Washington State Department of Transportation

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March 30, 2016

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

RE:

- SR 542: CED East Church Mountain Road Roadway Realignment and Culvert Replacement (MP 38.67 to MP 39.04) USACE (14) NWS-2009-786
- SR 539: Ten Mile Road to Badger Road (SR 546) Widening (MP 5.90 to MP 12.62) USACE NWS-2007-470
- SR 539 Widening Project: Horton to Ten Mile Road (MP 1.64 to MP 12.62) USACE 200500927
- SR 542/Everson Goshen Road Vic to SR 9 Vic USACE (23) NWS-2012-575
- SR 546/Depot Rd and Bender Rd-Intersection Improvements
  USACE (18) NWS-2012-575
  (Potter Road) Mitigation Site
- SR 542 Glacier Emergency USACE (14) NWS-2015-822

Dear Ms.Terzi,

The Washington State Department of Transportation completed qualitative monitoring of the I-539 Potter Road mitigation site on August 19, 2015, to address Year-10 (2019) performance standards. Monitoring activities included vegetation observations and photo documentation. This Year-6 report is being issued in support of the request for early closeout.

General Site Information			
USACE Numbers	(14) NWS-2009-786, NWS-2007-470, 200500927, (23) NWS-2012-575, (18) NWS-2012-575		
Mitigation Location	West of Van Zandt, off of Potter Road, Whatcom County		
LLID Number	1222054487876		
Construction Date	2008-2009		
Monitoring Period	2010-2019		
Year of Monitoring	6 of 10		
Type of Impacts	Wetland	Buffer	
Area of Project Wetland Impact	8.15 acres	6.8 acres	
Type of Mitigation	Wetland Establishment	Wetland Enhancement	Buffer Enhancement
Area of Mitigation[1]	10.4 acres	6.53 acres	9.24 acres

Performance Standards (Year-10)	2015 Results	Management Activities
13.13 acres created wetland present	2013 delineation indicates total wetland acreage is 17.17 acres	
60% cover native facultative or wetter woody species in the forested and scrub-shrub wetlands	More than 60% cover; 63% ($CI_{80\%}$= 56-71%) in 2014	Installed 60 live stakes in 2015
Less than 20% cover non-native invasive species (listed in WSDOT 2009) across the entire mitigation site. Japanese knotweed (*Reynoutria japonica*) and purple loosestrife (*Lythrum salicaria*) shall not be tolerated.	Invasive species cover in the wetland is low; 5% cover ($CI_{80\%}$= 1-9%) in 2014	Weed control occurred 13 times in 2014 and 10 times in 2015
50% cover native woody species in the buffer	More than 50% cover; 65% ($CI_{80\%}$= 58-73%) in 2014	
Less than 20% cover by non-native invasive species (listed in WSDOT 2009) in the buffer	Invasive cover in the buffer is very low; 1% in 2014	Weed control occurred 13 times in 2014 and 10 times in 2015

[1] Additional wetland acreage provided at SR 539 Larson Road, SR 539 Strand Road, and SR 539 Wiser Lake Mitigation Sites.

Site development:

This site has met all the final Year-10 standards in both Year 5 and 6. Discussion regarding early closeout is appropriate.

Vegetation structure is diverse across the site and intermixed with a varied hydrologic regime. Beaver appear to remain active on the site. A portion of the central wetland area is inundated long into the growing season and this has affected woody vegetation survival in that area. Depths reported in 2014 reached around three feet deep near the beaver dam. Cover of woody vegetation in areas that have been flooded due to the beaver activity may have been depressed due to long, deep inundation. The installation of a pond leveler on May12th, 2015 should provide a more consistent depth of inundation and prevent the flooding of adjacent properties.

Reed canarygrass, along the southwest site boundary, and Japanese knotweed, in the buffer preserve, will continue to be monitored and controlled as necessary. Areas of long inundation that may become exposed and suitable for recruitment of reed canarygrass as water levels draw down should continue to be evaluated for reed canarygrass recruitment. Targeted weed control and/or native grass seeding may help prevent reed canarygrass cover from increasing on the site.

Shrubs in several shoreline areas will be relocated to higher ground. The result will be a more open, sun-exposed condition, which is suitable for Oregon spotted frog breeding habitat. A native grass seed mix will be applied to muddy shorelines to preclude establishment of reed canarygrass. Replacement plantings of woody vegetation will be discontinued. Natural processes which kill trees and shrubs, such as beavers, willow borers, and excessive inundation, will be allowed to create more open conditions on portions of the site.

Results for Performance Standard 1
(13.13 acres created wetland):

A delineation conducted in May and October 2013 indicates total wetland acreage is 17.17 acres.

Results for Performance Standard 2
(60% cover native facultative or wetter woody species in the forested and scrub-shrub wetlands):

Native cover of facultative and wetter woody species is developing well. A central area located behind the beaver dam is subject to deep water for long duration. At the time of monitoring (August), ponded water was still present in this area. Over most of this area, woody vegetation has died back and young grass appears to be coming in in patches. Given the abundance of woody vegetation in other parts of the site, this standard likely is still being met. (Photo 1)

Results for Performance Standard 3
(Less than 20% cover non-native, invasive species across the entire mitigation site):

Invasive species cover in the wetland is low. This performance standard was met in 2014.

Results for Performance Standard 4
(50% cover native woody species in the buffer):

Native cover of woody species in the buffer achieved the final Year-10 standard in 2014. Vegetation in the buffer is developing well.

Performance Standard 5
(Less than 20% cover non-native, invasive species in the buffer):

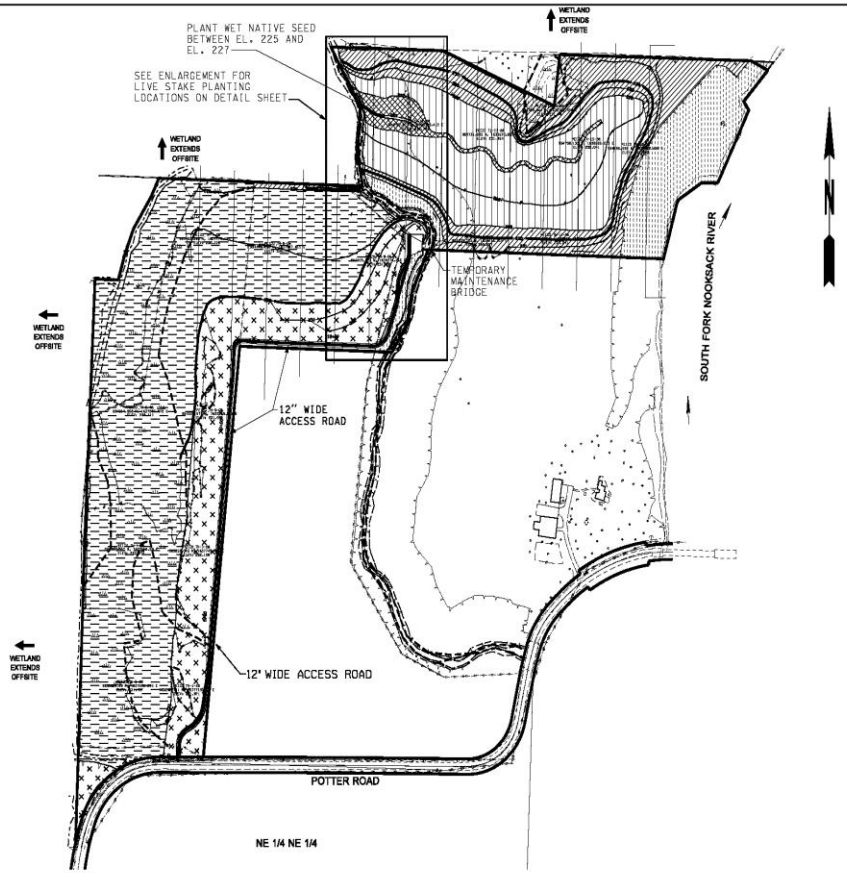
Invasive cover in the upland buffer is very low.

Photo 1 –Ponded area (August 19, 2015)

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



PLANTING AREAS		
SYMBOL	ITEM	PERCENTAGE
MIX PFO 1- 4' O.C.		
	BLACK COTTONWOOD *	10
	PACIFIC WILLOW *	10
	RED ALDER *	10
	BLACK TWINBERRY	10
	PACIFIC NINEBARK	10
	RED-OSIER DOGWOOD	15
	SITKA WILLOW	20
	WESTERN CRABAPPLE	15
MIX PFO 2- 4' O.C.		
	PACIFIC WILLOW *	5
	PAPER BIRCH *	5
	RED ALDER *	5
	SITKA SPRUCE *	10
	WESTERN RED CEDAR *	5
	BLACK HAWTHORN	10
	BLACK TWINBERRY	10
	CLUSTERED WILD ROSE	10
	RED-OSIER DOGWOOD	10
	SALMONBERRY	10
	SITKA WILLOW	10
	STINK CURRANT	5
	WESTERN CRABAPPLE	5
MIX PSS - 4' O.C.		
	BLACK COTTONWOOD *	5
	BLACK HAWTHORN *	15
	BLACK TWINBERRY	10
	CLUSTERED WILD ROSE	10
	RED-OSIER DOGWOOD	15
	SALMONBERRY	10
	SITKA WILLOW	15
	STINK CURRANT	10
	WESTERN CRABAPPLE	10
BUFFER MIX 1 - 4' O.C.		
	BEAKED HAZELNUT	20
	NOOTKA ROSE	15
	RED ELDERBERRY	15
	SERVICEBERRY	10
	SNOWBERRY	15
	THIMBLEBERRY	15
	VINE MAPLE	10
BUFFER MIX 2 - 4' O.C.		
	BIGLEAF MAPLE *	5
	DOUGLAS FIR *	10
	WESTERN HEMLOCK *	5
	WESTERN RED CEDAR *	10
	BEAKED HAZELNUT	15
	NOOTKA ROSE	10
	SERVICEBERRY	10
	SNOWBERRY	10
	THIMBLEBERRY	15
	VINE MAPLE	10

* TREES SPACED MIN. 8' O.C.

EXISTING VEGETATION TO BE SAVED AND PROTECTED. INTERPLANTING AND WEED CONTROL AS NECESSARY.

LEGEND

EXISTING WETLAND
EXISTING FENCE
EXISTING VEGETATION
ORDINARY HIGH WATER
TOP OF BANK

0 150 300
SCALE IN FEET

POTTER ROAD MITIGATION SITE

FILE NAME	T:\412006\XL3053 SR 542 Church Mtn\Permits\PERMITS MARCH 09.dgn							PLOT1
TIME	8:02:46 AM			REGION NO.	STATE	FED.AID PROJ.NO.	Washington State Department of Transportation	SR 539 HORTON ROAD TO SR 546 WETLAND MITIGATION	
DATE	3/30/2009			10	WASH				
PLOTTED BY	mcleonkf			JOB NUMBER					
DESIGNED BY	L.GRANT			CONTRACT NO.		LOCATION NO.		PLANTING PLAN	SHEET OF SHEETS
ENTERED BY	K.McLEAN								
CHECKED BY	D.PETERS								
PROJ. ENGR.	S.ANDERSON								
REGIONAL ADM.	L.ENG	REVISION	DATE	BY			P.E. STAMP BOX DATE	P.E. STAMP BOX DATE	