



**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 164 - SE 368th Place & 158th Avenue SE (Bass Lake 2) Mitigation Site
USACE NWP 23 Number 2002-4-00231
EPA WQC# ECO-083

Dear Ms. Terzi:

The Washington State Department of Transportation completed qualitative monitoring of the SR 164 Bass Lake 2 mitigation site on July 14, 2010. Monitoring was completed to address Year-10 (2012) performance standards. Monitoring activities included an assessment of wetland hydrology, vegetation observations, and photo documentation. This Year-8 report is being issued for compliance with the terms and conditions of the Environmental Protection Agency Water Quality Certification # ECO-083 (200200231) and to document the third year achievement of final year standards (see discussion below).

General Site Information		
USACE NWP 23 Number	2002-4-00231	
WSDOT Contract Number	C6389	
Mitigation Location	Intersection of SR 169 and 400 th Street, King County	
Construction Date	2002	
Initial Monitoring Period	2003 to 2012	
Year of Monitoring	8 of 10	
Area of Project Impact	0.22 acre	
Type of Mitigation	Wetland Establishment	Wetland Enhancement
Area of Mitigation	0.415 acre	0.079 acre

Summary of Monitoring Results and Management Activities

Performance Standards (Year-10)	2008 Results	2009 Results ¹⁻²	2010 Results	Management Activities
Creation and restoration areas must achieve 0.4568 acre or more of wetland hydrology	Not Available	Not Available	0.47 acres wetland	
Less than 10% aerial cover of noxious weeds including <i>Phalaris arundinacea</i> (reed canarygrass)	<5% cover	3% cover	3% cover	Weed Control
75% aerial cover of native emergent facultative or wetter vegetation involving at least three herbaceous plant species	Not Applicable	Not Applicable	Not Applicable	
50% aerial cover of native woody species involving at least three species (wetland)	60% cover 8 species	75% cover (CI _{80%} = 64-85%) 12 species	75% cover at least 11 species	
50% aerial cover of native upland woody species involving at least three species	70% cover 4 species	78% cover (CI _{90%} = 65-91%) 8 species	80% cover at least 6 species	

Is the site a success?

This is the third year in a row that the mitigation site is meeting all of its Year-10 vegetative performance standards and is developing into a functioning wetland. This site has high cover of woody species and few invasive species in both the wetland and upland areas. The native tree and shrub plant community is dominated by redosier dogwood (*Cornus sericea*), roses (*Rosa* spp.), and Sitka willow (*Salix sitchensis*). This community provides the intended wetland functions including habitat complexity, food chain support, opportunities for nesting and perching birds, and fruit, seed, and leaf litter production. Variations in topography result in small depressions. These areas create opportunity for the site to perform hydrologic and water quality functions (Photo 1).

¹ Estimated values are presented with their corresponding statistical confidence interval. For example, 75% cover (CI_{80%} = 64-85%) means we are 80% confident that the true aerial cover value is between 64% and 85%.

² Planned emergent wetlands have developed as scrub-shrub wetlands, instead. These areas were monitored as scrub-shrub wetlands.

Results for Performance Standard 1
(Creation and restoration areas must achieve 0.4568 acres of wetland hydrology):

Monitoring records from March and April 2010 indicate wetland hydrology was not present in all of the intended areas. The area that does not appear to be receiving sufficient hydrology is roughly in the center of the site, to the southwest of the access gate. A wetland delineation conducted on the 23rd of March 2010, found 0.47 acre of combined wetland establishment and enhancement. This meets the performance standard.

Results for Performance Standard 2
(Less than 10% cover by all King County-listed Class A, B-designate, and County-selected priority noxious weed species on the mitigation site):

Reed canarygrass (*Phalaris arundinacea*) was the only species observed that is referenced in the performance standard. Cover of reed canarygrass was visually estimated at three percent. Other noxious weed species observed in small quantities included Himalayan blackberry (*Rubus armeniacus*) and bull thistle (*Cirsium vulgare*).

Results for Performance Standard 3
(Emergent wetland mitigation areas will be native plant community with 75% or more aerial cover):

The majority of the originally planned emergent area has developed as forested wetland and has been included in that zone for evaluation of performance standards. There is still a small area that did not effectively develop as forested or emergent wetland (just south of the perch pole). This area is a mix of bare ground, sparse native emergent species, sparse native woody volunteers, and weeds (primarily reed canarygrass).



Photo 1 – Inundated topographical depression (March 2010)

Results for Performance Standard 4
(50% aerial cover of native woody species involving at least three species (wetland)):

Cover of native FAC or wetter woody species in the forested wetland is visually estimated to be 75 percent and involves at least 11 species (Photo 2).

Results for Performance Standard 5
(50% aerial cover of native upland woody species involving at least three species.):

The buffer area on this site was not distinct in landscape position or plant community from the forested wetland. Cover of woody species in the area designated as buffer on the planting plan, however, is visually estimated to be 80 percent and involves at least six species.



Photo 2 – Woody cover in the wetland (July 2010)

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

