

March 30, 2016

Ms. Jennifer Schroder
Mr. Jon Regala
City of Kirkland
Parks and Community Services Department and Planning Department
123 Fifth Avenue
Kirkland, WA 98033-6189

RE: I-405, SR 520 to SR 522 Stage 1 (Kirkland Stage 1) (Thrasher’s Corner)
Mitigation Site
City of Kirkland Permit LSM05-00017

Dear Ms.Schroder and Mr. Regala:

The Washington State Department of Transportation completed qualitative monitoring of the I-405 Thrasher’s Corner mitigation site on June 30, 2015, to address Year-10 (2017) performance standards. Monitoring activities included vegetation observations and photo documentation. This Year-8 report is being issued for compliance with the reporting requirements of the Land Surface Modification Permit – City of Kirkland Permit Number LSM05-00017.

General Site Information			
USACE NWP IP Number	200401410		
City of Kirkland Permit Number	LSM05-00017		
Mitigation Location	West of SR 527, adjacent to Thrasher’s Corner Regional Park, King County.		
LLID Number	1222146478041		
Construction Date	2007-2008		
Monitoring Period	2008-2017		
Year of Monitoring	8 of 10		
Type of Impacts	Wetland	Buffer	
Area of Project Wetland Impact	1.56 acres	2.91 acres	
Type of Mitigation	Wetland Establishment	Wetland Enhancement	Preservation
Area of Mitigation¹	0.14 acre	0.72 acre	3.22 acres

¹ Additional wetland acreage provided by two other mitigation sites, including I-405 Forbes Lake East and I-405 Forbes Lake West.

Performance Standards (Year-10 unless otherwise noted)	2015 Results	Management Activities
Wetland delineation	4.56 acres (See WSDOT 2013) ²	
At least 80% cover of native woody species in the forested and scrub-shrub wetlands; of this area no more than 30% will be volunteer red alder (<i>Alnus rubra</i>)	Cover is 95%; Red alder relative cover is 30%	
At least three native, non-invasive facultative or wetter plant species will achieve a minimum of 8% relative cover for each species in the emergent wetland zone	Broadleaf cattail (<i>Typha latifolia</i>), small-fruited bulrush (<i>Scirpus microcarpus</i>) each provide at least 8% cover.	
At least three native, non-invasive facultative or wetter plant species will achieve a minimum of 10% relative cover for each species in the forested and scrub-shrub wetland zones	Red alder, redosier dogwood (<i>Cornus alba</i>), black cottonwood (<i>Populus balsamifera</i>) each provide at least 10% cover.	
Species identified as King County-listed noxious and obnoxious weeds, including, but not limited to, reed canarygrass (<i>Phalaris arundinacea</i>), non-native blackberries (<i>Rubus</i> species), purple loosestrife (<i>Lythrum salicaria</i>), Scotch broom (<i>Cytisus scoparius</i>), and Japanese knotweed (<i>Reynoutria japonica</i>), will not exceed 20 percent cover in the wetland creation areas.	Cover is 5%	The site was visited three separate times for weed control in 2015.

² [WSDOT] Washington State Department of Transportation. 2013. I-405 – SR 520 to SR522 Stage 1 (Kirkland Stage 1) I-405 Thrasher’s Corner Mitigation Site. Wetland Delineation Report.

Methods:

The site has developed more rapidly than anticipated and has been meeting the year-10 final year standards for the forested and scrub-shrub wetland woody and herbaceous cover, emergent cover, and invasive cover, for three years. On April 30, 2013 a request to discontinue quantitative sampling for all vegetative performance standards was sent to USACE, this request was accepted on April 30, 2013 by USACE. All vegetative performance standards were assessed qualitatively.

WSDOT staff performed a wetland delineation using methods described in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Version 2.0) (USACE 2010) and a Global Positioning System (Trimble Mapping Grade) (Performance Standards 1). The site was delineated on May 9, 2011 and has met the final-year year ten wetland acreage requirements. On February 19, 2013 a request to discontinue hydrology monitoring was sent to USACE. This request was accepted on March 7, 2013 by USACE.

For additional details on the methods, see the [WSDOT Wetland Mitigation Site Monitoring Methods Paper](#) (WSDOT 2008).

Site development:

Thrasher's Corner mitigation site continues to achieve all final year (Year-10) standards in Year-8. Conditions on site remain similar to observations since 2012, apart from a decline in beaver activity since 2013 and a slight increase in reed canarygrass (*Phalaris arundinacea*) cover in the emergent zone. The established wetland contains dense communities of both deciduous and coniferous trees, as well as a diverse layer of shrub species. Invasive cover across the site is relatively low, and these species are only present in trace amounts in the established wetland.

Results for Performance Standard 1
(Wetland acreage a minimum 0.927 acre):

A delineation conducted in May 2011 indicated wetland acreage was 4.56 acres (WSDOT 2013)².

Results for Performance Standard 2
(Cover of native woody species will be at least 80 percent in the forested and scrub-scrub wetlands, of this area no more than 30 percent will be volunteer red alder):

Native woody cover is qualitatively estimated to be 95 percent. Red alder (*Alnus rubra*) is estimated to comprise 30 percent relative cover (Photo 1).

Results for Performance Standard 3
(At least three native, non-invasive facultative or wetter plant species will achieve a minimum of 8 percent relative cover for each species in the emergent wetland zone):

The dominate plants in this zone each provide at least eight percent cover and include: broadleaf cattail, small-fruited bulrush, and giant horsetail.

Results for Performance Standard 4
(At least three native, non-invasive facultative or wetter plant species will achieve a minimum of ten percent relative cover for each species in the forested and scrub-shrub wetland zones):

Red alder (*Alnus rubra*), redosier dogwood (*Cornus sericea*), and black cottonwood (and *Populus balsamifera*) are each estimated to have a minimum of ten percent relative cover.

Performance Standard 5
(Species identified as King County-listed noxious and obnoxious weeds, including, but not limited to, reed canarygrass, non-native blackberries, purple loosestrife, Scot's broom and Japanese knotweed will not exceed 20 percent cover in the wetland creation areas):

The cover of species listed above is estimated to be five percent across the site. This consists of primarily of reed canarygrass, small patches of Himalayan blackberry (*Rubus armeniacus*), and climbing nightshade (*Solanum dulcamara*). Paleyellow iris (*Iris pseudacorus*) is present off site just to the east of the wetland creation and has the potential to migrate onto the site.



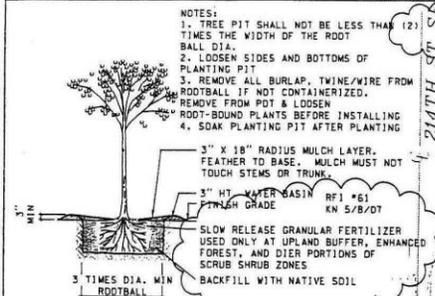
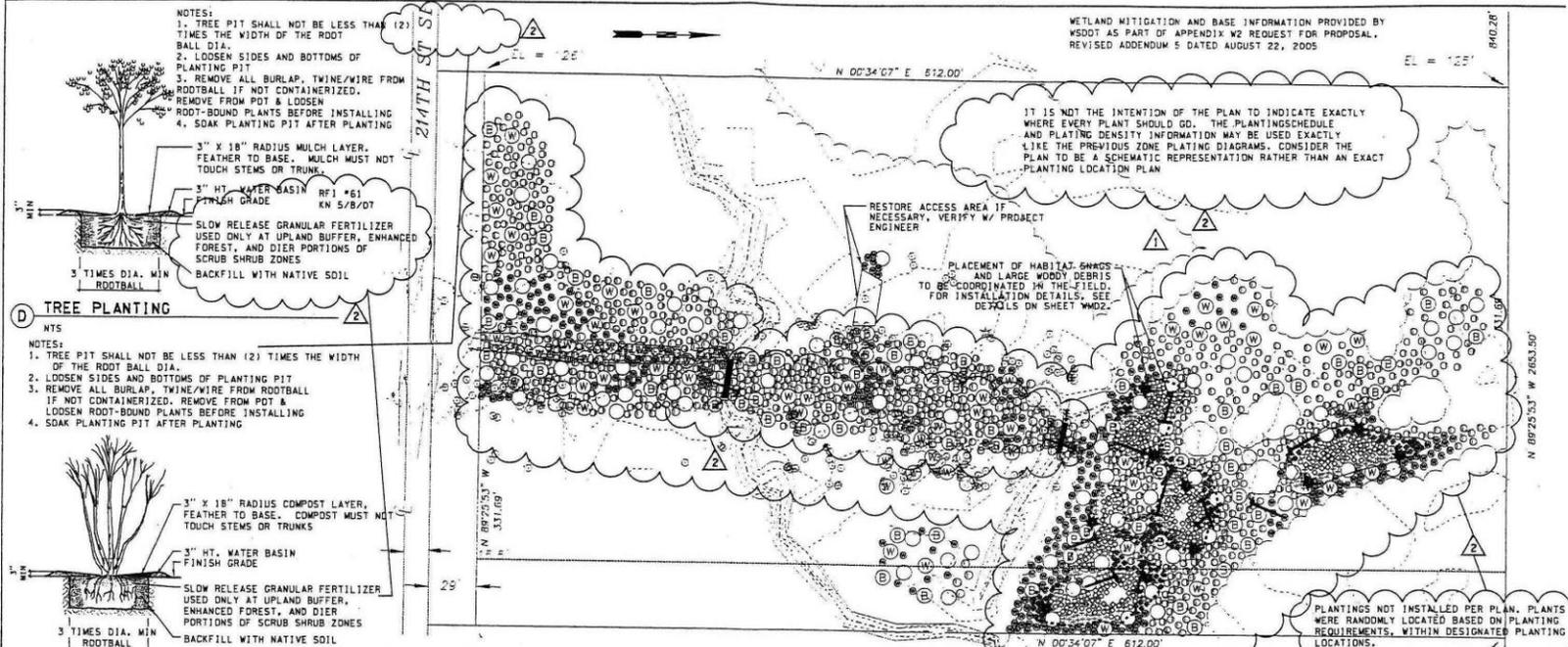
Photo 1 – Facultative and wetter species/ establishment adjacent to unnamed seasonal stream.

We welcome your questions or comments. Please contact me at 360/570-2579 or by e-mail at littaud@wsdot.wa.gov for questions about these mitigation sites.

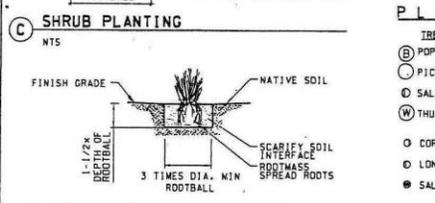
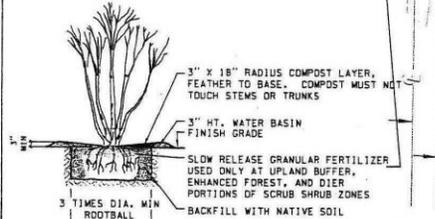
Sincerely,

Doug Littauer
Wetlands Program

AS-BUILT



D TREE PLANTING
 NTS
 NOTES:
 1. TREE PIT SHALL NOT BE LESS THAN (2) TIMES THE WIDTH OF THE ROOT BALL DIA.
 2. LOOSEN SIDES AND BOTTOMS OF PLANTING PIT
 3. REMOVE ALL BURLAP, TWINE/WIRE FROM ROOTBALL IF NOT CONTAINERIZED.
 4. REMOVE FROM POT & LOOSEN ROOT-BOUND PLANTS BEFORE INSTALLING
 5. SOAK PLANTING PIT AFTER PLANTING

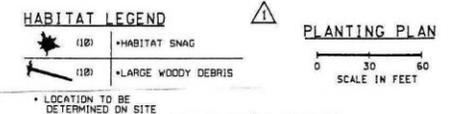


PLANT SCHEDULE

TREES	SIZE	QTY.	CONDITION	PERENNIALS / EMERGENTS	SIZE	QTY.	CONDITION
(B) POPULUS BALSAMIFERA / BLACK COTTONWOOD	40x: 5'-6" HT.	65	CONTAINER	ATHYRIUM FILIX-FEMINA / LADY FERN	1 GAL.	122	CONTAINER
(P) PICEA SITCHENSIS / SITKA SPRUCE	60x: 2'-3" HT.	82	CONTAINER OR BALL & BURLAP	CAREX OBNUPTA / SLOUGH SEDGE	10 CU. IN. POTS	144	CONTAINER
(S) SALIX LASIANDRA / PACIFIC WILLOW	60x: 2'-3" HT.	118	CONTAINER	LYSICHITON AMERICANUM / SKUNK CABBAGE	1 GAL.	118	CONTAINER
(W) THUJA PLICATA / WESTERN RED CEDAR	40x: 5'-6" HT.	59	CONTAINER OR BALL & BURLAP	SCIRPUS MICROCARPUS / SMALL FRUITED BULRUSH	10 CU. IN. POTS	181	CONTAINER
(C) CORNUS STOLONIFERA / RED OSIER DOGWOOD	3'-4" HT.	444	CONTAINER				
(D) LONICERA INVOLUCRATA / BLACK TWINBERRY	1'-2" HT.	307	CONTAINER				
(S) SALIX SITCHENSIS / SITKA WILLOW	3'-4" HT.	285	CONTAINER				

PLANTING DENSITY

12 FT. D.C.	TREES	RESTORATION AREA
8 FT. D.C.	SHRUBS	
3 FT. D.C.	EMERGENTS	
200 FT. D.C.	TREES	ENHANCEMENT AREA
40 FT. D.C.	SHRUBS	



PLANTING NOTES:
 FORESTED WETLAND: MULCH ENTIRE AREA
 EMERGENT WETLANDS: NO MULCH
 AREAS THAT REQUIRE NO GRADING, MULCH ONLY A 18" RADIUS.

FILE NAME	*****DESIGNFILENAME*****	REVISION	DATE	BY	STATE	FED. AID PROJ. NO.
TIME	*****	NO.				
DATE	*****	10				
PLOTTED BY	*****	WASH				
DESIGNED BY	*****	JOB NUMBER				
ENTERED BY	B. TAYLOR	CONTRACT NO.				
CHECKED BY	D. MYERS	LOCATION NO.				
PROJ. ENGR.	AS BUILT		3/7/08			
REGIONAL ADM.	LWD UPDATE		8/25/06			
	EARLY RFP SUBMITTAL		3/16/06			
	REVISION					

THRASHER'S CORNER

I-405
 SR 520 TO SR 522
 STAGE 1

WM-13

SHEET

DATE

Kiewit
 DMJM HARRIS | AECOM