



November 25, 2019

AOA-3748

James Athan
AceJimmy@msn.com

**SUBJECT: Wetland Restoration for 1325 Redmond-Fall City Road
Parcel 302507-9019, King County, WA (ENFR18-0118)**

Dear James:

We have prepared the attached wetland restoration plan (**Figures 1 and 2**) associated with clearing and filling that occurred within a wetland on the subject property.

1.0 Existing Critical Areas

The majority of the subject property consists of a large wetland. Since all of the unpermitted work occurred within a wetland that will be restored and there is no other proposed project, a buffer determination does not appear necessary and the wetland was not rated. At the time of an October 31, 2019 site review, all of the unpermitted structures within the wetland had been removed.

2.0 Wetland Impacts

It is my understanding that wetland impacts on the site occurred primarily as part of the construction of a greenhouse and outdoor storage areas associated with a leasing operation for several landscape companies that were on the site. Filling appears to have occurred in both wetland pasture as well as areas that contained willow (*Salix* sp.) and other woody vegetation.

3.0 Wetland Restoration

Restoration will consist of the removal of all recent gravel and the restoration of the original plant community. Historic wetland pasture will be re-seeded and those areas where shrubs were removed would be re-planted with a variety of cuttings. The following maintenance and monitoring program should be implemented as part of this restoration effort.

3.1 Goal, Objective, and Performance Standard for Restoration Area

The primary goal of the restoration plan is to restore and increase the habitat functions of the impacted wetland. To meet this goal, the following objective and performance standard have been incorporated into the design of the plan:

Objective: Increase the structural and plant species diversity within the restoration area.

Performance Standard: *Within the designated areas to be planted with cuttings, there will be 100% survival of all woody planted species throughout the restoration area at the end of the first year of planting. For Years 2-3, success will be based on an 80% survival rate or similar number of recolonized native woody plants. Areal coverage of plantings or native re-colonized species will be at least 15% at Year 1, 25% at Year 2, and 35% at Year 3.*

3.2 Construction Management

Prior to commencement of any work in the restoration area, the clearing limits will be staked and all existing vegetation to be saved will be clearly marked. A pre-construction meeting will be held at the site to review and discuss all aspects of the project with the landscape contractor and the owner.

A consultant will supervise plan implementation during construction to ensure that objectives and specifications of the restoration plan are met. Any necessary significant modifications to the design that occur as a result of unforeseen site conditions will be jointly approved by King County and the consultant prior to their implementation.

3.3 Monitoring Methodology

The monitoring program will be conducted for a period of three years, with annual reports submitted to King County. Vegetation monitoring will include general appearance, health, mortality, colonization rates, percent cover, percent survival, volunteer plant species, and invasive weeds.

Photo-points will be established from which photographs will be taken throughout the monitoring period. These photographs will document general appearance and progress in plant community establishment in the restoration area. Review of the photos over time will provide a visual representation of success of the restoration plan.

3.4 Maintenance Plan

Maintenance will be conducted on a routine, year-round basis. Additional maintenance needs will be identified and addressed following periodic maintenance reviews.

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3.5 Contingency Plan

All dead plants will be replaced with the same species or an approved substitute species that meets the goal of the restoration plan. Plant material shall meet the same specifications as originally installed material. Replanting will not occur until after reason for failure has been identified (e.g., moisture regime, poor plant stock, disease, shade/sun conditions, wildlife damage, etc.). Replanting shall be completed under the direction of the consultant, King County, or the owner.

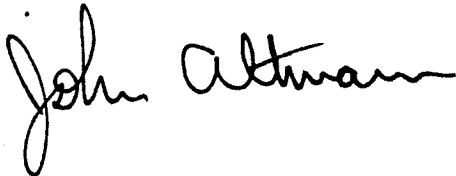
3.6 As-Built Plan

Following completion of construction activities, an as-built plan for the restoration area will be provided to King County. The plan will identify and describe any changes in relation to the original approved plan.

If you have any questions, please give me a call.

Sincerely,

ALTMANN OLIVER ASSOCIATES, LLC

A handwritten signature in black ink that reads "John Altmann". The signature is written in a cursive, flowing style.

John Altmann
Ecologist

Attachment



King County
Department of Permitting
and Environmental Review

Residential Site Plan Template

Ref: KCC 21a.12.030
 Max. Impervious Surface Allowed _____
 Max. Bldg. Height Allowed _____
 Ref: KCC 21a.12.170
 Min. Blg. Setback From Street _____
 Min. Garage Setback From Street _____
 Min. Blg. Setback From Interior _____
 Permit Center validation:
 Zoning
 Site Review Not Applicable
 Validated Signature _____
 Login Initials _____ Date: _____

Engineering / Drainage Approval
 Signature: _____
 Date: _____

Critical Areas Approval
 Signature: _____
 Date: _____

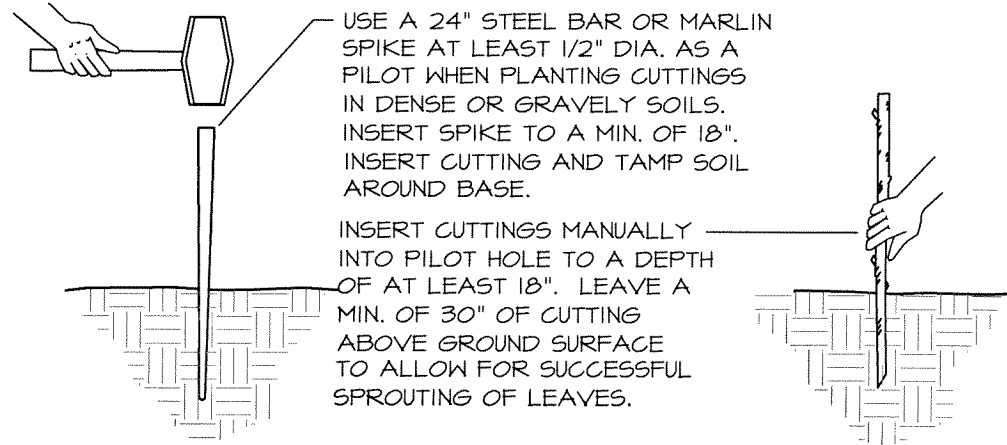
Clearing / Grading Approval
 Signature: _____
 Date: _____

Fire Approval
 Signature: _____
 Date: _____

PLANT SCHEDULE

SHRUBS

SCIENTIFIC NAME	COMMON NAME	SPACING	QTY.	SIZE (MIN.)	NOTES
CORNUS SERICEA	RED-OSIER DOGWOOD	4' O.C.	620	4' CUTTING	1/2" DIA. MIN., BARK INTACT
POPULUS BALSAMIFERA	BLACK COTTONWOOD	4' O.C.	620	4' CUTTING	1/2" DIA. MIN., BARK INTACT
SALIX LASIANDRA	PACIFIC WILLOW	4' O.C.	620	4' CUTTING	1/2" DIA. MIN., BARK INTACT



- NOTES:
- CUTTINGS SHALL BE SPECIES AS NOTED IN THE PLANT SCHEDULE.
 - CUTTINGS SHALL BE AT LEAST 1/2" DIA. AND 4' (min.) IN LENGTH.
 - CUTTINGS MUST BE ALIVE WITH SIDE BRANCHES CLEARLY REMOVED AND BARK INTACT. CUTTINGS SHALL BE PLANTED WITHIN 24 HOURS OF CUTTING.
 - THE BUTT ENDS SHOULD BE CLEANLY CUT AT AN ANGLE FOR EASY INSERTION INTO THE SOIL. THE TOP SHOULD BE CUT SQUARE OR BLUNT.
 - CUTTINGS MUST BE FRESH AND KEPT MOIST AFTER CUTTING. THEY SHOULD BE PRUNED AND INSTALLED THE SAME DAY.

1 CUTTING INSTALLATION (TYP.)
SCALE: NTS

SPECIFICATIONS

- ALL GRAVEL WITHIN THE FILLED WETLANDS WILL BE REMOVED AND THE AREA WILL BE DECONSOLIDATED TO A DEPTH OF 12".
- FILL REMOVAL, CULVERT REMOVAL, AND SEEDING SHALL BE DONE IN THE DRY SEASON (JULY - SEPTEMBER).
- GRAVEL AREAS AND THE CLEARED NO FILL AREA THAT PREVIOUSLY WERE VEGETATED WITH TREES AND SHRUBS (SCRUB - SHRUB WETLAND FILL AREA & CLEARED NO FILL) WILL BE REPLANTED WITH CUTTINGS.
- GRAVEL AREAS THAT WERE PREVIOUSLY PASTURE (PASTURE WETLAND FILL AREA) WILL BE RESEEDED WITH RED FESCUE.
- IN AREAS OF FILL AND CULVERT REMOVAL, SILT FENCING OR STRAW-FILLED WATTLES SHALL BE ON THE DOWNSTREAM SIDE OF THE WORK AREA. REMOVE CULVERTS AND EXCAVATE FILL TO NATIVE GRADES, AOA TO BE PRESENT DURING EXCAVATION TO DETERMINE EXTENT OF GRADING. ALL MATERIAL TO BE EXPORTED FROM THE SITE.
- UPON APPROVAL OF REMOVAL OF FILL BY AOA, ALL BARE AREAS SHALL BE SEEDDED WITH A NATIVE WETLAND SEED MIX AT A RATE OF 40 LBS / ACRE.
- CUTTINGS SHOULD BE INSTALLED BETWEEN DECEMBER 1ST AND MARCH 31ST.
- NATIVE PLANT CUTTINGS SHALL BE GROWN AND COLLECTED IN THE MARITIME PACIFIC NORTHWEST. CUTTINGS SHALL BE OF ONE- TO TWO-YEAR-OLD WOOD, 1/2" DIA. MINIMUM. CUTTINGS SHALL BE A MINIMUM OF 4' IN LENGTH WITH 4 LATERAL BUDS EXPOSED ABOVE GROUND AFTER PLANTING. THE TOP OF EACH CUTTING SHALL BE A MINIMUM OF 1" ABOVE A LEAF BUD, THE BOTTOM CUT 2" BELOW A BUD. THE BASAL ENDS OF THE CUTTINGS SHALL BE CUT AT A 45 DEGREE ANGLE AND MARKED CLEARLY SO THAT THE ROOTING END IS PLANTED IN THE SOIL. CUTTINGS MUST BE KEPT COVERED AND MOIST DURING STORAGE AND TRANSPORT, AND NO CUTTINGS SHALL BE STORED MORE THAN THREE DAYS FROM DATE OF CUTTING. CUTTINGS SHALL ONLY BE USED IF PLANTING OCCURS BETWEEN DECEMBER 1ST AND APRIL 1ST. FOR PLANTING BETWEEN APRIL 1ST AND DECEMBER 1ST, ROOTED CUTTINGS OR SAPLINGS SHALL BE USED.
- PLANT LAYOUT SHALL BE APPROVED BY AOA UPON COMPLETION OF PLANTING.
- UPON APPROVAL OF PLANT INSTALLATION, KING COUNTY WILL BE NOTIFIED TO CONDUCT A SITE REVIEW FOR FINAL APPROVAL.
- MAINTENANCE AND MONITORING SHALL BE IMPLEMENTED ON A REGULAR BASIS PER THE APPROVED RESTORATION REPORT.