

**Mitigation Monitoring Report Cover Sheet
Oregon Department of State Lands**

Block 1: Report Information

DSL Permit Number:	COE Permit Number: <i>Nationwide Permit 27 - 200400726</i>
Permittee: <i>Gilmour</i>	
County: <i>Benton</i>	Report Date: <i>12/20/12</i> Monitoring Year <i>7</i>
Date Removal-Fill Activity Completed:	
Date mitigation was completed	Grading: <i>2/05</i> Planting: <i>5/06</i> <i>Mid-Valley Phase 1</i>
Report submitted by: <i>Marvin and Cindy Gilmour</i>	

Block 2: Monitoring Report Purpose

This monitoring report is for monitoring a project that includes: (check all that apply):

- Compensatory **freshwater** wetland mitigation for permanent wetland impacts.
- Compensatory **estuarine** wetland mitigation for permanent wetland impacts.
- Only non-wetland** compensatory mitigation.
- Only mitigation for temporary** impacts that has a monitoring requirement.
- Voluntary wetland enhancement, creation or restoration (General authorization or individual permit) not funded with money from our wetland mitigation revolving fund.
- Voluntary wetland enhancement, creation or restoration (General authorization or individual permit) funded with money from **our wetland mitigation revolving fund.**
- Mitigation Bank** Report
- Other: _____

Block 3: Results

	Success Criteria	Met? (Y/N)	Comments/Reasons for Failure*
1.	Emergent Vegetation	3 of 3 requirements	
2.	Wetgrass Prairie	6 of 6 requirements	
3.	Created Tree/Shrub	5 of 5 requirements	
4.	Forest - Enhanced	2 of 2 requirements	5 th year performance standard, met in 2010
5.	Buffer Areas - Upland Forest and Pond	4 of 4 requirements	5 th year performance standard, met in 2010

Remedial work recommended	Yes	No X
Deed Restriction or other protection instrument attached (noted: if a filed deed restriction was a required as a permit condition, please attach a copy: <i>previously submitted</i>)	Yes X	No
Final Monitoring Report?	Yes	No X
Requesting release or partial release of bond/credits	Yes	No X

*see report for detailed information

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1.0 REGULATORY BACKGROUND

The purpose of this report is to summarize the progress of Phase 1 of the Mid-Valley Wetland Mitigation Bank (Bank). The Bank is located approximately one mile east of Independence Highway and one and one-half miles south of Springhill Drive in T10S, R4W, Sec. 15, Tax Lot 700. The letter of approval for the Bank was signed on September 27, 2005 and is permitted as ACOE permit #2004-000726. Phase 1 of the Bank consists of 33.1 acres.

Development of the Bank was through a combination of restoration of previously drained wetlands (10.58 acres), restoration of wet prior converted (1.02 acres), enhancement of remnant ash swales and shrub/scrub (10.17 acres), and the creation of wetlands from upland agricultural land (4.78 acres). The inclusion of adjacent 4.89 acres of upland forest as buffer to the Bank is also planned.

Anticipated Bank credits:

<u>Type of Credit</u>	<u>Acres</u>	<u>Ratio</u>	<u>Credits</u>
Restoration	10.58	1:1	10.580
WPC Restoration	1.02	2:1	0.510
Creation	4.78	1½:1	3.187
Enhancement	10.17	5:1	2.034
Buffer	4.89	10:1	0.489
Total	31.44		16.8

2.0 WORK SUMMARY

Beginning in early March, efforts concentrated on covering all prairie areas to spot treat unwanted species before native grasses got tall and inhibited detection. All prairie areas were walked at least two times targeting velvet grass (*Holcus lanatus*), meadow foxtail (*Alopecurus pratensis*), penny royal (*Mentha pulegium*), parentucellia (*Parentucellia viscosa*) and any other non-natives encountered. The existing forested area was periodically spot treated throughout the season. As spring moved forward focus shifted towards patrolling the emergent draw down zones for opportunistic species such as spatula-leaf loosestrife (*Lythrum portula*) and penny royal (*Mentha pulegium*). Most of this time was spent on surveillance, with little spraying as non-natives are well under control.

Limited mowing was performed in early July. Mowing concentrated on the outside borders, where new weeds are most likely to move in, and corridors through the prairie areas to aid in weed surveillance. Heavy forbs areas were also mowed to reduce biomass; overall ~25% of the site was mowed. Following mowing, prairie areas were periodically scanned for unwanted

species such as wild carrots, dandelions, Centaury, and thistles while detection was easy, to prevent any of these species from potentially going to seed. Due to moisture and above average soils temperatures, the mowed portions of the site were patrolled again to spot treat any non-natives that took advantage of the spring-like conditions.

Table 1. Summary of Restoration Activities - October 2011 through December 2012.

Activity	Location
Site Preparation	Borders only
Existing forested vegetation treatment	All non-native vegetation treated
Spot weed control	100% of bank was patrolled
Mowing	60ft along borders, access trails through prairie, and heavy forbs areas

3.0 AS-BUILT PLANS

The as-built plans were submitted with the first monitoring report in April 2006.

4.0 HYDROLOGY PERFORMANCE STANDARDS, METHODOLOGY, AND RESULTS

4.1 Performance standards:

Wetland hydrology, defined as saturation of the major part of the root zone (in the upper 12-inches of the soil profile) or ponding upon the soil surface for at least 12.5% of the growing season must be achieved (for the purpose of this determination, the growing season is defined as the period in which temperatures are expected to be above 28⁰ F in 5 out of 10 years. This is the period between March and November in Benton County. Wetland hydrology will be present in three out of five years or less if the weather records are close to normal and no irrigation is supplied.

4.2 Methodology:

Water depth and depth of saturation will be indicated throughout the site using a combination of groundwater monitoring tubes as an aid to show how the water level follows the site topography, and paired plots along the site boundary and any high areas to indicate the exact location of the wetland boundary. The paired plots will be done using soil probes or pits. In addition, these areas will be visually documented with photographs to show a dominance of wetland species. The wetland boundary will then

be displayed on a site map.

4.3 Results

This provision has been met for at least three years and is no longer being monitored.

5.0 VEGETATION PERFORMANCE STANDARDS AND METHODOLOGY

Vegetation monitoring was conducted on all areas.

5.1 Performance Standards

Emergent Herbaceous

1. A minimum of 55% of the relative plant cover (including bare soil) is comprised of native species.
2. No more than 15% of the relative plant cover is comprised of non-native invasive species as defined below.
3. The wetland's moisture index is less than 3.0.

*Non-native invasive species to be included: reed canary grass (*Phalaris arundinacea*), purple loosestrife (*Lythrum salicaria*), Himalayan blackberry (*Rubus discolor*), and Japanese knotweed (*Polygonum cuspidatum*), Eurasian water milfoil (*Myriophyllum spicatum*), climbing nightshade (*Solanum dulcamara*) (and yellow-flag iris (*Iris pseudacorus*), Anne's lace (*Daucus carota*), Canadian thistle (*Cirsium arvense*), bull thistle (*Cirsium vulgare*), orchard grass (*Dactylis glomerata*) and annual ryegrass (*Lolium multiflorum*) or others as determined by the MBRT.

Wetgrass Prairie

The above performance standards along with the following:

1. At least 10 wetgrass prairie species are present as listed in "Species Composition for Willamette Valley Vegetation Types" by Kathy Pendergrass, August 2003, supplied by John Marshall (USFWS) author of "Draft Guidance on Vegetation Performance Standard and Monitoring Protocols for Reference Sites and Mitigation Sites" to enhance Appendix II of this document.
2. Tufted hairgrass (*Deschampsia cespitosa*) is represented by 25% or greater relative plant cover.
3. At least 50% of the relative plant cover (including bare soil) is comprised of native species.
4. No more than 15% of the relative plant cover is comprised of non-native invasive species as defined above.

5. The prairie's moisture index is between 2.0 and 3.0.
6. No more than 5% relative plant cover by shrubs or trees.

Shrub and Forest - Created

By the end of the second growing season, the shrub and forest component of the wetland will meet or exceed 75% of the species richness of the reference site (excluding non-native invasive species). The plant density in forested wetlands will be at least 50 to 100 living stems per acre and shrub/scrub wetlands at least 200 to 300 living woody stem per acre, of species that are rated FAC or wetter, excluding FAC- species. This must be achieved by the end of the second growing season following planting and maintained through the end of the monitoring period until canopy coverage is greater than 30%. There will be no more than 15% aerial coverage of non-native invasive species*. These densities will be a combination of planted individuals and natural recruitment.

In addition the herbaceous layer in the forest and shrub areas will meet or exceed the performance standards for emergent herbaceous wetlands as stated above.

Forest - Enhanced

Year five performance standard for the enhanced forested wetland will be maintaining the existing wetland forest and shrub layers while managing for no more than 15% of non-native invasive species.

Buffer Areas - Upland Forest and Pond

Year five performance standard for the upland forest buffer will be to maintain the forest cover with 20% or less of non-native invasives. The five year performance standard for the existing pond will be to maintain it as a pond/wetland and maintain 20% or less of non-native invasives.

5.2 Methodology

Monitoring was conducted on the existing monitoring points that had been laid out using a stratified systematic plot method. The transects were laid out in a stratified arrangement along one baseline with equal distance between each transect (approximately 250'). The transects crossed the entire wetland, generally perpendicular to the topography. The sampling plots were predetermined and plotted on the transects at 100-foot intervals from each other. Two additional plots were added for 2010 per the 5th year monitoring requirements. These plots were #34 in the existing forested area, and photo point 6 which is illustrated on the map (attachment 2) and utilized as both a vegetation and photo monitoring point.

The herbaceous sample plots were conducted using one meter quadrants, located at the northwest corner of each point. When needed, a 30-foot diameter forest/shrub sample plot was placed with its center at the plot center point encompassing the herbaceous plots. The starting point of the sample plots was staggered in order to cover a broader area. The sample plots were permanently identified in the field and were plotted on a site map.

5.3 Vegetation Monitoring Results

Vegetation monitoring was conducted on June 11, 2012 by Marvin Gilmour, and Ray Fiori. Attachment 1 includes spread sheets with the monitoring results. The monitoring point location map is included as Attachment 2. The spread sheets include a complete listing of all species identified in the Bank's monitoring plots including both the botanical and common names, the indicator status, origin (native or non-native), and moisture index. Thirty-six monitoring plots were examined.

During the June 2012 monitoring, 49 plant species were identified in the Bank monitoring plots. Although considerably more diversity exists on the site, species were only counted if they occurred in a monitoring plot. Species encountered in previous years remain on the list as they are likely to show up again, but were not counted in the total species. As the bank matures, some of the annual, early seral species are beginning to disappear, but will resurface through various disturbance regimes.

As with last year, several areas of bareland were included in the monitoring results which resulted from an accumulation of organic matter. In areas with a lot of grass, the water sitting on the site over the winter caused the grass to create mats of dead biomass on the ground surface, forming a deep organic litter mat. As evident from last year, this process sets back succession and allows new seedlings to germinate in the rich organic matter. This process has also proved very beneficial for introducing forbs species. During the monitoring, we noted these areas on the monitoring data sheets as bare ground due to organic litter cover. Open water was prevalent again this year with a very cold and wet spring in which evaporation didn't begin to outpace precipitation until late May (Hyslop data).

This year grass species represent 48.14% of the vegetation cover with the two most abundant species Spike bentgrass (*Agrostis exarata*) and Tufted hairgrass (*Deschampsia cespitosa*) covering 12% and 17% respectively throughout all monitored habitats. This was a shift from 2010 when Meadow barley was the second most abundant species, with forbs, sedges, and rushes continuing to increase. Water foxtail (*Alopecurus geniculatus*), Meadow barley (*Hordeum brachyantherm*) and Slender wheatgrass (*Elymus Trachycaulus*) were the three next most prevalent grass species. Sedges and rushes represented 11.71% cover this year, grasses were 48.14%, and forbs were 27.0%.

5.3.1 Emergent Vegetation

All three of the performance criteria for **emergent herbaceous** vegetation were met.

Required: At least 55% of the mean plant cover (including bare soil) will be comprised of native species. – **Met**; Plots 2, 16, 19, 20, 24, 25, 26 and 29 are the planned emergent vegetation plots, which are comprised of 75.63% native species.

Required: No more than 15% of the mean plant cover will be comprised of non-

native invasive species. –**Met**; with 0% of non-native invasive species.

Required: The wetland's moisture index is less than 3.0. –**Met**; with an average prevalence index of 1.41.

5.3.2 Wetgrass Prairie

The performance criteria for **wetgrass prairie** were met for 6 of the 6 requirements.

Required: At least 10 wetgrass prairie species are present as listed in "Species Composition for Willamette Valley Vegetation Types" by Kathy Pendergrass. – Met; Sixteen wet grass prairie species were identified within the wet prairie plots this year with twenty species throughout all the monitoring points.

Required: Tufted hairgrass is represented by 25% or greater mean cover. – As discussed during annual site visit, this standard led to lack of diversity and is to be removed. We will be discussing this in the coming months; Tufted hairgrass was present on average 23.25% in the 20 plots identified as wetland prairie and its decline is directly related to the increase in sedge, rush, and forbs cover.

Required: At least 55% of the mean plant cover (including bare soil) will be comprised of native species. – **Met**; In the 20 wetland prairie plots there was 90.5% native plant cover. Non-native and bare ground accounted for 9.5%.

Required: No more than 15% of the mean plant cover will be comprised of non-native invasive species. – **Met**; 0% of non-native invasive species.

Required: The prairie's moisture index is between 2.0 and 3.0. –**Met**; the average prevalence index of the prairie plots is 2.12.

Required: The prairie has no more than 5% mean cover by shrubs or trees. – **Met**; four of the 20 prairie plots have any shrub or overstory component, none of which accounts for significant shading. There were 91 stems noted, 25 Oregon ash (*Fraxinus latifolia*), and 67 Nootka rose (*Rosa nutkana*). This standard will be more closely reviewed as the shrub and tree components begin to grow and age, but this represents the approximately same number as last year, and Nootka rose is on the prairie cohort list.

5.3.3 Shrub and Forest - Created

The performance criteria for **shrub and forest - created** were met for 5 of the 5 requirements.

Required: By the end of the second growing season, the shrub and forest component of the wetland will meet or exceed 75% of the species richness of the reference site (excluding non-native invasive species). —Met; reference site (in-Bank) contains a combination of six overstory and scrub/shrub species, while the Bank (not including the reference sites) includes 10 overstory and scrub/shrub species, which exceeds the 75% species richness required. ($6 \times .75 = 4.5$ required species).

Required The plant density in forested wetlands will be at least 50 to 100 living stems per acre and shrub/scrub wetlands at least 200 to 300 living woody stem per acre, of species that are rated FAC or wetter. This must be maintained through the end of the monitoring period until canopy coverage is greater than 30%. -- Met; there are 61.7 trees per acre and 33.1 shrubs per acre.

Required: There will be no more than 15% aerial coverage of non-native invasive species*. – Met with 0% non-native invasives.

In addition, the herbaceous layer in the forest and shrub areas will meet or exceed the performance standards for emergent herbaceous wetlands (below):

Required: At least 55% of the mean plant cover (including bare soil) will be comprised of native species. – Met; plots 27, 27a (not monitored for herbaceous), 28 and 33 are the planned forest/shrub vegetation plots, which are comprised of 67.5% native plant cover.

Required: The wetland's moisture index is less than 3.0. –Met; with an average weighted moisture index of 2.31.

5.3.4 Forest - Enhanced

The performance criteria for **Forest - Enhanced** were met for 2 of the 2 requirements.

Required: Year five performance standard for the enhanced forested wetland will be maintaining the existing wetland forest and shrub layers while managing for no more than 15% of non-native invasive species. *Met, This was documented in 2010 as part of the year 5 monitoring report and is no longer being monitored.*

5.3.5 Buffer Areas - Upland Forest and Pond

The performance criteria for **Buffer Areas - Upland Forest and Pond** were met for 4 of the 4 requirements.

Required: Year five performance standard for the upland forest buffer will be to maintain the forest cover with 20% or less of non-native invasives. The five year performance standard for the existing pond will be to maintain it as a pond/wetland and maintain 20% or less of non-native invasives.— **Met**, *This was documented in 2010 as part of the year 5 monitoring report and is no longer being monitored.*

6.0 PHOTO POINT MONITORING

Monitoring point photos are included as Attachment 3.

7.0 CREDIT SALES SUMMARY

Mid-Valley Mitigation Bank (Phase 1) has a possible 16.8 credits. On 12/21/10 the Corps released the final credits and DSL did the same on 12/29/10 verifying all credits available to sell. The final credits were sold from the bank this year, resulting in a balance of zero credits. This is the second of the final five monitoring report. Table 2 summarizes the credit sales. An accounting error in 2008 was realized by DSL in 2012, and the resulting 0.8865 credits were shifted to the Mid-Valley Phase 2 ledger.

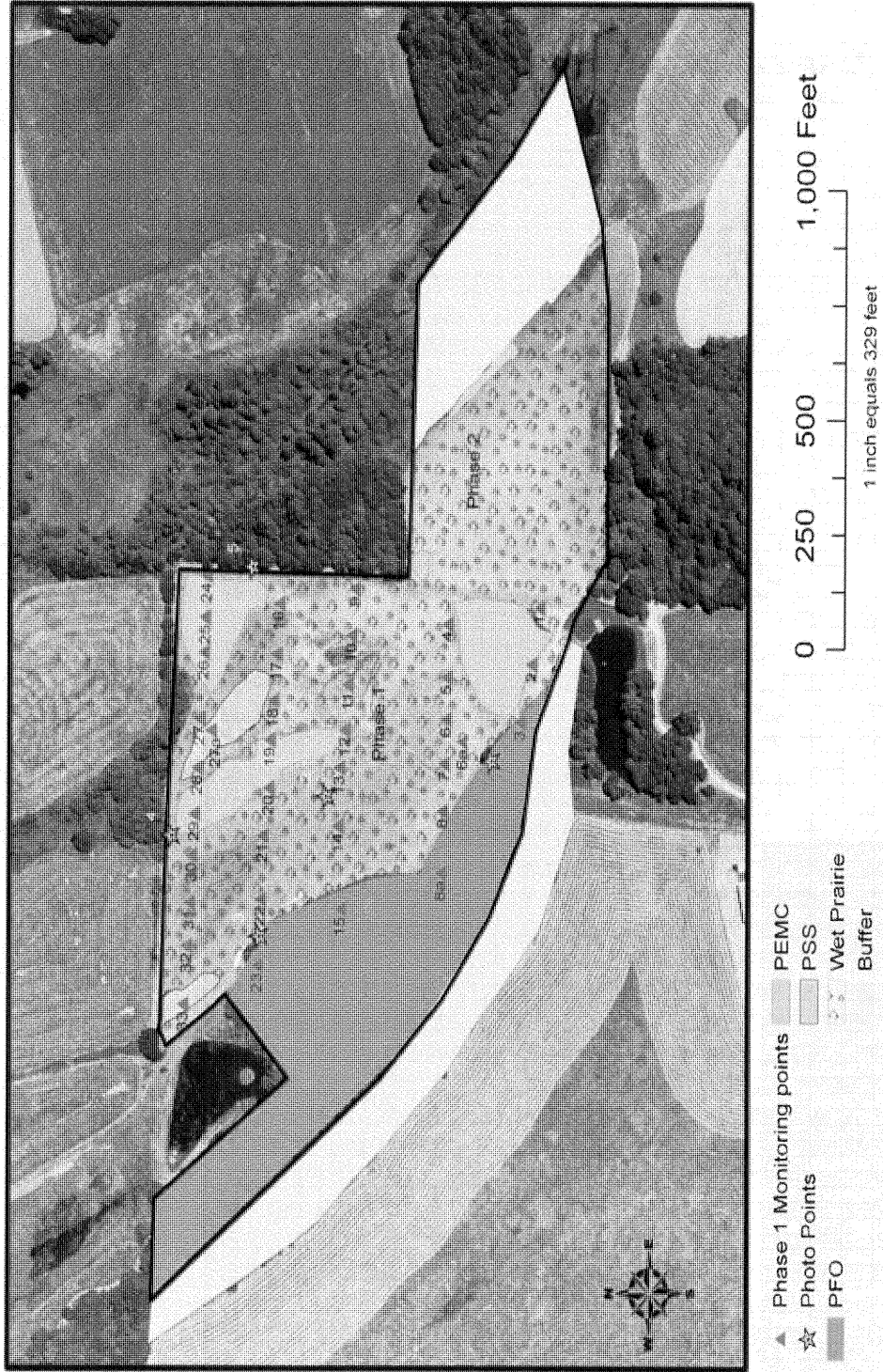
Table 2 – Mid-Valley Phase 1 Credit Summary

<i>DATE</i>	<i>NAME</i>	<i>LOCATION</i>	<i>PERMIT NUMBER</i>		<i>SOLD</i>	<i>BALANCE</i>
9/28/05	CORPS/DSL INITIAL RELEASE - 30% CREDITS - 5.04					5.04
			DSL	CORP		
10/4/05	Investor's Equity Inc - Keith Nakayama	Charlies Estates, Lebanon	35040-RF	200500499	0.18	4.86
10/4/05	RMA Development	Clearview III, Lebanon	34107-RF	200500164	0.47	4.39
10/4/05	Gordon Vogt	Skyview III, North Albany	33916-RF	200500075	0.09	4.3
10/7/05	Conser Homes	Morningstar Phase III	34842-SP	200500432	0.13	4.17
10/11/05	BBF Dev. Clover Ridge-Myles Breadner	Edgewater, Albany	NA	200500365	0.87	3.3
10/11/05	Wulf Const	Creekside at Adair, Adair Village,	NA	199900325	0.13	3.17
10/17/05	Ken Kohl-ODOT	OR 228: Or99E to I-5	NA	200500163	2.57	0.6
10/25/05	Conser Homes	Sweetwater Subdivision	15198/5877-ENF	DSL only	0.27	0.33
11/7/05	City of Philomath		NA	NA	0.34	-0.01
6/9/06	CORPS/DSL 2ND RELEASE - 30% CREDITS - 5.04					5.03
6/16/06	GRS Enterprises	Eagle View Estates	34707-RF	200500435	0.28	4.75
8/29/06	Kingdom Estates	31707 S Fifth Street, Lebanon	3642-FP	200600291	0.2695	4.4805
12/6/06	RC Ventures LLC	Millersburg	37196-RF	200600615	0.978	3.5025
12/6/06	Gregory M. Perry		37033-RF	200600550	0.07	3.4325
9/5/06	Home Solutions	Kevin Spillman	NA	NA	0.07	3.3625
1/5/07	North Coast Electric	Ferry Street, Albany	37472-RF	200600886	0.27	3.0925
2/14/07	Progressive Design Builders	Philomath	37098-FP	NA	0.5	2.5925
10/11/06	Fernwood Environmental	Lake Point Estates, Sweet Home	36435-RF	NA	0.2	2.3925
3/8/07	IWM, LLC - R & D Construction		37275-RF	2006-945	0.49	1.9025
8/13/07	CORPS/DSL 3RD RELEASE - 20% CREDITS - 3.36					5.2625
4/19/07	Arrt Properties, LLC		37469-RF	2006-909	1.12	4.1425
2/26/07	Brownsville JV, LLC	Brownsville	38586	2007-478	0.13	4.0125
3/28/08	Hendgen-McMinville LLC	Albany Heights, Albany	39616-RF	NA	1.65	2.3625
4/4/08	CORPS/DSL 4th RELEASE - 15% CREDITS - 2.52					4.8825
4/4/08	DSL	Per Dana Hicks	33347 & 36174	NA	3.099	1.7835
7/23/09	ODOT	I-5 Bridges-Variou Locations	42585-GA	NA	0.092	1.6915
8/25/09	ODOT	Locke Creek Bridge OR99W	42796-RF	NA	0.015	1.6765
12/29/10	CORPS/DSL 5th/Final RELEASE - 5% CREDITS - 0.84					2.5165
8/17/11	OSU	SW 15th St. & Philomath BLVD	46865-RF	2011-181	1.63	.8865
1/18/12	Accounting error from 2008 DSL Credit purchase	Shift credits to Phase 2 Ledger for accounting purposes			0.8865	0
	Total Released = 16.8			Total Sold =16.8		

Attachment 1: Monitoring Data

Mid-Valley Mitigation Bank - Phase 1																									
Sample Plot Monitoring Results - June 11, 2012																									
Botanical Name	Common Name	Status	Origin	Wet	Moisture	Average Cover each Species					REF														
				Prairie	Index	Wet Prairie	FOE	F/SN	Emergent	Entire	1	2	3	4	5	6a	7	8	8a	9					
Overstory Species - stem count (within 30' diameter)																									
<i>Acer macrophyllum</i>	Bigleaf maple	FACU	native		4																				
<i>Alnus rubra</i>	Red alder	FAC	native		3																				
<i>Crataegus douglasii</i>	Black hawthorn	FAC	native		3														31						
<i>Fraxinus latifolia</i>	Oregon ash	FACW	native		2						11				25				4						
<i>Malus fusca</i>	Western crabapple	FACW	native		2																				
<i>Populus trichocarpa</i>	Black cottonwood	FAC	native		3																				
AVG Trees/plot (fac or wetter)	1.00																								
AVG Trees/ac. (fac or wetter)	61.7																								
Scrub/Shrub Species - stem count (within 30' diameter)																									
<i>Cornus sericea</i>	Red osier dogwood	FACW	native		2																				
<i>Rosa nutkana</i>	Nootka rose	FAC	native	Yes	3										45										
<i>Salix lasiandra</i>	Pacific willow	FACW	native		2																				
<i>Sambucus racemosa</i>	Elderberry	FACU	native		4																				
<i>Symphoricarpos albus</i>	Snowberry	FACU	native		4																				
AVG Shrubs/plot (fac or wetter)	5.5																								
AVG Shrubs/ac. (fac or wetter)	339.1																								
Herbaceous Species - percent cover (1 meter square sample plots)																									
<i>Alisma gramineum</i>	Narrow leaf water plantain	OBL	native		1	0.00	0.00	0.00	1.88	0.43%															
<i>Alisma triviale</i>	Northern water plantain	OBL	native		1	0.00	0.00	0.00	0.00	0.00%															
<i>Bidens cernua</i>	Nodding beggarticks	FACW+	native		2	0.00	0.00	0.00	0.00	0.00%															
<i>Camassia quamash</i>	Common camas	FACW	Native	Yes	2	0.00	0.00	0.00	0.00	0.00%															
<i>Carex obtusifolia</i>	Slough sedge	OBL	native		1	2.50	32.50	0.00	0.00	5.14%									70						
<i>Carex unilateralis</i>	One-sided sedge	FACW	native	Yes	2	1.00	0.00	0.00	1.25	0.86%									5						
<i>Centaureum erythraea</i>	Centaury	FAC	non		3	0.00	0.00	1.25	0.00	0.14%															
<i>Cicuta douglasii</i>	Western water-hemlock	OBL	native		1	0.00	2.50	0.00	0.00	0.29%									10						
<i>Downingia elegans</i>	Show downingia	OBL	native	Yes	1	0.00	0.00	0.00	3.75	0.86%															
<i>Eleocharis ovata</i>	Ovoid spike rush	OBL	native	Yes	1	0.00	0.00	0.00	0.00	0.00%															
<i>Eleocharis palustris</i>	Creeping spike rush	OBL	native		1	0.00	0.00	0.00	3.75	0.86%															
<i>Epilobium ciliatum</i>	Fringed willowherb	FACW	native	Yes	2	3.75	0.00	0.00	0.00	2.14%				5	10				10						
<i>Epilobium densiflorum</i>	Dense spike-primrose	FACW	native	Yes	2	1.25	0.00	0.00	0.00	0.71%															
<i>Eriophyllum lanatum</i>	Oregon sunshine	NOL	native	Yes	2	0.75	0.00	0.00	0.00	0.43%															
<i>Geum macrophyllum</i>	large leaf avens	FACW	native		2	0.00	25.00	0.00	0.00	2.86%			100												
<i>Geranium molle</i>	Dovefoot geranium	NOL	non		1	0.00	0.00	0.00	0.00	0.00%															
<i>Gratiola ebracteata</i>	Bractless hedgehyssop	OBL	native	Yes	1	0.00	0.00	0.00	0.00	0.00%															
<i>Juncus bufonius</i>	Toad rush	FACW	native	Yes	2	1.00	0.00	0.00	0.00	0.57%	20														
<i>Juncus effusus</i>	Soft rush	FACW	native		2	4.50	3.75	0.00	0.00	3.00%						45			5						
<i>Juncus filiformis</i>	Thread rush	FACW	native		2	0.00	0.00	0.00	3.75	0.86%															
<i>Juncus tenuis</i>	Slender rush	FACW	native	Yes	2	0.75	0.00	0.00	0.00	0.43%									15						
<i>Kickxia elatine</i>	Sharp point fleveilin	FAC	non		3	1.00	0.00	2.50	0.00	0.86%															
<i>Lapsana communis</i>	Nippewort	FACU	non		4	0.00	3.75	0.00	0.00	0.43%															
<i>Lupinus rivularis</i>	Stream-side lupine	FAC	native		3	0.00	0.00	0.00	0.00	0.00%															
<i>Lythrum portula</i>	Spatulateleaf loosestrife	NOL	non		1	0.00	0.00	0.00	3.75	0.86%															
<i>Montia sibirica</i>	Spring Beauty	FAC	native		3	1.00	23.75	0.00	0.00	3.29%								20	20						
<i>Parentucellia viscosa</i>	Parentucellia	FAC	non		3	0.00	0.00	0.00	0.00	0.00%															
<i>Plagiobothrys figuratus</i>	Fragrant popcornflower	FACW	native	Yes	2	0.00	0.00	0.00	11.25	2.57%															
<i>Plagiobothrys scouleri</i>	Scouler's popcorn flower	FACW	native	Yes	2	0.00	0.00	0.00	0.00	0.00%															
<i>Potentilla gracilis</i>	Slender cinquefoil	FAC	native	Yes	3	0.25	0.00	0.00	0.00	0.14%															
<i>Polystichum munitum</i>	Sword fern	FACU	native		4	0.00	0.00	0.00	0.00	0.00%															
<i>Ranunculus orthorhynchus</i>	Straight beaked buttercup	FACW	native	Yes	2	0.00	2.50	0.00	0.00	0.29%															
<i>Rorippa curvisiliqua</i>	Western yellowress	OBL	native	Yes	1	0.50	0.00	0.00	0.00	0.29%			5												
<i>Rubus discolor</i>	Himalayan blackberry	FACU	non		4	0.00	0.00	0.00	0.00	0.00%															
<i>Rumex crispus</i>	Curly dock	FAC	non		3	0.00	0.00	0.00	0.00	0.00%															
<i>Rubus ursinus</i>	Trailing blackberry	FACU	native		4	0.00	5.00	0.00	0.00	0.57%															
<i>Sagittaria latifolia</i>	Wapato	OBL	native		1	1.00	0.00	0.00	6.25	2.00%	20	50													
<i>Sidalcea campestris</i>	Meadow sidalcea	FACU	native		4	1.25	0.00	0.00	0.00	0.71%															
<i>Sidalcea cusickii</i>	Cusick's checkermallow	FACW	native	Yes	2	6.00	0.00	0.00	0.00	3.43%				15	35										
<i>Sisyrinchium angustifolium</i>	Blue eyed grass	FACW	native	Yes	2	0.00	0.00	0.00	0.00	0.00%															
<i>Tellima grandiflora</i>	Fringe cup	FACU	native		4	0.00	0.00	0.00	0.00	0.00%															
<i>Typha latifolia</i>	Cat-tail	OBL	native		1	0.00	0.00	0.00	9.38	2.14%															
<i>Veronica americana</i>	American speedwell	OBL	native		1	0.00	0.00	0.00	6.25	1.43%			50												
<i>Veronica peregrina var. xalapensis</i>	Hairy purlane speedwell	OBL	native	Yes	1	0.00	0.00	0.00	0.00	0.00%															
<i>Vicia hirsuta</i>	Hairy vetch	NOL	non		1	0.00	1.25	0.00	0.00	0.14%															
									11.71%	38.71%															
Grass Species - percent cover (1 meter square sample plots)																									
<i>Agrostis exarata</i>	Spike bentgrass	FACW	native	Yes	2	18.00	0.00	5.00	3.13	11.57%	20			25	30				10						
<i>Alopecurus geniculatus</i>	Water foxtail	OBL	native		1	2.75	0.00	0.00	11.25	4.14%	10														
<i>Beckmannia syzigachne</i>	Slough grass	OBL	native	Yes	1	0.75	0.00	0.00	6.88	2.00%															
<i>Briza Minor</i>	Little quaking grass	FAC	non		3	0.00	0.00	0.00	0.00	0.00%															
<i>Danthonia californica</i>	California oatgrass	FAC	native	Yes	3	0.75	0.00	0.00	0.00	0.43%															
<i>Deschampsia cespitosa</i>	Tufted hairgrass	FACW	native	Yes	2	23.25	0.00	21.25	5.00	16.86%				35	5	85		30	25						
<i>Deschampsia danthonioides</i>	Annual hairgrass	FACW	native	Yes	2	0.50	0.00	0.00	0.00	0.29%									10						
<i>Deschampsia elongata</i>	Slender hairgrass	FACW	native	Yes	2	0.00	0.00	2.50	0.00	0.29%															
<i>Elymus Trachycaulus</i>	Slender wheatgrass	FAC	native		3	10.00	0.00	5.00	0.00	6.29%															
<i>Hordium brachyantherum</i>	Meadow barley	FACW	native	Yes	2	7.00	0.00	5.00	6.25	6.00%				20	5			30	25						
<i>Lolium multiflorum</i>	Annual rye grass	FACU	non		4	0.00	0.00	0.00	0.00	0.00%															
<i>Poa trivialis</i>	Rough-stalk bluegrass	FACW	non		2	0.00	0.00	0.00	0.00	0.00%															
<i>Vulpia myuros</i>	Rattail fescue	FAC	non		3	0.25	0.00	1.25	0.00	0.29%															
									48.14%																
Sample Plot #																									
Open Water: 1,10,25,26														1	2	3	4		6	6a	7	8	8a	9	
Bareground due to: (organic litter: 7, 21, 24)/(canopy closure: 6a, 27, 28)						mean=	2.92							30											
Relative % native cover including bareland as non-native (herbaceous only):														100	100	100	100	100	100	100	45	60	80	100	95
wet prairie mean =	90.50					emergent mean=	75.63																		

Mid-Valley Mitigation Bank Phase 1 Vegetation/Photo Monitoring Points



Attachment 3: Photo Monitoring Point Photos

Mid-Valley Phase 1 Mitigation Bank 2012 Photo Monitoring

Photo Point 1 North

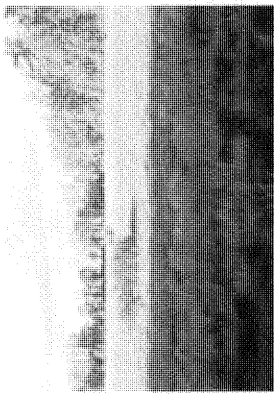


Photo Point 1 East



Photo Point 1 South



Photo Point 1 West



Photo Point 2 North

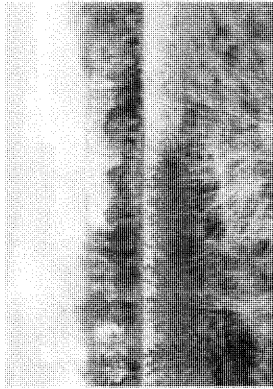


Photo Point 2 East



Photo Point 2 South



Photo Point 2 West



Photo Point 3 North

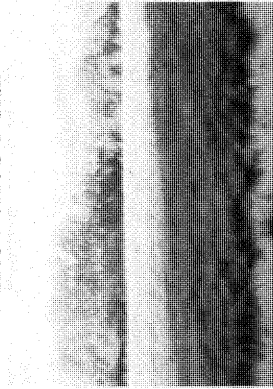


Photo Point 3 East



Photo Point 3 South



Photo Point 3 West



Attachment 3: Photo Monitoring Point Photos

Photo Point 4 North



Photo Point 4 South

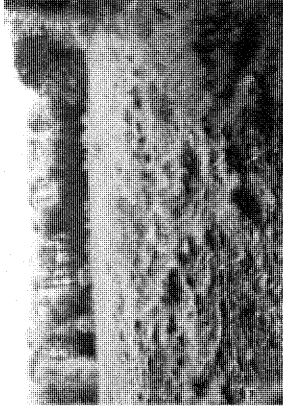


Photo Point 4 East



Photo Point 5 Southwest

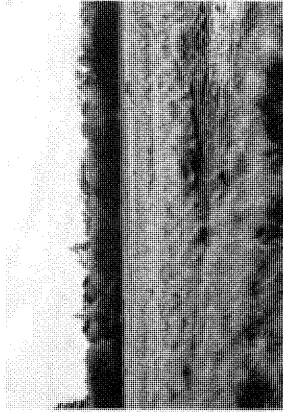


Photo Point 5 North

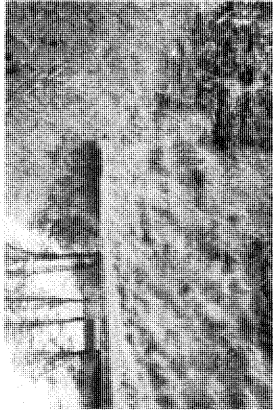


Photo Point 5 Northwest

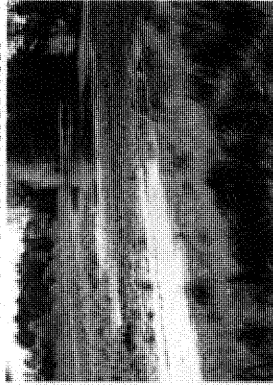


Photo Point 5 South

