



**Washington State  
Department of Transportation**

Lynn Peterson  
Secretary of Transportation

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March 30, 2015

Ms. Gail Terzi  
US Army Corps of Engineers Seattle District  
Regulatory Branch CENWS OD RG  
PO Box 3755  
Seattle, WA 98124-3755

RE: I-405, SR 520 to SR 522 Stage 1 (Kirkland Stage 1) (Thrasher’s Corner)  
Mitigation Site  
USACE IP Number 200401410

Dear Ms. Terzi:

The Washington State Department of Transportation completed qualitative monitoring of the I-405 Thrasher’s Corner mitigation site on July 2, 2014, to address Year-7 (2014) performance standards, as well as Year-10 (2017) performance standards achieved in Year-7. Monitoring activities included vegetation observations and photo documentation.

<b>General Site Information</b>			
<b>USACE NWP IP Number</b>	200401410		
<b>City of Kirkland Permit Number</b>	LSM05-00017		
<b>Mitigation Location</b>	West of SR 527, adjacent to Thrasher’s Corner Regional Park, King County.		
<b>LLID Number</b>	1222146478041		
<b>Construction Date</b>	2007-2008		
<b>Monitoring Period</b>	2008-2017		
<b>Year of Monitoring</b>	7 of 10		
<b>Type of Impacts</b>	Wetland	Buffer	
<b>Area of Project Wetland Impact</b>	1.56 acres	2.91 acres	
<b>Type of Mitigation</b>	Wetland Establishment	Wetland Enhancement	Preservation
<b>Area of Mitigation<sup>1</sup></b>	0.14 acre	0.72 acre	3.22 acres

<sup>1</sup> 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)	2014 Results	Management Activities
Wetland delineation	4.56 acres (See WSDOT 2013) <sup>2</sup>	
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> ), giant horsetail ( <i>Equisetum telmateia</i> ), mannagrasses ( <i>Glyceria</i> species), and soft-stem bulrush ( <i>Schoenoplectus tabernaemontani</i> ) each provide at least 5% 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> ), twinberry honeysuckle ( <i>Lonicera involucrata</i> ), Pacific willow ( <i>Salix lasiandra</i> ), Sitka spruce ( <i>Picea sitchensis</i> ), and Sitka willow ( <i>Salix sitchensis</i> ) each provide at least 5% 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%	Weed control was performed on 2/6, 4/2, 9/10, 10/12, 12/1 in 2014.

<sup>2</sup> [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-7. Conditions on site remain similar to 2013 observations, apart from a decline in beaver activity. The northeast corner was deeply inundated to greater than four feet in 2013, and in 2014 is drawn down with some areas of shallow (around six inches) inundation. Invasive cover is low, consisting primarily of reed canarygrass with a few scattered climbing nightshade (*Solanum dulcamara*) and Robert geranium (*Geranium robertianum*).

Results for Performance Standard 1  
(Wetland delineation):

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

Results for Performance Standard 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):

Native woody cover is qualitatively estimated at 95%. This value exceeds the performance standard target. Red alder (*Alnus rubra*) is estimated to comprise 30 percent of the relative cover.

Results for Performance Standard 3  
(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):

The dominate plants in this zone each provide at least five percent cover and include: broadleaf cattail, small-fruited bulrush, giant horsetail, mannagrasses, and soft-stem bulrush (Photo 1).



**Photo 1** – Facultative and wetter species/emergent zone cover

Performance Standard 4  
(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):

Dominant plants in the emergent zone each provide at least five percent cover and include: Red alder, redosier dogwood, black cottonwood, twinberry honeysuckle, Pacific willow, Sitka spruce, and Sitka willow.

Performance Standard 5  
(Species identified as King County-listed noxious and obnoxious weeds):

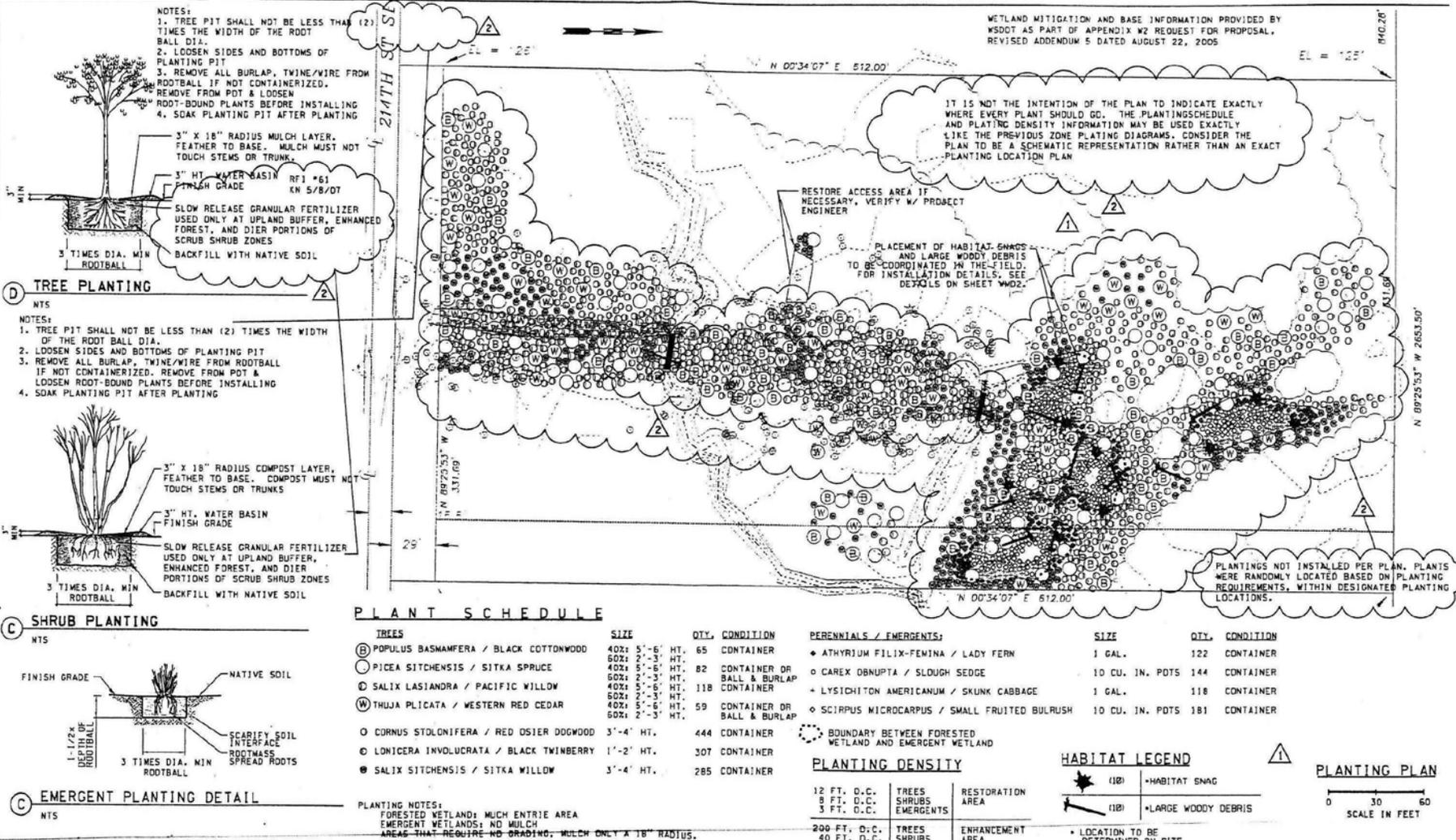
Invasive cover is visually estimated at five percent across the site. The cover consists primarily of reed canarygrass, with a few scattered climbing nightshade and Robert geranium.

We welcome your questions or comments. Please contact me at 360/570-6640 or by e-mail at [busht@wsdot.wa.gov](mailto:busht@wsdot.wa.gov) for questions about these mitigation sites.

Sincerely,

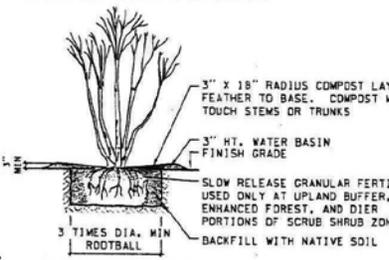
Tony Bush  
Wetlands Program

AS-BUILT

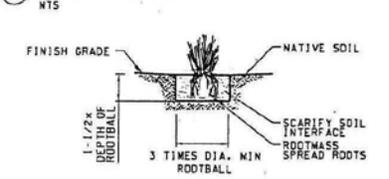


**D TREE PLANTING**

- 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. REMOVE FROM POT & LOOSEN ROOT-BOUND PLANTS BEFORE INSTALLING  
 4. SOAK PLANTING PIT AFTER PLANTING



**C SHRUB PLANTING**



**C EMERGENT PLANTING DETAIL**

**NTS**

**PLANT SCHEDULE**

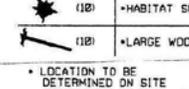
TREES	SIZE	QTY.	CONDITION
(B) POPULUS BASMAMFERA / BLACK COTTONWOOD	40x: 5'-6" HT.	65	CONTAINER
(C) PICEA SITCHENSIS / SITKA SPRUCE	40x: 2'-3" HT.	82	CONTAINER OR BALL & BURLAP
(D) SALIX LASIANDRA / PACIFIC WILLOW	40x: 5'-6" HT.	118	CONTAINER
(W) THUJA PLICATA / WESTERN RED CEDAR	40x: 2'-3" HT.	59	CONTAINER OR BALL & BURLAP
(O) CORNUS STOLONIFERA / RED OSIER DOGWOOD	3'-4" HT.	444	CONTAINER
(L) LONICERA INVOLUCRATA / BLACK TWIMBERRY	1'-2" HT.	307	CONTAINER
(S) SALIX SITCHENSIS / SITKA WILLOW	3'-4" HT.	285	CONTAINER

PERENNIALS / EMERGENTS:	SIZE	QTY.	CONDITION
(A) ATHYRIUM FILIX-FEMINA / LADY FERN	1 GAL.	122	CONTAINER
(C) CAREX OBNUPA / SLOUGH SEDGE	10 CU. IN. POTS	144	CONTAINER
(L) LYSICHTON AMERICANUM / SKUNK CABBAGE	1 GAL.	118	CONTAINER
(S) SCIRPUS MICROCARPUS / SMALL FRUITED BULRUSH	10 CU. IN. POTS	181	CONTAINER

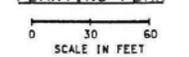
**PLANTING DENSITY**

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	

**HABITAT LEGEND**



**PLANTING PLAN**



FILE NAME	*****DESIGNFILENAME*****
TIME	*****
DATE	*****
PLOTTED BY	*****
DESIGNED BY	
ENTERED BY	B. TAYLOR
CHECKED BY	D. MYERS
PROJ. ENGR.	
REGIONAL ADM.	

REVISION	DATE	BY
1	3/7/08	
2	8/25/06	
3	3/16/06	

REGION	STATE	FED. AID PROJ. NO.
10	WASH	

CONTRACT NO.	LOCATION NO.



**THRASHER'S CORNER**  
 I-405  
 SR 520 TO SR 522  
 STAGE 1

WM-13  
 SHEET