



**Washington State
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March 25, 2011

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

RE: SR 20 Oak Harbor to Frostad Road Mitigation Site
USACE NWP (14) 200300735
NWP (18) 2004-00078 & Ecology Work Order 1724
NWP (23) 2004-01209
NWP (23) 2005-00305

Dear Ms. Terzi:

The Washington State Department of Transportation completed qualitative monitoring of the SR 20 Whiskey Creek wetland mitigation site on September 16, 2010 to address Year-10 (2016) performance standards. The site is in year-6 of 10 and is normally a non-reporting year. This letter documents the second consecutive year of the achievement of final-year performance standards. Monitoring activities in 2010 included a wetland delineation, vegetation observations, and photo documentation.

General Site Information		
USACE NWP Numbers	(14) 200300735, (18) 2004-00078, (23) 2004-01209 , (23) 2005-00305	
Contract Number	C6764	
Mitigation Location	East of Whidbey Island Naval Air Station, along Whiskey Creek, Island County.	
LLID Number	1226358483452	
Construction Date	2004	
Monitoring Period	2005-2014	
Year of Monitoring	6 of 10	
Area of Project Impacts - Wetland	0.647 acre	
Type of Mitigation	Wetland Establishment	Wetland Enhancement
Area of Mitigation	1.01 acres	0.07 acre

Summary of Monitoring Results and Management Activities

Performance Standards (Year-10)	2010 Results	Management Activities
The wetland areas will be delineated using current methods to assure that the mitigation site contains 1.03 acre of new wetland.	Present	
Native emergent vegetation will achieve 75% coverage in emergent (PEM) creation areas.	95 percent (qualitative)	
Native woody species will achieve 75% coverage in scrub-shrub (PSS) and forested (PFO) creation and enhancement areas. Native upland wetland woody species will achieve 50% coverage.	90 percent (qualitative)	
No more than 10% coverage by the following non-native invasive species in the wetland: reed canarygrass (<i>Phalaris arundinacea</i>), non-native blackberries (<i>Rubus</i> sp.) and Scotch broom (<i>Cytisus scoparius</i>).	None observed	Manual weed control and occurred in June, July, Aug., Sept., and August. Herbicide application occurred in March, May, June, July, Sept., and Aug.. Bio-controls were released in June.
Three native vegetation species will achieve 5% or greater relative cover in each of the forested wetland, scrub-shrub wetland and wetland plant communities.	4 species in PEM, 5 species in PSS (qualitative)	
No more than 10% coverage by the following non-native invasive species in the buffer: reed canarygrass (<i>Phalaris arundinacea</i>), non-native blackberries (<i>Rubus</i> sp.) and Scotch broom (<i>Cytisus scoparius</i>)	Less than 2 percent cover (qualitative)	Manual weed control and occurred in June, July, Aug., Sept., and August. Herbicide application occurred in March, May, June, July, Sept., and Aug.. Bio-controls were released in June.
60% cover by native woody species including 25% cover by tree species in created buffer.	Overall cover: 65 percent Tree cover: 50 percent	
5 native woody species will achieve 7% or greater relative cover in the created buffer.	6 species present (qualitative)	

Is the site a success?

Although this site is currently in year-6, it is meeting all of its final-year performance standards for the second consecutive year and has developed into a complex, functioning wetland. This site has high cover of woody species and few invasive species in both the wetland and upland areas. Willows (*Salix* sp), red alder (*Alnus rubra*), and redosier dogwood (*Cornus sericea*) are dominant species in the scrub-shrub and forested wetlands while the emergent wetland is dominated by native species such as common mare's tail (*Hippuris vulgaris*) and broadleaf cattail (*Typha latifolia*). These diverse plant communities provide significant cover and foraging opportunities for wildlife.

Results for Performance Standard 1 (1.03 acre of new wetland present):

The combined May 2009 and December 2010 delineations include all of the wetland areas on the mitigation site. The delineations document the presence of 2.05 acres of combined wetland

establishment and enhancement located within the wetland boundary. An additional 1.2 acres of wetland occur in the wetland preservation area on the northern and western edges of the site.

Results for Performance Standard 2

(Native emergent vegetation will achieve 75% coverage in emergent (PEM) creation areas):

The cover of native emergent species in the emergent wetland is qualitatively estimated to be 95 percent (Photo 1). This cover value exceeds the performance standard target.

Results for Performance Standard 3

(Native woody species will achieve 75% coverage in scrub-shrub and forested creation and enhancement areas. Native wetland woody species will achieve 50% coverage):

The aerial cover of native woody species in the scrub-shrub and forested wetlands is qualitatively estimated to be 90 percent (Photo 2 – next page). Dominant species observed in these zones include Pacific willow (*Salix lucida* ssp. *lasiandra*), Hooker's willow (*Salix hookeriana*), twinberry honeysuckle (*Lonicera involucrata*), and red alder. All dominant species and virtually all other species present in these zones are FAC or wetter, therefore the second performance standard requirement has been achieved.



Photo 1 – Herbaceous cover in the emergent wetland (September, 2010)

Results for Performance Standard 4

(No more than 10% coverage by reed canarygrass, non-native blackberries, and Scotch broom in the wetland):None of the specified species were observed in any of the wetland zones. Canada thistle (*Cirsium arvense*) is present in the wetland, however it only provides approximately two percent cover (qualitative estimate). This value is below the performance standard threshold. Control of invasive species will continue in 2011.

Results for Performance Standard 5

(Three native vegetation species will achieve 5% or greater relative cover in each of the wetland plant communities):

In the emergent wetland, common mare's tail, broadleaf cattail, soft rush (*Juncus effusus*), and water parsley (*Oenanthe sarmentosa*) are qualitatively estimated to provide greater than 5 percent relative cover. In the forested and scrub-shrub wetlands, five species including

Hooker's willow (*Salix hookeriana*), Pacific willow (*Salix lucida* ssp. *lasiandra*), Sitka willow (*Salix sitchensis*), red alder (*Alnus rubra*), Nootka rose (*Rosa nutkana*), and twinberry honeysuckle (*Lonicera involucrata*), provide greater than five percent relative cover.



Photo 2 – Woody cover in the scrub-shrub wetland (September, 2010)



Photo 3 – Woody cover in the upland buffer

Results for Performance Standard 6

(No more than 10% coverage reed canarygrass, non-native blackberries, and Scotch broom in the buffer):

The cover of invasive species in the upland buffer is qualitatively estimated to be two percent. This cover estimate is below the performance standard threshold. Of the species specifically addressed in the performance standard, Scotch broom is the only species observed. Canada thistle is also present in very small quantities in the buffer.

Results for Performance Standard 7

(60% cover by native woody species including 25% cover by tree species in created buffer):

The aerial cover of native woody species in the upland buffer is qualitatively estimated to be 65 percent. Dominant species observed included red alder, snowberry (*Symphoricarpos albus*), Douglas-fir (*Pseudotsuga menziesii*), and lodgepole pine (*Pinus contorta*) (Photo 3). The aerial cover of tree species is qualitatively estimated to be 50 percent; therefore both performance standard requirements are met.

Results for Performance Standard 8

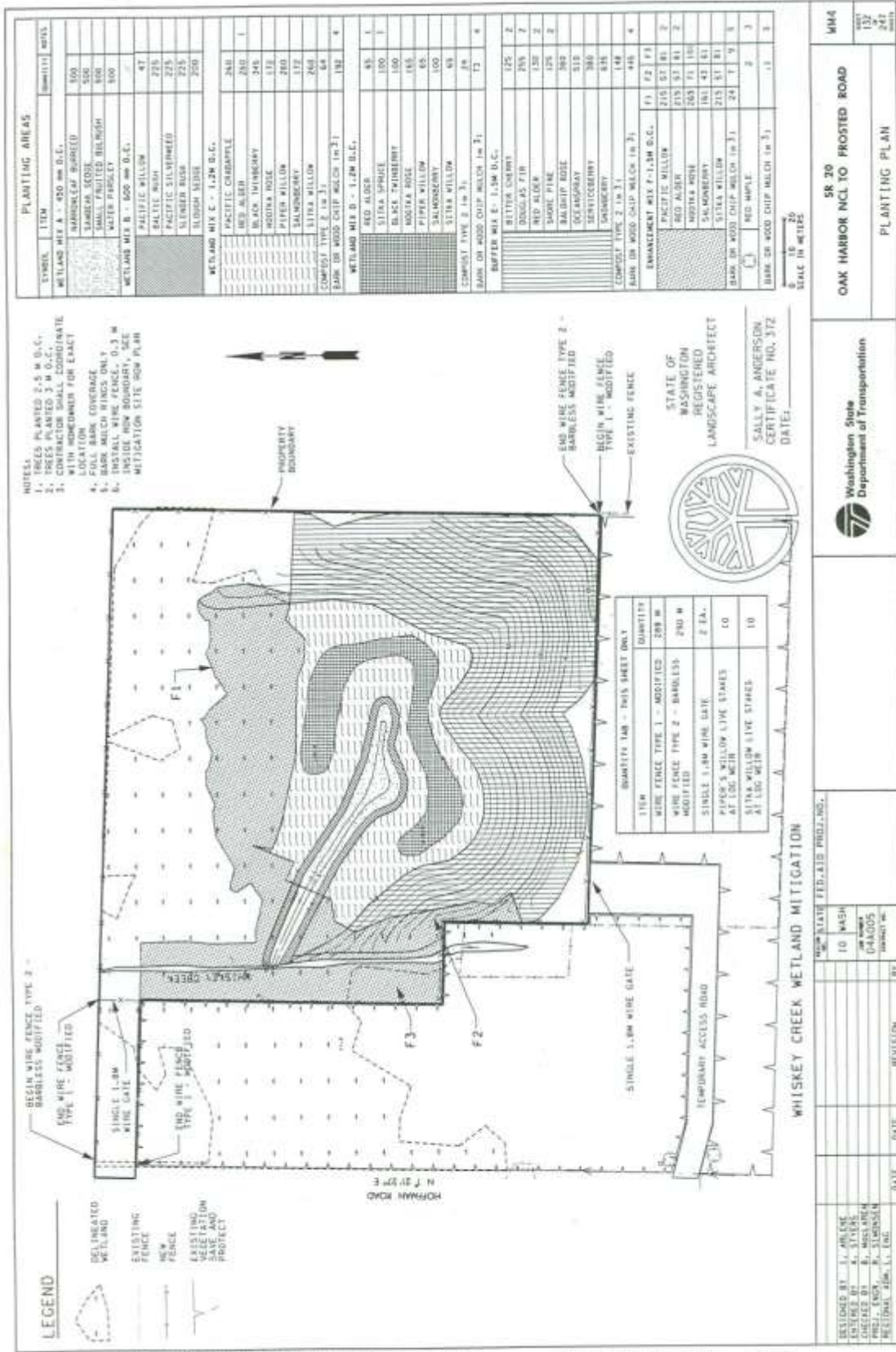
(5 native woody species will achieve 7% or greater relative cover in the created buffer):

According to qualitative estimates, red alder, snowberry, Douglas-fir, lodgepole pine, twinberry honeysuckle, and oceanspray (*Holodiscus discolor*) all provide at least seven percent relative cover in the upland buffer.

For questions about this report or the mitigation site please contact me at 360-570-6640 or by email at busht@wsdot.wa.gov.

Sincerely,

Tony Bush
Wetland Assessment and Monitoring Program



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OAK HARBOR NCL TO FROSTED ROAD	NO. 132
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Washington State Department of Transportation	PLANTING PLAN