

# **HABITAT TECHNOLOGIES**

November 16, 2013

Avenue 55 LLC  
@ Mr. Drew Zaborowski, Development Associate  
1420 – 5<sup>th</sup> Avenue, Suite 2650  
Seattle, Washington 98101

**RE: STREAM AND WETLAND BUFFER RESTORATION PROGRAM  
Parcel 0420114072  
2719 West Valley Highway, City of Sumner**

Dear Mr. Zaborowski,

As presently identified the final site plan for the creation of an commercial/industrial park facility within Parcel 0420114072 consistent with the City of Sumner Comprehensive Plan would result in a minor modification (regarding) of the very outer area of the standard City of Sumner buffer associated with Jovita Creek/Sotain Creek (WRIA#10-0032) and a reduction in the buffer associated City of Sumner Type III Wetland located offsite to the northeast of the eastern boundary of the new facility. Jovita Creek is located within the Washington State Department of Transportation right of way, is documented to provide fish habitats, and meets the criteria for designation as a City of Sumner Type 3 Stream following the Washington Department of Natural Resources water typing.

## **SITE DESCRIPTION**

The project site exhibited a somewhat gentle slope from west to east and had been historically managed for the production of agricultural crops for several decades. The project site was leveled and filled in or around 2002 in preparation for commercial/industrial development consistent with the existing City of Sumner Comprehensive Plans and land use zoning. This preparation action included the construction of a stormwater pond facility along the eastern boundary of the project site.

The property is located within the Lower White River Valley of the Puyallup – White River Watershed and bound on the north and south by existing commercial/industrial development, on the west by West Valley Highway, and on the east by Jovita Creek/Sotain Creek and the SR167 Corridor. The property is identified within the City of Sumner Comprehensive Plan for commercial/industrial utilization along the SR 167 Corridor.

**Directions to Project Site:** From SR167 exit onto 24<sup>th</sup> Street East and continue westbound on 24<sup>th</sup> Street East to the intersection with West Valley Highway. Turn south onto West Valley Highway and continue to the project site located on the eastern side of West Valley Highway and south of the entry ramp to southbound SR167 (Figure 1).

## CRITICAL AREAS DETERMINATION

A series of assessments of critical areas within and immediately adjacent to the project site have been completed as a part of the proposed project development action (see *Wetland Verification Report for Avenue 55*, dated September 25, 2013 and *HABITAT MANAGEMENT PLAN* dated October 2, 2013).

**Offsite Wetlands:** As documented within the wetland delineation assessments completed by Harbor Environmental Review Services the majority of the project site does not exhibit all three of the established criteria for designation as “wetland.” However, this assessment did identify a wetland immediately east of the eastern portion of the project site generally within a shallow depression dominated by reed canarygrass and adjacent to the Jovita Creek/Sotain Creek Corridor further offsite to the east. This offsite wetland was defined as a City of Sumner Category III Wetland.

An additional offsite wetland had been identified within the very eastern portion of the property directly to the north of the project site (see reference to findings documented by A.J. Bredberg within *Wetland Verification Report for Avenue 55*, dated September 25, 2013). This offsite wetland was defined as a City of Sumner Category III Wetland.

**Offsite Drainage Corridor:** No defined drainage corridors were identified within the project site. Onsite assessment did identify a defined surface water drainage corridor directly to the east of the eastern boundary of the project site. This surface water drainage corridor has been previously identified as the Jovita Creek/Sotain Creek and located within the SR167 Corridor. This creek was located within a well defined channel that had been modified by prior land use actions primarily associated with channel creation through excavation and vegetation management through mowing and vegetation removal.

The ordinary high water mark (OHWM) for this creek corridor has been identified at the top of bank. The OHWM has been surveyed and made a part of the project site plan. Jovita Creek/Sotain Creek is defined within the Washington Department of Natural Resources Water Type System as a Type F (fish bearing) Water. This creek is also identified by the City of Sumner as a Type III Stream (fish bearing).

**Fish and Wildlife Habitats:** The project site had been leveled and filled in preparation for commercial/industrial development consistent. This preparation action included the construction of a stormwater pond facility along the eastern boundary of the project site. As such, onsite habitats were very limited.

Onsite assessment identified a variety of wildlife species within and immediately adjacent to the project site. The majority of these species were present along the stream and wetland corridor adjacent to the eastern boundary of the project site and the forested hillside to the west of the project site. No direct population assessments of fish

species within the Jovita Creek/Sotain Creek Corridor were completed as a part of this assessment. However, fish species within system have been documented to include a range of salmonid and non-salmonid species.

The project site was not identified to provide direct habitats for species listed by state or federal agencies as endangered, threatened, or sensitive. However, the adjacent Jovita Creek Corridor and the downstream White River System was identified to provide critical habitats for a number of listed species.

## **SELECTED SITE DEVELOPMENT ACTION**

The *Selected Site Development Action* proposes the re-development of the project site to construct a commercial/industrial facility consistent with the existing City of Sumner Comprehensive Plans and land use zoning. Initial site development actions were completed in or around 2002 and included the leveling of the project site and the development of a stormwater facility in the eastern portion of the project site.

The *Selected Site Development Action* would **not** require any adverse impacts to the identified offsite Category III Wetlands or adverse impacts to the identified offsite Type III Stream. In addition, this development action would not require any adverse impacts to identified critical habitats associated with the offsite Type III Stream Corridor or downstream aquatic resources. The *Selected Site Development Action* would establish water quality protections on the short-term during site re-development following Best Management Practices and both water quality and water quantity protections on the long-term using a designed stormwater facility consistent with City of Sumner Standards.

## **STREAM AND WETLAND BUFFER RESTORATION PROGRAM**

One of the primary elements of the *Selected Site Development Action* is the establishment and restoration of a protective buffer composed of native trees and shrubs through the removal and control of the existing reed canarygrass and the planting of selected native species adjacent to the offsite wetland and stream corridor. The establishment of this buffer area would also include the planting of the adjacent stormwater facility to provide even greater onsite habitats and protection of the offsite wetland and stream corridor. The established native plant community would provide thermal protection for aquatic habitats, a protective screen between upland uses and the established wetland and stream corridor, provide direct and indirect aquatic and terrestrial habitats, and provide support for the onsite and downstream aquatic food web.

## CITY OF SUMNER BUFFER ESTABLISHMENT

The City of Sumner may allow for the reduction of the standard wetland buffer on a case-by-case basis where the following factors can be demonstrated:

1. The wetland is not a Category I or II with a habitat score of 20 or greater and is not a Category IV wetland;

**Discussion:** The wetlands identified offsite to the east and to the northeast of the project site have been identified as City of Sumner Category III Wetlands.

2. The adjacent land is extensively vegetated and has less than 15 percent slopes and that no direct or indirect, short-term or long-term, adverse impacts to regulated wetlands, as determined by the director, will result from a regulated activity; **or**

3. The project includes a buffer enhancement plan using native vegetation which substantiates that an enhanced buffer will improve the overall vegetative quality and habitat function of the buffer to provide a net increase in protection for wetlands functions and values;

**Discussion:** As outlined below the overall site development proposal includes a buffer enhancement plan using native plants and invasive species controls to improve the overall vegetative quality and habitat function of the buffer to provide a net increase in protection for wetlands functions and values.

4. The applicant has demonstrated that the project impacts to wetlands have been avoided and minimized to the degree possible on site; and

**Discussion:** The overall site development plan incorporates the previously approved stormwater facility and internal circulation patterns to both optimize usable area and protective buffer area for the adjacent wetland and stream corridor. In addition, the stormwater facility shall be enhanced with the same species used for the enhanced buffer and would become a significant part of the overall protective area between the onsite development and the offsite wetland and stream corridor.

As presently proposed the proposed site development plan would avoid a decrease in the standard buffer for the wetland and stream corridor offsite to the east and only a minimal reduction of the standard buffer for an additional wetland offsite to the northeast of the eastern portion of the project site.

5. Buffer reduction shall not result in greater than a 35 percent reduction in the standard buffer width, and the reduced buffer shall not be less than 25 feet

**Discussion:** The proposed buffer width reduction would not result in greater than a 35% reduction in the standard buffer for the offsite wetland and stream corridor.

## **DESCRIPTION OF THE BUFFER PROGRAM**

1. As compensation for the minor reduction of the standard buffer for a Category III Wetland located to the northeast of the eastern portion of the project site and for a minor modification of the very outer edge of the standard buffer associated with the offsite Jovita Creek Corridor the established onsite buffer area shall be restored and enhanced. Compensatory actions shall be accomplished through the removal of the existing reed canarygrass and blackberry, the planting of native trees and shrubs, and ongoing monitoring and maintenance to ensure project success. As a part of this program there shall be no adverse changes in the existing offsite stream/wetland hydrology patterns.
2. The restoration and enhancement buffer area shall be cleared of invasive grasses and shrubs. All cut vegetation shall be removed from the project site and disposed in an approved offsite location. These areas shall then be planted with a mixture of native trees and shrubs common to the local area and selected to provide additional stream and wetland functions (see attached planting plan).
3. Habitat features (i.e. standing snags and logs) shall be placed within the established buffer area to provide structural diversity and habitats for wildlife common to the area.
4. All onsite activities shall be monitored by the onsite biologist. Following the completion of onsite planting activities a "record-drawing" plan shall be prepared and submitted to the City of Sumner. A **five-year** monitoring program shall be undertaken to assure the success of the buffer program. If required by the City, a series of financial guarantees shall also be implemented to assure that the proposed work is completed and is proven successful. In addition, if required by the City the monitoring period may be increased if the performance criteria are not met at the end of the five-year monitoring period.
5. Temporary and long-term erosion control measures shall be implemented. These measures include the use of Best Management Practices during initial actions and as a part of the maintenance program.
6. The stormwater facility shall also be planted with a variety of native trees and shrubs common to the local area. The intent is to make the stormwater facility a functional part of the overall protective area along the offsite wetland and stream corridor.
7. Site development shall utilize designs to minimize potential impact to the established onsite buffer area. Such designs include directional lighting away from the buffer area and onsite water quality protections.

8. Protective fencing shall be installed along the western edge of the stormwater facility to limit human intrusion into the established buffer area. This fence shall have a lockable gate to allow for monitoring and maintenance access. The protective fence shall also be posted with buffer boundary signs as approved by the City of Sumner.

## **GOAL AND OBJECTIVE OF THE BUFFER PROGRAM**

The **GOAL** of the *Buffer Program* is to fully compensate for an unavoidable reduction of standard buffer for an offsite wetland and for a minor modification of the outer edge of the standard buffer associated with the Jovita Creek Corridor. The buffer program shall provide full compensation for minor buffer impacts while also enhancing the physical and biological functions of the onsite buffer associated with the Jovita Creek Corridor.

To achieve the defined **GOAL**, the following **OBJECTIVES** and **PERFORMANCE CRITERIA** have are defined:

**Objective A.** The buffer program areas shall restore and enhance the retained onsite buffer through the removal/management of invasives and the planting of native tree and shrubs species. The retained onsite buffer shall exhibit a scrub/shrub and sapling tree vegetation class within five years following initial planting

**Performance Criterion #A1:** As defined by sampling at established plots, 100% of the trees and shrubs initially planted within the restored buffer shall exhibit survival through the end of the first growing season following planting.

**Performance Criterion #A2:** As defined by sampling at established plots, 80% of the trees and shrubs initially planted within the restored buffer shall exhibit survival through the end of the second, third, fourth, and fifth growing seasons following planting.

**Performance Criterion #A3:** As defined by sampling at established plots within the restored buffer the presence of invasive shrubs shall **not** adversely impact the survival of desirable vegetation. The restored buffer shall not exceed 10% aerial coverage of blackberries or other invasive shrubs at the end of the first, second, third, fourth, or fifth growing seasons following planting.

**Objective B.** The buffer area shall include the placement of snags (stumps) and downed logs which provide nesting and cover habitat for wildlife common to the area.

**Performance Criterion #B1:** A minimum of six (6) snags (minimum 20 feet in length, minimum 20 inch diameter at the top, minimum 10 foot diameter at bottom of rootball) and a minimum of six (6) downed log (minimum 20 feet in length, minimum 20 inch diameter at 10 feet above root collar, minimum 10 foot diameter at bottom of rootball) shall be placed within the buffer area.

## SELECTED PLANT COMMUNITIES

The plants selected for the restored buffer shall be obtained as nursery stock. These selected species are native and commonly occur in the local area. The plant species prescribed are selected to increase plant diversity, match present offsite communities, increase wildlife habitats, and enhance the aquatic environment. Many of the selected species can be somewhat sensitive to direct sunlight upon initial removal from the nursery and installation within the buffer area. Special care shall be undertaken by the planting contractor during installation to utilize existing shading and to ensure that plants are handled and installed with some care. Adequate irrigation must also be provided at the time of installation.

In addition, special planting actions shall be undertaken to help control reed canarygrass. These actions may include the placement of cardboard or biodegradable fabric pads and mulch around the desirable plants.

RESTORED BUFFER	STORMWATER FACILITY	COMMON NAME SCIENTIFIC NAME	SIZE
39	21	Western hawthorne <i>Crataegus douglasii</i>	2 gallon
39	0	Oregon ash <i>Fraxinus latifolia</i>	2 gallon
39	15	Sitka spruce <i>Picea sitchensis</i>	2 gallon
39	0	Western crabapple <i>Pyrus fusca</i>	2 gallon
39	48	Western red cedar <i>Thuja plicata</i>	2 gallon
78	78	Red-osier dogwood <i>Cornus stolonifera</i>	1 gallon
78	48	Black twinberry <i>Lonicera involucrata</i>	1 gallon
78	23	Pacific ninebark <i>Physocarpus capitatus</i>	1 gallon
78	40	Nootka rose <i>Rosa nutkana</i>	1 gallon
78	32	Sitka willow <i>Salix sitchensis</i>	1 gallon
0	43	Tall Oregon grape <i>Berberis aquifolium</i>	1 gallon
0	14	Flowering currant <i>Ribes sanguineum</i>	1 gallon
<b>585</b>	<b>362</b>	<b>TOTAL</b>	

## **IMPLEMENTATION INSPECTION**

Essential to the success of the buffer program is the accurate inspection of onsite activities immediately prior to and during the initial invasive control and planting phase. These activities include pre-implementation site inspection, onsite inspection and technical direction during invasive species removal and planting activities, and post-planting site inspection and evaluation.

The project biologist shall complete onsite inspections, verify, and approve the following project tasks (at a minimum):

1. Marking of work areas and access corridors. Marking of desirable plants to be retained.
2. Removal of invasive species and existing garbage.
3. Nursery stock acceptance.
4. Modification of plant species and sizes.
5. The character and placement of habitat features.
6. Installation of the irrigation system.
7. Installation of buffer boundary signs.

The pre-implementation site inspection allows the project team and the project biologist to evaluate and, if necessary, adjust the onsite implementation steps. These steps include analysis of project site elevation features, project sequencing and timing, final grade analysis, unforeseen required minor modifications to the original establishment plan, and the establishment of environmental protections (silt fences, etc.) required during planting. Onsite technical inspection during implementation and planting activities shall be implemented by the project biologist. The project biologist shall perform implementation oversight and address minor unforeseen implementation difficulties to assure that the goal of the buffer program is met.

The project biologist shall be responsible for ensuring that the species and sizes of native plants selected and noted within the final planting plan are utilized during implementation. If selected native species become unavailable, the project biologist shall approve, based on City standards, substitute plant species to assure that the goal of the buffer program is met.

Following the completion of onsite planting activities an implementation report and "record-drawing" plan shall be prepared and submitted to the City of Sumner. The implementation report shall include a description of who completed the onsite actions, a description of the scope of work completed, a description of work specifications, and a detailed timeline of completed actions. The implementation report shall also include a project evaluation prepared by the project biologist.

## IMPLEMENTATION SCHEDULE

PROJECT TASK	TASK SCHEDULE
Onsite pre-implementation meeting	Completed by August 1, 201x
Placement of protective fencing. Final marking and identification of work area and access corridors.	Completed by August 5, 201x
Removal of invasive plants for the project area(s).	Completed by August 15, 201x
Placement of habitat features within the project area(s).	Completed by August 30, 201x
City of Sumner environmental staff review of the planting areas.	Completed by September 15, 201x
Planting of buffer area.	Completed by October 15, 201x
Record-drawings implementation report to City	Completed by November 5, 201x

Year 201x represents the starting point of the buffer program.

## PROJECT MONITORING

Following the successful completion of the proposed buffer program a **five-year** monitoring and evaluation program shall be undertaken. The purpose of this monitoring is to ensure the success of the buffer program as measured by an established set of performance criteria (*see above*).

## STANDARDS OF SUCCESS

A minimum of eight (8) 15-foot radius sample plots shall be established within the restored buffer. The locations of these sample plots shall be depicted on the implementation report graphic. Observations and measurements shall be recorded for all plant species in order of dominance based on the relative percent cover for each species within the various vegetation strata.

The evaluation of the success of the buffer program shall be based on the defined survival rates. The defined performance criteria shall be applied at the times of yearly monitoring. The percent survival rate shall be based on combined counts of existing and planted species during vegetation monitoring. Sample locations shall be shown on the "record drawings" plans and shall correspond to identified photopoints. Trees and shrubs shall be visually evaluated to determine the rate of survivorship, health, and vigor of each plant.

1. As a part of each monitoring period the project biologist shall count the number of live plants which were planted within identified sample plots. Plants shall be identified to species and observations of general plant condition (i.e., plant health, amount of new growth) are to be recorded for each plant within each sample plot.

2. At identified sample plots the project biologist shall determine percent coverage of vegetation for emergent species and for the scrub/shrub and sapling tree species.
3. At identified sample plots the project biologist shall count the number and tag for removal undesirable invasive plants and estimate the aerial coverage (as if the observer were looking straight down from above) of these invasive plants. Undesirable plants include blackberries, Scot's broom, tansy ragwort, and other such plants listed in the Washington State Noxious Weed List.
4. At identified sample plots the project biologist shall count the number of desirable "volunteer" plants and estimate the aerial coverage of these plants.
5. The project biologist shall take photographs that show the buffer area. During the five-year monitoring period photos shall be taken in the same direction and at the same location to provide a series of photos. These photos shall show plant growth, plant species, and plant coverage.
6. Upon the completion of each monitoring period as noted below the project biologist shall prepare a report defining methods, observations, and results along with the date the observations were completed. Each report shall be provided to the City of Sumner.

MONITORING YEAR	PLANT COMMUNITY MONITORING	SUBMITTAL OF MONITORING REPORT
YEAR-1	on or about April 15, 201x+1	
	on or about Sept. 15, 201x+1	report due Oct. 7, 201x+1
YEAR-2	on or about April 15, 201x+2	
	On or about Sept. 15, 201x+2	report due Oct. 7, 201x+2
YEAR-3	On or about Sept. 15, 201x+3	report due Oct. 7, 201x+3
YEAR-4	On or about Sept. 15, 201x+4	report due Oct. 7, 201x+4
YEAR-5	On or about Sept. 15, 201x+5	report due Oct. 7, 201x+5

## VEGETATION MAINTENANCE PLAN

Maintenance of the buffer plant community may be required. Such maintenance shall be identified during the monitoring period and shall be undertaken at the direction of the project biologist. The overall objective is to establish undisturbed plant communities that do not require maintenance. Activities may include, but are not limited to, the removal of invasive non-native vegetation and the irrigation of selected areas. Established maintenance activities include the removal of any trash within the established buffer area.

## REMOVAL OF INVASIVE NON-NATIVE VEGETATION

As a contingency, should the removal of invasive non-native shrubs become necessary, the project proponent would contact the City of Sumner to establish and define specific

actions to be taken. Resultant contingency plan activities shall be implemented when the ongoing vegetation monitoring program indicates that invasive shrubs are becoming dominant in the onsite plant community (i.e. greater than 10% aerial coverage).

Reed canarygrass control methods shall also be undertaken and shall focus on removal of the vegetation at the ground level using line-trimmers for the first three years following initial planting. The objective is to allow the more desirable native species to become established and eventually shade the reed canarygrass. The project team shall employ a landscape contractor to perform the control of the reed canarygrass, as well at the removal of other invasive species. All removal actions shall also be monitored onsite by the project biologist. The objective of the reed canarygrass control is to limit the ability of this species to adversely impact more desirable species. The success or failure of the overall buffer restoration program is not dependent upon reed canarygrass comprising less than 10% of the plant community.

The following invasive vegetation removal program shall be implemented to ensure the establishment of desirable plant communities.

MONITORING YEAR	FIRST REMOVAL ACTION	SECOND REMOVAL ACTION	THIRD REMOVAL ACTION
YEAR-1	On or about March 10, 201x+1	on or about April 10, 201x+1	on or about June 15, 201x+1
YEAR-2	On or about March 10, 201x+2	on or about April 10, 201x+2	on or about June 15, 201x+2
YEAR-3	On or about March 10, 201x+3	on or about April 10, 201x+3	on or about June 15, 201x+3

At the direction of the project biologist additional removal actions (if required) shall also be undertaken to ensure the establishment of desirable plant communities. The project proponent shall not be responsible for replacement of removed plants by others.

### CONTINGENCY PLAN

As a contingency, should the proposed buffer program fail to meet the performance criteria, the project proponent shall undertake required remedial actions. Where plant survival is the failing component, the project proponent shall replant and ensure the success of this second planting which would be held to the same standard of success as measured by threshold criteria and monitoring processes. Where non-native, invasive vegetation exceeds 10% aerial coverage the project proponent shall undertake removal actions. Such removal actions shall be completed using hand tools or pulling the plants by hand to remove the invasive vegetation without disrupting the soil profile. All cut or pulled vegetation shall be removed from the buffer area and disposed in an approved location. Herbicides shall only be used following approval by the City of Sumner. All herbicide application shall be completed by a licensed professional.

Should additional remedial actions be required, the project proponent shall meet with the City of Sumner to establish and define actions to be taken to meet the desired goal of this buffer program.

## **TEMPORARY IRRIGATION**

The project proponent shall ensure that a minimum of **one (1) inch of water is supplied each week** to the restoration area between May 1 and October 15 for a least the first two years following initial planting. The calculated amount of required water shall include both natural rainfall and temporary irrigation. The need for additional years of irrigation shall be determined based on site conditions and overall plant survival. The amount of water supplied to the restoration area shall be increased if onsite monitoring defines such a need.

Irrigation shall be provided via a temporary system placed on the ground surface within the buffer area or with optional hand watering. The system shall allow for a minimum of 10% overlap of coverage between sprinklers and the sprinklers shall be a minimum of four (4) feet above ground. The project team shall employ a landscape contractor to install, operate, and maintain the irrigation system. All actions shall also be monitored onsite by the project biologist. The City of Sumner shall provide water for the temporary irrigation system.

## **PLANTING NOTES**

All plant materials utilized within the buffer area shall be native to the Puget Sound Region. The onsite biologist shall inspect plant materials to assure the appropriate plant schedule and plant characteristics are met. The project proponent shall warrant that all plants would remain alive and healthy for a period of one year following completion of planting activities. The project proponent shall replace all dead and unhealthy plants with plants of the same specifications.

## **FINANCIAL GUARANTEE**

The project proponent shall provide a financial guarantee defined in two parts. Part One (Implementation Guarantee) shall be associated with the initial onsite elements of the buffer program. Part Two (Performance Guarantee) shall be associated with the maintenance and monitoring elements of the proposed buffer program. These guarantees shall be held by the City of Sumner and be equal to 120% of the actual estimated costs for identified activities. This increased percentage would allow for adequate funds to be available as a contingency should actions be required to meet the goals of these plans. The Implementation Guarantee shall be deemed to be released by the City of Sumner upon the successful completion of the initial onsite compensation elements and the acceptance by the City of Sumner. The Performance Guarantee shall be deemed to be released upon meeting the established threshold criteria and acceptance by the City of Sumner of the required reporting documents. If applicable,

equivalent portions of the Performance Guarantee shall be released by the City of Sumner after each monitoring period.

### Implementation Guarantee

TASK	ASSOCIATED COST
Mowing and removal of invasive vegetation, and debris. (16 hrs machine and 2 person crew at \$150/hr.)	\$ 2,400.00
Silt fencing and installation (appro. 400 linear feet x \$5/ft)	\$ 2,000.00
Imported topsoil/mulch and protective pads for planting	\$ 1,500.00
195 2-gallon trees with installation (\$25.00/each)	\$ 4,875.00
390 1-gallon shrubs with installation (\$12.50/each)	\$ 4,875.00
Habitat features and installation (12 at \$150/each)	\$ 1,800.00
Onsite biologist technical oversight (12 hours at \$100/hr)	\$ 1,200.00
Installation of a temporary irrigation system	\$ 2,000.00
Production of "record drawing" and report (8 hrs at \$100/hr).	\$ 800.00
<b>SUB-TOTAL</b>	<b>\$21,450.00</b>
Required 20% contingency	\$ 4,290.00
<b>IMPLEMENTATION GUARANTEE TOTAL</b>	<b>\$ 25,740.00</b>

### Performance Guarantee

TASK	ASSOCIATED COST
Year-One onsite monitoring with expenses Two times for plants (10 hrs at \$100/hr) Annual report with photos (6 hrs at \$100/hr)	\$ 1,750.00
Year-Two onsite monitoring with expenses Two times for plants (10 hrs at \$110/hr) Annual report with photos (6 hrs at \$110/hr)	\$ 1,850.00
Year-Three onsite monitoring with expenses One time for plants (5 hrs at \$120/hr) Annual report with photos (5 hrs at \$120/hr)	\$ 1,350.00
Year-Four onsite monitoring with expenses One time for plants (5 hrs at \$120/hr) Annual report with photos (5 hrs at \$120/hr)	\$ 1,350.00
Year-Five onsite monitoring with expenses One time for plants (5 hrs at \$120/hr) Annual report with photos (5 hrs at \$120/hr)	\$ 1,350.00
Temporary Irrigation Program One inch of water per week between June 1 <sup>st</sup> and October 15 <sup>th</sup> for years one and two.	\$ 4,000.00
Invasive Vegetation Removal Four times (early March, early April, mid-June, mid-September) for years one, two, and three (each at 20 hrs, 2 person crew at \$50/hr.)	\$ 12,000.00
<b>SUB-TOTAL</b>	<b>\$23,650.00</b>
Required 20% contingency	\$ 4,730.00
<b>PERFORMANCE GUARANTEE TOTAL</b>	<b>\$ 28,380.00</b>

Thank you for allowing Habitat Technologies the opportunity to assist with your project planning.

Sincerely,

*Thomas D. Deming*

Thomas D. Deming, PWS  
Habitat Technologies

## FIGURES

The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. The orthophotos and other data may not align. Pierce County and Habitat Technologies assume no liability for variations ascertained by actual survey. All data is expressly provided AS IS and WITH ALL FAULTS. Pierce County and Habitat Technologies make no warranty of fitness for a particular purpose.

### Map Legend

- Highlighted Tax Parcels
- Tax Parcels
- Roads
- County - 2011 - Ortho



**Figure 1 Site Vicinity**

0 160 320 ft.



## **APPENDIX A – Buffer Planting Plan**