes from predominantly aquatic to predominantly terrestrial. For watercourses, the OHW is the elevation of the top of the bank of the channel. The OHW elevation is the boundary of DNR jurisdiction and is the reference point for building and sewer setbacks.

Care for and organize the plants. Keep seedlings watered well and shaded prior to planting. Subdivide the plants by soil moisture requirements. Separate the species that need to be planted in the temporarily impounded areas and those for the drier uplands. Organize the plants by zone. Make sure that both wildflowers and grasses are present in the specified mix to increase the below-ground root structure.

LO—D. INSTALLATION

Construction bidding and contracting. If a contractor will be utilized for the installation and/or maintenance of the installed BMP, a contractor must be chosen from two or more bids for the cost-share assistance requirements. BCWD will reimburse up to 50% of the *lowest* reasonable professional bid amount, not to exceed the maximum contracted cost-share amount. It is the prerogative of the landowner to choose whichever contractor to perform the installation of the BMP design, even if the designated contractor is the landowner. The designated contractor must work with BCWD staff to properly install the BMP design according to specifications. Improperly installed designs will be removed and reinstalled or fixed outside of cost-share assistance.

BCWD staff coordination. A BCWD staff member will be on-site supervising the installation of the BMP. The landowner will inform and coordinate with the BCWD staff *at least one week prior to beginning construction* to allow time to schedule on-site installation supervision during this time period.

General installation. The contractor shall perform the installation in the bid/contracted time period. The landowner should plan to be on-site during this time period as a resource. If the landowner is acting as the contractor, he or she is responsible for the coordination, purchasing, and delivery of all materials and equipment needed to properly perform the installation. All installation shall be done to plan specifications.

Plant installation. Plant clumps of 3 to 6 plants of the same species with a spacing of 12 - 18 inches on center between plants. To plant through erosion fabric, use scissors to cut the fabric, then dig or use a bulb auger and drill to make a hole. Plant so that the surface of the root ball matches the existing soil surface. Take care to avoid leaving an air space under the roots. Tamp the soil lightly, replace the erosion control fabric over the bare soil. To plant through mulch, move the mulch aside, then dig or drill the hole. Plant so that the surface of the root ball matches the existing soil surface and be sure not to mix mulch in with the soil when packing around the root ball. After planting replace the mulch, but take care not to bury the plant.

Keep track of in-kind donation and hours. The landowner is responsible for keeping track of any in-kind donated materials or time they have spent on project installation. Again, any in-kind labor done by landowner or otherwise will be reimbursed at a rate of \$10/hour, unless otherwise approved by the BCWD Board of Managers. The hour log and donation schedule shall be submitted to BCWD staff prior to the post-construction evaluation in order to receive reimbursement for the labor.

E. POST-INSTALLATION MAINTENANCE

Site maintenance is very important for the first few years but will decrease as the plants become established. Maintenance includes watering, weeding (by hand or selectively with herbicides), replanting if needed and maintaining. It is important to maintain the planting in a timely manner to prevent plant mortality and keep the work manageable.

Replant plants. Plugs and plants have a certain lifespan and mortality rate. Bare areas are subject to increased erosivity and weed establishment; therefore it is important to replant any areas that have become devegetated for any reason. Plants should be replanted according to the plants that were originally specified on the design, or an acceptable substitute should be installed according to the hydrologic character or zone of the replanting area. Note: Plant replacement due to neglect on the part of the landowner (e.g. – lack of watering and/or weeding) is to be done *at cost to the landowner* (see also, “BCWD—G. LOSSES & AVAILABLE REPLACEMENT COST FUNDING” in the BCWD Staff Responsibilities section)

Keep the plants watered very well during the first 3-4 weeks. Watering needs will vary depending on the soil, weather, and temperature at the time of planting. Plants will need to be watered 1-2”/week for the first 3-4 weeks after planting and slightly less frequently later in the season depending on the amount of rain received. If the plants are in pure sand and the weather is dry with high temperatures, the plants may need daily watering of ½” or more for the first month or so. Adequate watering in the first season is one of the most important factors in a successful planting.

Prepare a watering plan ahead of time. Soaker hoses or low output drip emitters, which ensure that the water reaches the plant, are ideal, but sprinklers work well too. To gauge watering needs when using a sprinkler, place a small dish in the area being watered and check it occasionally for water depth. Time how long it takes to fill the dish to 1” and use this time to know when to move the hose. A less frequent, long, deep watering is more beneficial and than many short watering sessions.

The best time to water is early in the morning. Whenever possible avoid watering from noon to 5:00pm. Plants along the shoreline can be watered directly from the lake by using a bucket to gently pour water at the base of the plant.

Weed invasive species on an ongoing basis. It is easy to identify weeds in planted areas if weed scouting is done early and frequently after planting. If weeding is done early, the weeds are generally smaller than the plants and are not as evenly spaced as the desired plants. Labeling and learning to identify the native plants can also be of great help. Weeds are easier to pull when they are small and they often grow faster than the native plugs, so frequency in weeding is important. Some desirable native species, especially aquatic and wet meadow ones, will reseed themselves, so care should be taken to remove only invasive and nuisance species.

Weeds can be hand-pulled or treated selectively with herbicides. Always follow instruction on the herbicide label. Use only aquatic formulations of an herbicide within ten feet of the water. Herbicides can be applied to individual plants using a spray bottle or a dauber constructed of PVC pipe. The latter

distances the applicator from the chemical and does not require bending. If you have questions about weed identification or weeding, please contact the BCWD staff.

Replant if large areas of plants do not survive. Native plants will spread and seed themselves in the raingarden , so replanting is not necessary unless there is a high mortality in a relatively large area. Plants can be replaced in early September or the following spring.

Label examples of different species. To help you learn the names of the plants and to aid in weeding, label a few of each plant species within the raingarden.

Add more diversity. Not all species planted will survive the first year. Feel free to add different species to your planting, giving priority to native plant species. For native plant lists and native plant grower lists please contact the Washington Conservation District or consult the DNR publication “Lakescaping For Wildlife & Water Quality”.

LO—F. MONITORING

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Document the project by keeping project notebook and taking pictures from established “photopoints”. Start a Restoration Notebook / Calendar in which to document preparation, planting and maintenance activities as well as other points of interest, such as blooming dates, notes on wildlife, photographs, pressed flowers, as well as records of precipitation, water level fluctuations, etc.

Select locations or “photopoints” where a series of pictures will be taken. Locations should be easy to find (such as where the photographer’s back is against a tree or house), and should include a profile of the different parts of the project zones. Be sure to photograph the site BEFORE, DURING and AFTER the restoration.

For more information about site preparation, planting, maintenance, and monitoring see the DNR publication “Lakescaping For Wildlife & Water Quality”, Chapters 5, 6, & 7.

We have discussed the guidelines for operation and maintenance contained herein.

Landowner (1)

Date

We agree to the terms of the operations and maintenance contract contained herein.

Landowner (2)

Date

We agree to the terms of the operations and maintenance contract contained herein.

Brown's Creek Watershed District Representative

Date

HOMEOWNER CONTACT INFORMATION:

Name _____

Street Address _____

City, State, Zip _____

Phone _____

Email _____

CONTRACTOR CONTACT INFORMATION:

Name _____

Street Address _____

City, State, Zip _____

Phone _____

Email _____

PLANT SUPPLIER CONTACT INFORMATION

Name _____

Street Address _____

City, State, Zip _____

Phone _____

Email _____

PLANT INSTALLER CONTACT INFORMATION:

Name _____

Street Address _____

City, State, Zip _____

Phone _____

Email _____