

# Second Annual Wetland Monitoring/As-Built Report

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Lower Perry Bridge/Longley Meadow Restoration  
Union County, Oregon



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## Compensatory Wetland Monitoring Report

Lower Perry Bridge/Longley Meadow Restoration  
Union County, Oregon  
Section 15, Township 3 South, Range 36 East (Longley Meadow)

ODOT Key # 12359  
US Army Corps of Engineers Permit No. 2002-00032  
Oregon Department of State Lands Permit No. 24666

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Figure 3.	As-Built/Monitoring Map
	Photo-points

## 1.0 SITE DATA SUMMARY

<b>Project Name</b>	Lower Perry Bridge/Longley Meadow Restoration
<b>Site Location</b>	Approximately 10 miles southwest of La Grande, Oregon (Longley Meadow) Section 15, Township 3 South, Range 36 East 45° 18' 25" N, 118° 17' 16" W Union County
<b>USACE Permit Number</b>	2002-00032
<b>DSL Permit Number</b>	24666
<b>Monitoring Frequency</b>	Annually
<b>Anticipated Date of Final Monitoring</b>	2008
<b>Mitigation Designer</b>	Confederated Tribes of the Umatilla Reservation
<b>Construction PM</b>	Allison Cowie
<b>Planting Contractor</b>	Confederated Tribes of the Umatilla Reservation
<b>Date Constructed</b>	August 4, 2003
<b>Size of Mitigation Area</b>	0.15 acre
<b>Investigator</b>	Tanya Harrison
<b>Date of Site Visit</b>	June 23, 2005
<b>ODOT Key #</b>	12359
<b>Mitigation Goals</b>	Creation of a 0.15-acre wetland that provides the following functions: 1) floodflow alteration (during large scale events), 2) production export, and 3) habitat for wetland-associated birds
<b>Mitigation Objectives</b>	Creation of at least 0.15 acre of scrub-shrub wetlands
<b>Success Criteria</b>	1) creation of at least 0.15 acre of scrub-shrub wetlands 2) at least 70 percent cover of scrub-shrub vegetation after five years
<b>Directions to Site</b>	From Interstate-84, take exit 252 and drive south on Oregon-244 approximately 4.3 miles, to where the highway crosses Bear Creek; the mitigation site is located near the Grande Ronde River, approximately ½ mile north of Oregon-244

## 2.0 INTRODUCTION

In 2003, the Oregon Department of Transportation (ODOT) completed replacement of the Lower Perry Bridge, a previously degraded structure located on Interstate-84, approximately four miles west of La Grande, Oregon (Figure 1). Construction associated with the bridge replacement resulted in the filling of 0.10 acre of scrub-shrub wetlands. These wetlands are described in detail in the following documents: *Wetland Delineation, Lower Perry Bridge* (ODOT 2001) and *Wetland Impact Assessment and Mitigation Plan, Lower Perry Bridge* (ODOT 2002).

To compensate for the loss of wetlands, ODOT provided funding to the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) for construction of a 0.15-acre scrub-shrub wetland at Longley Meadow, a restoration project located approximately four miles upstream of the Lower

Perry Bridge (Figure 1). Wetland mitigation consisted of excavation to expose saturated soils, seeding of wetland emergent species, and installation of shrub species. Table 1 provides a timeline of significant mitigation activities. Table 2 provides a list of shrub species installed in the created wetland.

**Table 1. Project History**

May 3, 2002	DSL issues permit to ODOT
May 24, 2002	COE issues permit to ODOT
June 4, 2003	COE modifies permit
August 4, 2003	Wetland excavation and grading completed
September 29, 2003	Wetland seeding completed
December 30, 2003	ODOT sends COE letter describing status of mitigation
April 2004	Shrubs planted
January 2005	Additional shrubs planted
March 2005	ODT sends 1 <sup>st</sup> annual monitoring report to COE
November 2005	Additional shrubs planted

**Table 2. Shrub Installation**

April 2004		
Common Name	Scientific Name	Number installed
Red-osier dogwood	<i>Cornus stolonifera</i>	50
Black cottonwood	<i>Populus trichocarpa</i>	20
Booth willow	<i>Salix boothii</i>	25
McKenzie willow	<i>Salix mackenzieana</i>	25
January 2005		
Common Name	Scientific Name	Number installed
Booth willow	<i>Salix boothii</i>	105
November 2005		
Common Name	Scientific Name	Number installed
Booth willow	<i>Salix boothii</i>	75
McKenzie willow	<i>Salix mackenzieana</i>	25

### 3.0 GOALS, OBJECTIVES, AND SUCCESS CRITERIA

As a mitigation goal, the wetland mitigation plan (ODOT 2002) proposed creation of a 0.15-acre wetland that provides the following functions: 1) floodflow alteration (during large scale events), 2) production export, and 3) habitat for wetland-associated birds. The objective of the mitigation was the “creation of at least 0.15 acre of palustrine scrub-shrub wetlands.” In the addendum to the application for the Longley Meadow Restoration project (ODOT 2002), ODOT established the following success criteria:

- 1) creation of at least 0.15 acre of scrub-shrub wetlands
- 2) at least 70 percent cover of scrub-shrub vegetation after five years

The U.S. Army Corps of Engineers (COE) addressed success criteria in their permit modification letter dated June 4, 2003. In this letter, the COE stated that ODOT would be responsible for establishing “0.15 acre of palustrine emergent wetland ... subject to a performance measure of 70 percent cover of native scrub-shrub plant species after five years.” The word “emergent” is assumed to be a typo.

## 4.0 METHODS

The results described in this report are based on data collected at the site on June 23, 2005. The mitigation site was evaluated by examining the area's vegetation, hydrology, and size. Vegetation measurements were obtained along two 65-foot transects. Figure 3 shows the locations of the transects.

Data collection along each transect consisted of recording the plant species (or open water or bare ground) present at each three-foot interval. Additional information collected at the site included: observations of the site's hydrology, general vegetation characteristics, and site deficiencies and actions needed. Photographs were also taken throughout the mitigation area and at established photo-points. To determine the size of the created wetland, a topographic survey was conducted by CTUIR in November 2003 (Figure 3).

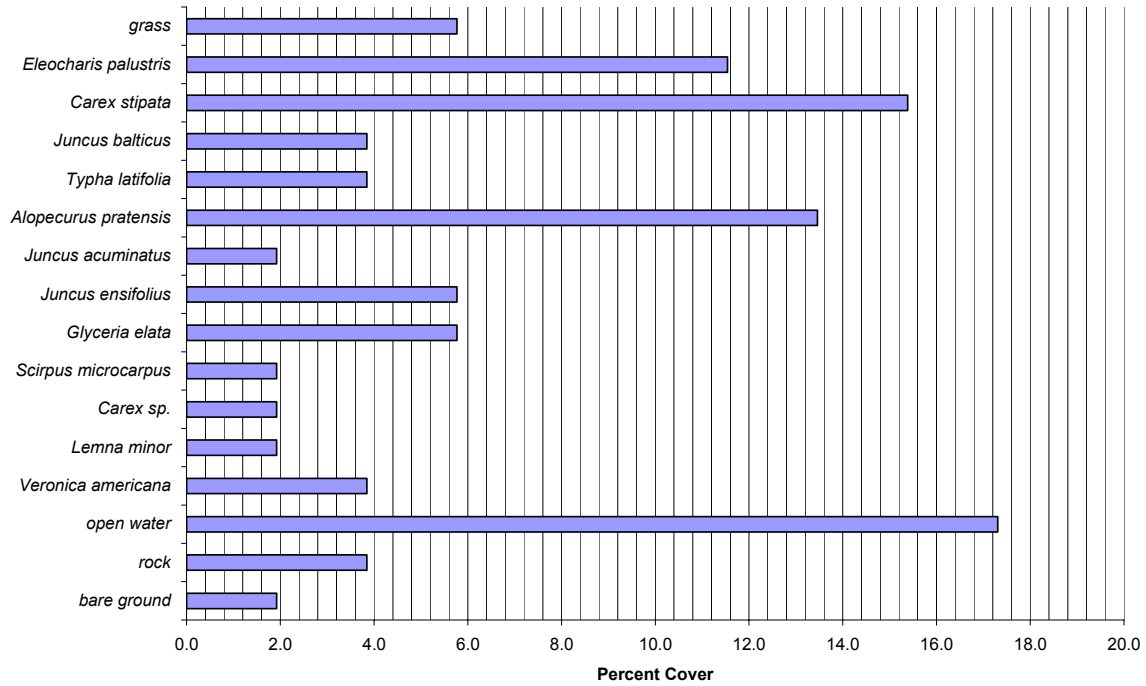
## 5.0 RESULTS

As shown in the attached photo-points and illustrated in Graph 1 and Table 3 below, the mitigation site currently supports a relatively diverse population of emergent vegetation. According to data collected on June 23, 2005, the site supports 77 percent cover of wetland plant species ( $CI_{95\%} = 77-96$  percent). Of this, zero percent represents scrub-shrub vegetation. Although it was not included in the results, willow shoots (*Salix* sp.) and a small number of Canada thistle (*Cirsium arvensis*) were observed in the wetland. During a follow up visit on November 23, 2005, most of the willow cuttings had growth over the summer, but all had been grazed down by deer.

Hydrology throughout the area ranged from saturated soils to small areas inundated by up to one foot. The upland slopes surrounding the wetland exhibited areas of bare ground interspersed with upland tree plantings (primarily ponderosa pine (*Pinus ponderosa*)) and upland weeds.

The topographic survey revealed the site to be the same size as designed. The site measured 0.15 acre (6425 square feet) (Figure 3).

**Graph 1**  
Percent Cover Along Transects



**Table 3. Vegetation Data From Transects<sup>1</sup>**

Common Name	Scientific Name	Indicator Status <sup>2</sup>	Percent Cover
Grass	<i>Poaceae</i>	unknown	5.8
Creeping spikerush	<i>Eleocharis palustris</i>	OBL	11.5
Saw-beaked sedge	<i>Carex stipata</i>	NOL (assumed to be FACW+)	15.4
Baltic rush	<i>Juncus balticus</i>	FACW+	3.8
Broadleaf cattail	<i>Typha latifolia</i>	OBL	3.8
Meadow foxtail	<i>Alopecurus pratensis</i>	FACW	13.5
Taper-tip rush	<i>Juncus acuminatus</i>	OBL	1.9
Dagger-leaf rush	<i>Juncus ensifolius</i>	FACW	5.8
Tall mannagrass	<i>Glyceria elata</i>	FACW+	5.8
Panicled bulrush	<i>Scirpus microcarpus</i>	OBL	1.9
Sedge	<i>Carex sp.</i>	FAC to OBL	1.9
Common duckweed	<i>Lemna minor</i>	OBL	1.9
American speedwell	<i>Veronica americana</i>	OBL	3.8
Open water			17.3
Rock			3.8
Bare ground			1.9
Total			99.8
% cover of scrub-shrub vegetation			0
% cover of wetland plant species (FAC to OBL)			77

1 Transect locations shown on Figure 3

2 Status of plant species as specified in the *National List of Plant Species that Occur in Wetlands: Oregon* (Reed 1988, 1996).

## 6.0 SUMMARY AND RECOMMENDATIONS

The mitigation site was observed to be a particularly diverse, well-functioning wetland, representing an early successional stage typical in wetland development. A low cover of shrub vegetation is common in early wetland establishment. Additional shrub plantings conducted over a series of growing seasons will help to increase the cover of shrub vegetation and will eventually enable the site to satisfy the performance criterion of 70 percent cover of scrub-shrub plant species after five years.

Although the entire site exhibits wetland hydrology, some parts of the wetland appear too wet to support the vigorous growth of most shrub species. Many of the shrubs planted in the inundated areas did not survive. Therefore, additional shrub plantings should be concentrated in parts of the wetland that are saturated but not inundated. The areas supporting meadow foxtail (*Alopecurus pratensis*) are particularly well-suited for supporting shrub growth.

### 6.1 Recommendations

The following activities will help to insure that the site eventually satisfies the success criteria:

- Continue to plant shrub species, especially at the base of the slopes surrounding the wetland and in areas currently supporting meadow foxtail
- Continue to plant upland woody species along the slopes surrounding the wetland
- Hand-pull the Canada thistle
- Continue to assess the common cattail and hand-pull if the population increases
- Place seedling protection tubes around willow cuttings to help reduce grazing pressure by deer until plants are established

## REFERENCES

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Oregon Department of Transportation. November 2001. Wetland Delineation, Lower Perry Bridge. Environmental Section, Salem, OR.

Oregon Department of Transportation. January 2002. Wetland Impact Assessment and Mitigation Plan, Lower Perry Bridge. Environmental Section, Salem, OR.

Oregon Department of Transportation. May 16, 2002. Letter: Addendum to Application, Longley Meadow Restoration. Environmental Section, Salem, OR.

Reed, P.B. Jr. 1988. National List of Plant Species that Occur in Wetlands: Oregon. U.S. Fish and Wildlife Service Biological Report No. 88.

Reed, P.B. Jr. et al. 1993. Plant List Supplement for Northwest Region 9.

# APPENDIX

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