Mitigation Monitoring Report Cover Sheet
Oregon Department of State Lands

Block 1: Report Information

DSL Permit Number: RF-36703
COE Permit Number: *Nationwide Permit 27* -#200500701
Permittee: *Gilmour*
County: *Benton* Report Date: December 11, 2018 Monitoring Year 12
Date Removal-Fill Activity Completed:
Date mitigation was completed Grading: 10*/06* Planting: *5/07, 10/07*
Report submitted by: Oregon Wetlands LLC

Block 2: Monitoring Report Purpose

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

X 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.**
X **Mitigation Bank** Report
Other: _____

Block 3: Results

	Success Criteria	Met? (Y/N)	Comments/Reasons for Failure*
1.	Emergent Herbaceous	3 of 3 requirements	
2.	Wetgrass Prairie	6 of 6 requirements	
3.	Shrub and Forest Restoration	6 of 6 requirements	
4.	Forest - Enhanced	2 of 2 requirements	Completed
5.	Hydrology - Delineation	1 of 1 requirements	Completed

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): *previously submitted*	Yes	No
Final Monitoring Report?	Yes	No X
Requesting release or partial release of bond/credits	Yes	No X

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LIST OF ATTACHMENTS

1.0 REGULATORY BACKGROUND

The purpose of this report is to summarize the progress of the Evergreen Creek Wetland Mitigation Bank (Bank). The Bank is located on the west side of Bellfountain Road, at the intersection of Bellfountain and 53rd Street in T12S, R5W, Sec. 19, Tax Lot 700. The letter of approval for the Bank was signed on February 27, 2007 and is permitted as ACOE permit #200500701.

The Bank is 174.52 acres, which includes a combination of enhancement of cropped wetland (161.5 acres), enhancement of remnant ash and shrub/scrub riparian area (13.4 acres). The total potential credits produced include:

Type of Credit	Acres	Ratio	Credits
Cropped Wetland Enhancement	161.12	2:1	80.31
Enhancement	13.4	3:1	4.46
Total	174.52 acres		84.77
Credits Used for Graveled Parking Area			(0.25)
Total Credits Produced	**84.52 credits**		

2.0 WORK SUMMARY

Beginning in early April, efforts concentrated on covering all older prairie areas to spot treat unwanted species before native grasses got tall and inhibited detection. All prairie areas were covered at least one time targeting velvet grass, bent grass, rough-stalk bluegrass, annual blue grass, unwanted woody species and any other non-natives encountered. Forbs dominated prairie areas were walked multiples times with backpacks targeting Prickly lettuce, Thistle spp., Tansy, and any other non-native species encountered, which was much less time consuming this year as natives forbs continue to expand. We utilized one of our contract backpack crews this year to familiarize them with the site as we move towards the long-term management phase and get them geared up for new projects. They were able to cover the site in less time than expected and had them work on invasives in roadside ditch to finish out the day. A 60ft band along the South, North, and West boundaries were treated with broadleaf-specific herbicide when conditions were favorable to prevent encroachment from surrounding properties. Accessible areas in tree and shrub plantings were covered with backpack crew in late spring to spot treat any invading species, with Canadian thistles, prickly lettuce, and sow thistles being the primary targets. Since the PFO/PSS areas have closed in, non-natives have become much less of an issue, and only about 40% of the area is now accessible for surveillance.

The existing forested area was periodically spot treated throughout the season, with St. John's wart and Curly dock being the main targets. The emergent areas were covered in early fall to spot treat any pennyroyal present, and monitor for any other non-natives. Also in early fall, the few Himalayan blackberries that had been encountered within the site throughout the season were treated, which provides the most effective long term control. All borders were spot treated for non-natives to prevent these species from entering the site. Approximately 10 acres of forb/sedge/rush dominated prairie areas were treated with grass-specific herbicide in fall to keep native grasses in check and allow these species to expand.

Maintenance trails were mowed in late May to facilitate access for weed control, monitoring, and site visits. In early August, the large mower was utilized to re-mow maintenance trails, and approximately 10 acres of prairie which was to be targeted with fall grass-specific treatments. In addition, water edges of all emergent areas were mowed to provide better conditions during shorebird migrations and all berms were also mowed this year.

Table 1 - Summary of Restoration Activities at Evergreen Mitigation Bank from December 2017 through November 2018

Activity	Location
Existing forested vegetation treatment	All non-native vegetation treated (on-going)
Spot weed control	80% of mitigation bank area (on going)
Broadleaf weed control	60ft band along south, north and west borders (spring)
Mowing 2018	Maintenance trails, emergent edges, berms, and ~10 acres of prairie.
Grass-specific weed control	~10 acres of forb/sedge/rush dominated areas (fall)

3.0 AS-BUILT PLANS

The as-built plans were submitted within 60 days of grading as specified in the final instrument.

4.0 HYDROLOGY PERFORMANCE STANDARDS, METHODOLOGY, AND RESULTS

4.1 PERFORMANCE STANDARDS

Wetland hydrology sufficient to meet the criteria defined in the 1987 Corps of Engineers Wetland Delineation Manual (1987 Wetland Delineation Manual), will be present in at least three out of five years if the weather records are close to normal and no irrigation is supplied. Water depth and depth of saturation will be evaluated throughout the site using a combination of monitoring wells and a one time hydrology and vegetation delineation designed to meet the requirements of the 1987 Wetland Delineation Manual. The soil parameter is expected to be disturbed by the proposed grading, therefore lock of hydric soils indicators will not be interpreted as disqualifying a plot as wetland.

4.2 METHODOLOGY:

Water Monitoring Tubes: Ten (number of tubes will be driven by the site conditions, following bank grading) groundwater monitoring tubes will be constructed and monitored to show the duration of saturation. Tube monitoring data shall be collected three times between approximately March 1 and May 30 to demonstrate sufficient duration of wetness to meet the 1987 Wetland Delineation Manual. The monitoring report will also include precipitation date for the monitoring period from the nearest recording station. The locations of the monitoring tubes will be representative of the hydrological variation on site to prove duration of saturation needed to meet the 87 Manual criteria. These will be included on the as-built drawings.

Delineation: Paired plots concentrating along the wetland boundary, for any plots dominated by upland vegetation, and in any high areas will be utilized to indicate the exact location of the wetland boundary. The paired plots will be evaluated using soil probes or pits. This will be done to document that wetland hydrology has been achieved throughout the site. In addition to plot data, 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 to confirm acreage achieving the performance standard.

4.3 RESULTS

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

5.0 VEGETATION PERFORMANCE STANDARDS, METHODOLOGY AND RESULTS

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 that 15% of the relative plant cover is comprised of non-native invasive species as define 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*), Eurasion water milfoil (*Myriophyllum spicatum*), climbing nightshade (*solanium 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.

Wetland Prairie

The above performance standard 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 ADraft 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 that 15% of the relative plant cover is comprised of non-native invasive species as define 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 - Restoration

By the end of the second growing season, the newly planted 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 and shrub/scrub wetlands will be at least 80% of the reference site, 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 trees and shrubs are established and free to grow. 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 and scrub/shrub - Enhanced

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

5.2 Methodology

A stratified, systematic plot method was used to conduct vegetation sampling in all areas except the enhanced forest. Vegetation data was collected at each of 103 sample points that had been pre-determined and plotted along 6 transects. The monitoring point location map is included as Attachment 2. Each transect crosses the entire wetland (north to south) and they are located approximately 400 feet apart (north-south). Sampling plots were then located at 200 foot intervals along each transect. Herbaceous data was collected using one meter quadrants on the NW corner of each plot, and tree and shrub data was collected in 30ft diameter around plots. In the enhanced forest areas, four 50 ft square plots were marked, with the percent cover of non-native invasive species determined. The four plots were picked at random, two on each side of the Evergreen Creek. Extensive knowledge of the forested areas by the monitoring crew confirms that these four plots were representative of the entire area.

5.3 VEGETATION MONITORING RESULTS

Vegetation monitoring was conducted by Ray Fiori. On June 05, 2018, all WP, PFO, PSS, and existing forested areas were monitored. The PEMC was monitored on September 5, 2018 to allow for significant plant growth following adequate drawdown. Attachment 1 includes spread sheets with the results of the sampling. The spread sheets include a complete listing of all plant species identified in the monitoring plots. 103 monitoring plots were examined. The data spread sheets include the botanical names, common names, indicator status, origin (native or non-native), moisture index, and percent cover for each species. In 2017 64 plant species were identified within the monitoring plots, of these, 59 were native. In 2018 69 plant species were identified within the plots, of these 63 were native. Several new species were present in the plots this year, but several others that were present in previous years did not show up. Attachment 1 shows all species that have been present in the plots at one point, with a total of 82 native species. The low occurrence and cover of invasive and non-native species on site is a reflection of the continued effectiveness of site preparation, monitoring, establishment, care and spot treatment that the Bank sponsors continue. The increase in diversity is a direct result of allocating substantial resources to far exceed performance measures by continuing to incorporate new species to create diverse habitats as well as eliminating non-natives to encourage natural recruitment.

5.3.1 Emergent Vegetation

The native herbaceous cover averaged 98.75% in 2017 and was similar at 97.92% in 2018. There were no non-native invasive species and only 2.08% non-native cover. The amount of open water was 0% and bare ground was 1.7%. The open water/bareground percentages will vary widely depending on the timing of the monitoring, spring precipitation timing and timing/speed of drawdown. As the monitoring date has been delayed for this habitat, it has allowed for full establishment of vegetation. This year represented the earliest drawdown date since the bank was constructed, and as of report

submittal, one of the latest dates to reach full pool, which is typically accomplished with 12”-14” of fall precipitation.

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

Required: At least 55% of the relative plant cover (including bare soil) is comprised of native species -- ***Met****, with 97.92% of the relative plant cover is native species.*

Required: No more than 15% of the relative plant cover is comprised of non-native invasive species –***Met,*** *with no non-native invasive species.*

Required: The wetland’s moisture index is less than 3 –***Met,*** *with an average weighted moisture index of 1.04.*

5.3.2 Wetland Prairie

Native herbaceous cover averaged 95.41% (not including bareland) throughout the wet prairie area and of the vegetation itself, 99.68% were native species in 2018. Bareland represented 3.67% cover in 2018, which is mostly organic litter. There was no non-native invasive cover, while other non-natives represented 0.72%. As work continues to diversify the prairie habitat, this year 43.37% cover was by forbs/sedges/rushes, 52.35% cover was grasses, and 3.67% cover was bare substrate.

The performance criteria for **wetland 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. In conversations with John Marshall (USF&W, 2008) it was agreed upon to include the vernal pool species from this same source in the 10 required species, and this is reflected in the wetland prairie cohort species list as well. ***Met****. Twenty wetgrass prairie and vernal pool species were identified within the prairie plots.*

Required: Tufted hairgrass (*Deschampsia cespitosa*) is represented by 25% or greater relative plant cover***. Met, as discussed Tufted hairgrass represented an average cover of 30.2%. As discussed during the annual site visits, this provision needs removed, as its been the biggest factor in reducing diversity. As seen with all Oregon Wetlands LLC banks, the reduction in cover of tufted hairgrass is directly correlated to an increase in diversity (i.e. forbs/sedge/rush cover).***

Required: At least 50% of the relative plant cover (including bare soil) is comprised of native species. ***Met****. Non-natives and non-native invasives combined for 0.72%, bare soil was 3.67%, with native cover at 95.41%.*

Required: No more that 15% of the relative plant cover is comprised of non-native invasive species. ***Met****, with no non-native invasive species.*

Required: The wetland prairie moisture index is between 2.0 and 3.0. ***Met****. The mean prevalence index 2.05.*

Required: No more than 5% relative plant cover is comprised of shrubs or trees. ***Met***. *Plots # 51 and #87 contained planted and volunteer tree and shrub species, but represent less than 1% cover. Plots # 51 is at the edge of the wet prairie and forested portions so the forested area fell within the 30ft diameter tree/shrub sampling. Plot #87 is in an area where we are working to increase forbs abundance/diversity. Anytime significant bareground and moisture are present when trees are dispersing seeds, they will get established, which often happens in emergent drawdown zones. The area will be mowed periodically to set back the woody plants. (Mowed in 2014, 2017, 2018)*

5.3.3 Forest Enhanced

Required: Year five performance standards. The existing stem density of the native wetland forest and shrub species will be maintained. ***Met. N****o native wetland trees or shrubs have been removed intentionally. The stem/plant count has declined since the initial survey. Reconnecting evergreen creek to its historic forested floodplain has greatly increased the frequency of flood events and increased duration of saturation, which has directly taken out some trees as well as increased windfall. These are natural events that will contribute to the long term health of this habitat.*

Required: Year five performance standards. There will be no more than 15% aerial coverage of non-native invasive species. ***Met,*** *with no non-native invasive species.*

5.3.4 Shrub and Forest Restoration

This area continues to thrive. Planting took place in February of 2007, making this the 12th growing season. Initial planting survival was excellent, and through effect weed control, natural recruitment was also significant. Although initial stocking density was low compared to many current projects, in a relatively short period of time many areas have a closed canopy, herbaceous shade tolerant species have expanded, and large patches of shrub dominated areas continue to expand. Although maintenance was high in the early stages of establishment when this was basically a prairie with initial tree/shrub encroachment, it has declined to occasional spot checks in the shrub dominated areas that are accessible with an open canopy.

Species richness for woody plants exceeded the reference site. Eleven species were found in the reference site and 13 were found in the restoration area. Ponderosa pine (*Pinus ponderosa*) exists on site; however, it is not documented in a monitoring plot.

The reference site stem density is 635 trees and shrubs per acre. The planted plots showed an average stem density of 8.2 trees per plot and 15.23 shrubs per plot (Fac or wetter). This equates to a stocking density of 1444 stems per acre. Plot 13 was added to the scrub/shrub sampling in 2009, as the small area (.25 acres) around this plot is being managed for that habitat to increase the habitat complexity on the site. This plot is 100% aerial coverage of Pacific willow, which equates to a stem count of 150 which skews the overall stem count. If this plot is left out of the equation, average shrubs per plot drops to 6.07 which equates to an overall stocking density of 1112 stems per acre (FAC or wetter).

Required: The shrub and forest component will meet or exceed 75% of the species

richness of the reference site (excluding non native invasive species). ***Met,*** *with 13 overstory and shrub species identified in the bank, compared to 11 in the reference site.*

Required: Plant density will be at least 80% of the reference site with FAC or wetter. ***Met****, FAC or wetter woody stem density is 1112 stems per acre, (excluding #13) which exceeds 80% of the reference site which has 635 stems per acre (635 x 80% = 508).*

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

The herbaceous layer in the shrub and forest restoration area will meet or exceed the emergent habitat performance standards.

Required: At least 55% of the relative plant cover (including bare soil) is comprised of native species. **Met**, *with an average of 45.38% native herbaceous plant cover. Bare ground represented 52.88% this year, mostly due to canopy closure. As is evident through twelve years of monitoring, as canopy cover increases, herbaceous vegetation decreases. Absolute native cover is well over 100% in most areas.*

Required: No more that 15% of the relative plant cover is comprised of non-native invasive species. **Met,** *with no non-native invasive species.*

Required: The wetland's moisture index is less than 3. **Met**, *with an average weighted moisture index of 1.94.*

6.0 PHOTO POINT MONITORING

Photos from the photo points are included as Attachment 3; a map of photo point locations is located in Attachment 2. Photos were taken on 06/05/2018.

7.0 CREDIT SALES SUMMARY

An initial 25.4 credits (30%) were released in February 2007, due to meeting all the requirements for Release #1.

Release *1 (Fall/Winter 2006): Up to 30 percent upon submission of the grading as-built, submission of a copy of the financial assurance, Restrictive Covenant, submission of financial assurance and the MBRT conducts a field inspection.*

Release 2 *(Spring/Summer 2007): Up to 20 percent upon demonstration of all performance measures being achieved and delineation of acreage meeting the 1987 Wetland Delineation Manual hydrology (if weather conditions are close to normal).*

Release 3 *(Spring/Summer 2008): Up to 20 percent upon demonstration of all performance measures being.*

An additional 29.62 credits (35%) were released in September 2008, due to meeting all the requirements for a total release of 55.02 credits (65%).

***Release** 4 (Spring/Summer 2009): Up to 20 percent upon demonstration of all performance measures being.*

An additional 21.05 credits (25%) were released in March 2010, due to meeting all the requirements for a total release of 76.07 credits (90%).

***Release** 5 (End of 5th year monitoring or 5 years after replanting for those areas replanted)): All remaining credits (10%) upon demonstration of all performance standards being achieved. In addition, the long term management plan and funding must be received and approved by the MBRT.*

An additional 6.95 credits were released in January 2016, due to finalizing long term management plan requirements for a total release of 83.02 credits (98%).

***Release** 5 (End of 5th year monitoring or 5 years after replanting for those areas replanted)): All remaining credits (10%) upon demonstration of all performance standards being achieved. In addition, the long-term management plan and funding must be received and approved by the MBRT.*

Table 2 below contains all credit sales to date. Should any credit sales occur between submission of this report and 12/31/18, an updated spreadsheet will be sent to both agencies to reflect the calendar year credit sales.

Table 2 - Evergreen Credit Sales Summary

DATE	*NAME*	*LOCATION*	*DSL*	*CORP*	*ADDED*	*SOLD*	*BALANCE*
2/27/07	**CORPS/DSL INITIAL RELEASE-30%**		**Permit Number**		**25.4**		**25.4**
3/20/07	WSS, LLC	Hill Street Subdivision, Albany	37470	2006-910			**21.5**
5/7/07	DR Horton	Benton Woods	37557-RF	2006-930		2.5	**19**
9/27/07	City of Albany	COA 53rd Ave Park	39021-RF	2007-751		0.14	**18.86**
5/10/07	Greater Albany Public School	Knox Butte Road School Site	38849-RF	2007-582		1.26	**17.6**
12/10/07	Weirich Drive Development, LLC	Weirich Drive	39237-RF			0.1	**17.503**
3/20/08	ODOT	Wren Hill	730	199400929		1	**16.503**
3/24/08	Greater Albany Public School	Knox Butte Road School Site	38849-RF	2007-0582		0.34	**16.163**
4/1/08	Greater Albany Public School	Knox Butte Road School Site	38849-RF	2007-0582		0.04	**16.123**
9/8/08	**CORPS/DSL 2nd & 3rd RELEASE-35%**				**29.62**		**45.743**
4/29/09	Hyland Business Park LLC	Intersection of 31st St and Commercial St, Springfield	31129-FP & FP-7343	1997-00294		1.9	**43.843**
9/29/09	Junction City Prison Project	Lane County, ~ 3.5 miles south of Junction City	41791-RF	2008-378		20	**23.843**

DATE	*NAME*	*LOCATION*	*DSL*	*CORP*	*ADDED*	*SOLD*	*BALANCE*
11/2/09	Lane-Wendson No 1	T18, R 6W, sect 10	43512	2009-580		0.22	**23.623**
3/10/10	**CORPS/DSL 4th RELEASE 25%**				**21.05**		**44.673**
8/17/11	OSU	SW 15th st & Philomath BLVD	46865-RF	2011-181		0.53	**44.143**
5/15/12	Grain Millers	~3.5mi South of Junction City, OR	47997	2009-00036/1		17.98	**26.163**
9/6/12	American towers, AT&T	T11S, R3W, Sect. 16 Tax lot 1801	46538-RF	NWP-2011-92		0.09	**26.073**
6/10/2013	Cascade Pacific Pulp	T14S, R4W, Sect. 06 & T14S, R5W Sect. 01	50674-RF	2000-486/3		0.30	**25.773**
5/5/14	Hayden Homes, Applegate	Lat.44.04078°N, Long. -123.35919°W	34856-RF	NWP-2005-430		0.56	**25.231**
5/22/14	TEC Equipment	91317 Cobourg industrial Way, Cobourg, OR 97408	5981-ENF	None		0.5	**24.713**
11/13/14	Hayden Homes, Applegate 3	Lat.44.04078°N, Long. -123.35919°W	56711	NWP-2005-430-2		0.14	**24.573**
12/1/14	Junction City Prison Project	3.5 miles south of Junction City, Oregon	41791-RF	2008-378		0.16	**24.413**
5/5/15	Georgia Pacific	Halsey, Oregon	7460 ENF	NWP 2014-238		1.85	**22.563**
6/8/15	Cooper Creek LLC	9S, 5W, Section 04	56240-RF	NWP-2008-641		0.27	**22.293**
5/15/15	Hayden homes, Glacier Meadows	T18S R2W Sec. 5 TL9001	57660-RF	NWP-2005-480/1		0.62	**21.683**
1/8/16	**CORPS/DSL 5th RELEASE**				**6.95**		**28.633**
3/15/16	Waverly Assisted Living	T11S03W05DA	58619-RF	NWP-2015-509		0.242	**28.391**
3/15/16	ODOT, Twin Buttes	T14S03W18	58785	NWP-2016-64		0.118	**28.273**
3/15/16	ODOT, Oak Plain	T13S03W19	58784	NWP-2016-63		0.13	**28.143**
3/15/16	ODOT, Griffith Dr	T11S03W31	58782	NWP-2016-61		0.093	**28.05**
3/15/16	ODOT, Pugh Dairy Rd	T13S03W18	58783	NWP-2016-62		0.151	**27.899**
4/12/17	J. Conser & Sons, LLC	12S06W12AC	59825-RF	NWP-2017-49		0.79	**27.099**
6/12/17	City of Albany	Crocker Ln Improvements	NA	NWP-2015-503		0.1	**26.999**
12/11/17	Oakmont Development Co	Brooklane Heights	7965-ENF	NA		0.86	**26.139**

DATE	*NAME*	*LOCATION*	*DSL*	*CORP*	*ADDED*	*SOLD*	*BALANCE*
3/21/18	Samaritan	Elks drive/99W	RF59408	NWP 2016-0470		0.71	**25.429**
3/12/18	ODOT	Highway 126, West of Eugene	60925	NWP-2018-80		0.15	**25.279**
3/30/2018	Red Hill Estates	T14S, R5W, Section 33, Tax Lot 800	56714-RF	NWP-2014-307/1		1.47	**23.809**
4/20/2018	Starr Creek road connection	13S06W22	61064-RF	NWP-2018-176		0.01	**23.799**
4/9/18	Murphy Company expansion	2350 Prairie Road, Eugene, OR 97405	60278-RF	NWP-2017-283		2.15	**21.649**
9/14/17	Mountain West investment corp	3335 Main Street Philomath	60267-RF	NWP-2017-252		7.09	**14.559**
5/29/18	Ponderosa Ridge	11S05W20D	60985-RF	NWP-2018-129		0.03	**14.529**
6/11/18	Farm View Subdivision	10S04W35DB	60400-RF	NWP-2017-322		3.93	**10.599**
6/26/18	Alder Springs	17S04W14CB	61197-GP	NA		0.05	**10.549**
7/11/18	Eugene Civic Alliance	18S03W06AA	60943-RF	NWP-2018-93		0.84	**9.709**
8/2/18	Moss and 4th Duplexes	T. 19S, R. 01W, Section 14, Tax Lot 1606	61317-GP	NA		0.052	**9.657**
8/18/18	GP Halsey Mill	14S04W03, 304	61119-RF	NWP-2014-238/1		0.15	**9.507**
9/17/18	Northernwood, LLC	12S 06W 12, 517 19th street Philomath	61249-RF	NWP-2018-298		1.81	**7.697**
11/5/18	Timberhill Meadows Apartments	11S 05W 22, NW Kings Blvd Corvallis	61334-RF	NWP-2000-320/3		2.31	**5.387**
Total Sold						**77.633**	

Evergreen Wetland Mitigation Bank
Plant Species List
2018

Includes all species identified in and immediately adjacent to monitoring plots, except does not include herbaceous species in the enhanced forest

Botanical Name	Common Name	Status	Origin	Wet Prairie Cohort Species	Moisture Index
Overstory Species					
Alnus rhombifolia	White alder	FACW	native		2
Crataegus douglasii	Douglas Hawthorn	FAC	native		3
Fraxinus latifolia	Oregon ash	FACW	native		2
Malus fusca	Flowering crabapple	FACW	native		2
Populus trichocarpa	Black cottonwood	FAC	native		3
Scrub/Shrub Species					
Amelanchier alnifolia	Service berry	FACU	native		4
Cornus sericea	Red osier dogwood	FACW	native		2
Douglas spirea	Spiraea douglasii	FAC	native		3
Oemlaria cerasiformis	Indian plum	FACU	native		4
Physocarpus capitatus	Pacific ninebark	FACW	native		2
Rosa nutkana	Nootka rose	FAC	native	Yes	3
Rosa pisocarpa	Clustered rose	FAC	native		3
Salix lasiandra	Pacific willow	FACW	native		2
Symphoricarpos albus	Snowberry	FACU	native		4
Herbaceous Species					
Achillea millefolium	Yarrow	FACU	native		4
Alisma gramineum	Narrow leaf water plantain	OBL	native		1
Alisma triviale	Northern water plantain	OBL	native		1
Asclepias speciosa	Showy milkweed	FAC	native		3
Bidens cemua	Nodding beggarticks	FACW+	native		2
Cammasia leichtlinii	Large camss	FACW	native	Yes	2
Camassia quamash	Camas	FACW	native	Yes	2
Centaurium erythraea	Centaury	FAC	non		3
Carex densa	Dense sedge	OBL	native	Yes	1
Carex feta	Green-sheath sedge	FACW	native	Yes	2
Carex obnupta	Slough sedge	OBL	native		1
Carex pachystachya	chamisso sedge	FAC	native	Yes	3
carex scoparia	Pointed broom sedge	FACW	native		2
Carex unilateralis	One-sided sedge	FACW	native	Yes	2
Cyperus strigosus	Strawcolored flat sedge	FACW	native		2
Downingia elegans	Common downingia	OBL	native	Yes	1
Eleocharis ovata	Ovate spike rush	OBL	native	Yes	1
Eleocharis palustris	Creeping spike rush	OBL	native		1
Epilobium angustifolium	Fireweed	FACU	native		4
Epilobium ciliatum	Fringed willoweed	FACW	native	Yes	2
Epilobium densiflorum	Dense spike-primrose	FACW	native	Yes	2
Eriophyllum lanatum	Oregon sunshine	NOL	native	Yes	5
Galium trifidum var. pacificum	Small bedstraw	FACW	native		2
Geum macrophyllum	Large leaf avens	FACW	native		2
Gratiola ebracteata	Bractless hedgehyssop	OBL	native	Yes	1
Gnaphalium palustre	Cudweed	FAC	native	Yes	2

Grindelia integrifolia	Gumweed	FACW	native	Yes	2
Juncus bufonius	Toad rush	FACW	native	Yes	2
Juncus effusus	Soft rush	FACW	native		2
Juncus tenuis	Slender rush	FACW	native	Yes	2
Kickxia elatine	Sharp point flevellin	NOL	non		5
Lactuca serriola	Prickly lettuce	FACU	non		5
Ludwigia palustris	Marsh seedbox	OBL	native		1
Lupinus bicolor	Two-colored lupine	NOL	native		5
Lupinus rivularis	Stream-side lupine	FAC	native		3
Lupinus polyphyllus	Bigleaf lupine	FAC	native	Yes	3
Lythrum portula	Spatulaleaf loosestrife	OBL	non		1
Madia sativa	Coast tarweed	NOL	native		5
Mentha pulegium	Pennyroyal	OBL	non		1
Mimulus guttatus	Common monkey-flower	OBL	native	Yes	1
Myosotis laxa	Small-flowered forget me n	OBL	native		1
Plagiobothrys figuratus	Fragrant popcorn flower	FACW	native	Yes	2
Plagiobothrys scouleri	Scouler's popcorn flower	FACW	native	Yes	2
Plectritis congesta	Sea blush	FACU	native		4
Polygonum hydropiperoides	Water smartweed	OBL	native		1
Potentilla gracilis	Northwest cinqufoil	FAC	native	Yes	3
Prunella vulgaris	Common selfheal	FACU	native	Yes	4
Rorippa curvisiliqua	Western yellowcress	OBL	native	Yes	1
Ranunculus orthorhynchus	straight beaked buttercup	FACW	native	Yes	2
Rumex salicifolius	Willow dock	FACW	native		2
Sagittaria latifolia	Wapato	OBL	native		1
Saxifraga oregana	Oregon saxifrage	FACW	native	Yes	2
Scirpus tabernaemontani	Soft-stem-bulrush	OBL	native		1
Sidalcea campestris	Meadow checkermallow	FACU	native		4
Sidalcea cusickii	Cusick's checkermallow	FACW	native	Yes	2
Sidalcea nelsoniana	Nelson's checkermallow	FACW	native	Yes	2
Sparganium emersum	Simple-stem bur-reed	OBL	native		1
Tellima grandiflora	Fringe cup	NOL	native		5
Typha latifolia	Common cattail	OBL	native		1
Veronica peregrina var. xalapensis	Hairy purlane speedewell	OBL	native	Yes	1
Vicia hirsuta	Tiny vetch	NOL	Non		5
Grass Species					
Agrostis exarata	Spike bentgrass	FACW	native	Yes	2
Alopecurus aequalis	Short-awned foxtail	OBL	native		1
Alopecurus geniculatus	Water foxtail	OBL	native		1
Beckmania syzigachne	Slough grass	OBL	native	Yes	1
Deschampsia cespitosa	Tufted hairgrass	FACW	native	Yes	2
Deschampsia danthonioides	Annual hairgrass	FACW-	native	Yes	2
Deschampsia elongata	Slender hairgrass	FACW	native	Yes	2
Echinochloa crus-galli	Large barnyard-grass	FAC	non		3
Glyceria borealis	Floating mannagrass	OBL	native		1
Glyceria occidentalis	Western mannagrass	OBL	native		1
Hordeum brachyantherm	Meadow barley	FACW	native	Yes	2
Leersia oryzoides	Rice cut-grass	OBL	native		1
Lolium multiflorum	Annual rye grass	FACU	non		4
Panicum capillare	Common witchgrass	FAC	native	Yes	3
Poa palustris	Fowl bluegrass	FAC	native		3
Poa trivialis	Rough-stalk bluegrass	FAC	non		3
Vulpia myuros	Rattail fescue	FAC	non		3

Evergreen Wetland Mitigatigation Bank

Wet Prairie (WP) Plot Data

June 5, 2018

Species Observed				Wet Prairie Cohort	Moisture	Ave. Cover																															
Botanical Name	**Common Name**	**Status**	**Origin**	**Species**	**Index**	**ea. Species**	**16**	**20**	**21**	**30**	**32**	**33**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**	**51**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**	**61**	**62**	**71**	**72**
Oversory Species. - stem count within 30' Diameter (over 18" tall)																																					
Alnus rhombifolia	White alder	FAC	native		3																			1													
Fraxinus latifolia	Oregon ash	FACW	native		2																			1													
Malus fusca	Flowering crabapple	FACW	native		2																			2													
Populus trichocarpa	Black cottonwood	FAC	native		3																			3													
Rosa nutkana	Nootka rose	FAC	native	Yes	3																																
Salix lasiandra	Pacific Willow	FACW	native		2																																
	hawthorn																															2					
Herbaceous Species - percent cover																																					
Achillea millefolium	Yarrow	FACU	native		4	0.10																				5											
Alisma triviale	Northern water plantain	OBL	native		1	0.00																															
Asclepias speciosa	Showy milkweed	FAC	native		3	0.20																															
Carex densa	Dense sedge	OBL	native	Yes	1	1.63						50				10																10					
Carex pachystachya	chamisso sedge	FAC	native	Yes	3	0.41																							10	10							
Cammasia leichtlinii	Large camss	FACW	native	Yes	2	0.82																			10	10			10								
carex scoparia	Pointed broom sedge	FACW	native		2	0.41																							10	10							
Carex unilateralis	One-sided sedge	FACW	native	Yes	2	7.45		20		10					20	20				50					25		50	50	25			35	30				
Centaurium erythraea	Centaury	FAC	non		3	0.10																															
Eleocharis ovata	Ovate spike rush	OBL	native	Yes	1	0.00																															
Eleocharis palustris	Creeping spike rush	OBL	native		1	1.22	10						10																								
Epilobium angustifolium	Fireweed	FACU	native		4	0.41																		15								5					
Epilobium ciliatum	Fringed willoweed	FACW	native	Yes	2	3.27	30	10	10						35	10								10						10		15	5	25			
Epilobium densiflorum	Dense spike-primrose	FACW	native	Yes	2	2.24									25	10									5	5			30	10			15				
Eriophyllum lanatum	Oregon sunshine	NOL	native	Yes	5	0.41																				20											
Galium trifidum var. pacificum	Small bedstraw	FACW	native		2	1.53			15		15												15			10											
Gratiola ebracteata	Bractless hedgehyssop	OBL	native	Yes	1	0.00																															
Gnaphalium palustre	Cudweed	FAC	native	Yes	3	0.00																															
Grindelia integrifolia	Gumweed	FACW	native	Yes	2	0.71										10														10							
Juncus bufonius	Toad rush	FACW	native	Yes	2	0.00																															
Juncus effusus	Soft rush	FACW	native		2	0.31						15																									
Juncus tenuis	Slender rush	FACW	native	Yes	2	0.41						10															10										
Lactuca serriola	Prickly lettuce	FACU	non		5	0.00																															
Lupinus bicolor	Two-colored lupine	NOL	native		5	0.00																															
Lupinus rivularis	Stream-side lupine	FAC	native		3	0.00																															
Lupinus polyphyllus	Bigleaf lupine	FAC	native	Yes	3	0.00																															
Lythrum portula	Spatulaleaf loosestrife	OBL	non		1	0.10																															
Mimulus guttatus	Common monkey-flower	OBL	native	Yes	1	0.00																															
Myosotis laxa	Small-flowered forget me no	OBL	native		1	0.51				10																						10					
Plagiobothrys figuratus	Fragrant popcorn flower	FACW	native	Yes	2	0.82																										5	5				
Plagiobothrys scouleri	Scouler's popcorn flower	FACW	native	Yes	2	0.00																															
Plectritis congesta	Sea blush	FACU	native		4	0.41																								20							
Potentilla gracilis	Northwest cinqufoil	FAC	native	Yes	3	1.02																						15					10				
Prunella vulgaris	Common selfheal	FACU	native	Yes	4	1.63		10																	25	20											
Ranunculus orthorhynchus	straight beaked buttercup	FACW	native	Yes	2	0.51																				10				10							
Rorippa curvisiliqua	Western yellowcress	OBL	native	Yes	1	1.94								10		5	20	15			10	5															
Rumex salicifolius	Willow Dock	FACW	native		2	0.31																							15								
Saxifraga oregana	Oregon saxifrage	FACW	native	Yes	2	0.41																								10							
Sidalcea campestris	Meadow checkermallow	FACU	native		4	0.71					25																			10							
Sidalcea cusickii	Cusick's checkermallow	FACW	native	Yes	2	12.76	20	60		60	40	25			10	15				40			70		25	20	35	35				20	30	30			
Typha latifolia	Common cattail	OBL	native		2	0.61	30																														
Veronica peregrina var. xalapensis	Hairy purlane speedewell	OBL	native	Yes	1	0.00																															
						43.37																															
Grass Species - percent cover																																					
Agrostis exarata	Spike bentgrass	FACW	native	Yes	2	7.45							40	10		5	20	15	15		30	80			5										10		
Alopecurus aequalis	Short-awned foxtail	OBL	native		1	0.00																															
Alopecurus geniculatus	Water foxtail	OBL	native		1	0.00																															
Beckmania syzigachne	Slough grass	OBL	native	Yes	1	2.86							30							10																	
Deschampsia cespitosa	Tufted hairgrass	FACW	native	Yes	2	30.20			75				20	60		15	50	55	85		40										80				90	100
Deschampsia danthonioides	Annual hairgrass	FACW-	native	Yes	2	0.00																															
Deschampsia elongata	Slender hairgrass	FACW	native	Yes	2	0.00																															
Glyceria occidentalis	Western mannagrass	OBL	native		1	0.00																															
Hordeum brachyantherm	Meadow barley	FACW	native	Yes	2	11.73				15	20							15			10		15	25	5									25			
Lolium multiflorum	Annual rye grass	FACU	non		4	0.00																															
Poa trivialis	Rough-stalk bluegrass	FAC	non		3	0.10				5																											
Vulpia myuros	Rattail fescue	FAC	non		3	0.41																		10			5										
						52.35																															
Bareground (Organic Litter, #51 Canopy Closure)		Mean =	**3.67**				10							20	10		10					15		40							20		5	20			
Relative % non-native cover, includes bareground:		Mean=	**4.39**				10	0	0	5	0	0	0	20	10	0	10	0	0	0	0	15	0	50	0	0	5	0	0	0	20	0	5	20	0	0
Relative % native cover,		Mean=	**95.41**				90	100	100	95	100	100	100	80	90	100	90	100	100	100	90	85	100	50	100	100	95	100	100	100	80	100	95	80	100	100
Relative % non-native invasive canopy cover :		Mean=	**0.00**				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Total Vegetation that is Native:	**99.68**	Percent of Total Vegetation that is Non-native				**0.32**																															
Sample plot weighted moisture index (herbaceous layer only)		Mean=	**2.05**				1.9	2.6	2.1	2.0	2.0	2.0	1.5	1.9	1.9	2.0	1.9	2.0	2.0	1.8	2.0	1.7	2.1	2.8	2.5	3.7	2.0	1.8	2.2	2.6	1.9	1.9	2.1	2.0	2.0	1.8
Total # of native Species: 36																																					
Total Sample Size = 49	# of Wet Prairie Cohort Species = 20																																				

73	74	78	79	80	83	84	85	86	87	89	90	91	92	93	96	97	98	99
									3									
	10																	
									10									
									10									
10	20																	
									5									
			15	25														
									10									
								20										
									15									
			5															
									5									
			30															
								25										
								20	5									
									5									
			30															
									10									
50								20	20									
	10	20				10			5	30	20			30	10			
	25		20	55														
20	35	70		20	50	80	100	15		40	50	100	50		15		75	90
					50	10				30	30		50	70	70	100	25	10
															5			
20		10																
20	0	10	5	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0
80	100	90	95	100	100	100	100	100	95	100	100	100	100	100	95	100	100	100
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.8	1.8	2.0	1.0	1.0	2.0	2.0	2.0	3.1	2.7	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	1.8

Evergreen Wetland Mitigatigation Bank

Emergent Marsh (PEMC) Plot Data - 9/5/2018

Species Observed							Sample Plot Number																							
				Wet Prairie	Moisture	Ave.																								
Botanical Name	Common Name	Status	Origin	Cohort	Index	Cover	11*	12	14	15	17	18	19	22	23	24	25	26	27	28	29	34	35*	36	37	38	39	75	77	81
				Species		ea. Species																								
Scrub/Shrub Species -stem count within 30' radius																														
Populus trichocarpa	Black cottonwwod	FACW	native		2																									
Salix lasiandra	Pacific willow	FACW+	native		2		5										2				2									
Herbaceous Species - percent cover																														
Alisma gramineum	Narrow leaf water plantain	OBL	native		1	2.50	20			40																				
Alisma triviale	Northern water plantain	OBL	native		1	16.67	60	30	30	60	10	20				20	10	50	20	10	10			20				50		
Bidens cemua	Nodding beggarticks	FACW+	native		2	1.67								20							20									
Cyperus strigosus	Strawcolored flat sedge	FACW	native		2	1.25								10										20						
Downingia elegans	Common downingia	OBL	native	Yes	1	0.00																								
Eleocharis ovata	Ovate spike rush	OBL	native	Yes	1	0.00																								20
Eleocharis palustris	Creeping spike rush	OBL	native		1	21.67			40				20							40	60	100	30	40	80	60		30	20	60
Epilobium ciliatum	Fringed willoweed	FACW	native	Yes	2	0.00																								
Gnaphalium palustre	Cudweed	FAC+	native	Yes	3	0.83																							20	
Juncus bufonius	Toad rush	FACW	native	Yes	2	0.00																								
Ludwigia palustris	Marsh seedbox	OBL	native		1	6.67	10	30					20	10	30	20			40											
Lythrum portula	Spatulaleaf loosestrife	OBL	non		1	0.00																								
Mentha pulegium	Pennyroyal	OBL	non		1	0.42															10									
Polygonum hydropiperoides	Water smartweed	OBL	native		1	14.58	10	20	20		40	80				60	30	50	40											
Rorippa curvisiliqua	Western yellowcress	OBL	native	Yes	1	0.00																								
Sagittaria latifolia	Wapato	OBL	native		1	0.00																								
Sparganium emersum	Simple-stem bur-reed	OBL	native		1	0.00																								
Typha latifolia	Common cattail	OBL	native		1	5.63					50				70								15							
Grass Species - percent cover																														
Agrostis exarata	Spike bentgrass	FACW	native	Yes	2	1.04																	25							
Alopecurus aequalis	Short-awned foxtail	OBL	native		1	0.00																								
Alopecurus geniculatus	Water foxtail	OBL	native		1	5.83								40									20			20			60	
Beckmania syzigachne	Slough grass	OBL	native	Yes	1	5.83								20													100	20		
Deschampsia cespitosa	Tufted hairgrass	FACW	native	Yes	2	0.00																								
Echinochloa crus-galli	Large barnyard-grass	FAC	non		3	0.00																								
Glyceria borealis	Floating manna grass	OBL	native		1	0.00																								
Glyceria occidentalis	Western mannagrass	OBL	native		1	3.33							60												20					20
Hordeum brachyantherm	Meadow barley	FACW	native	Yes	2	0.42																	10							
Leersia oryzoides	Rice cut-grass	OBL	native		1	5.83			10								60			50						20				
Panicum capillare	Common witchgrass	FAC	native	Yes	3	0.00																								
Bareground (*-due to recent inundation or age) Mean =		**1.7**						20																20						
Open Water Mean=		**0.0**																												
Relative % native cover:		**Mean =**	**97.92**				100	80	100	100	100	100	100	100	100	100	100	100	100	100	90	100	100	80	100	100	100	100	100	100
Relative % non-native cover includes bareground :		**Mean =**	**2.08**				0	20	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	20	0	0	0	0	0	0
Relative non-native invasive cover:		**Mean =**	**0.00**																											
Percent of Total Vegetation that is Native:		**Mean =**	**99.56**																											
Percent of Total Vegetation that is Non-native:		**Mean =**	**0.44**																											
Sample plot weighted moisture index (herbaceous layer o		**Mean =**	**1.04**				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.35	1.00	1.00	1.00	1.00	1.00	1.40	1.00
Total # of Native Species	15																													
Total Sample points	24																													

Evergreen Wetland Mitigatigation Bank

Forested (PFO) Plot Data

June 5, 2018

Species Observed				Wet Prairie	Moisture	Ave												
Botanical Name	**Common Name**	**Status**	**Origin**	**Cohort**	**Index**	**Cover**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**13**	**31**
				Species		**ea. Species**												
Oversory Species. - stem count within 30' Diameter (over 18" tall)																		
Alnus rhombifolia	White alder	FAC	native		3			1										1
Crataegus douglasii	Douglas Hawthorn	FAC	native		3					1	1		1					1
Fraxinus latifolia	Oregon ash	FACW	native		2			1		1	1	2			8	9		30
Malus fusca	Flowering crabapple	FACW	native		2		3	1										
Populus trichocarpa	Black cotton wood	FACW	native		2					1		4		1				
Total # of Plos: 26																		
Total Stems per plot	**Mean=**	8.2					3	3	0	3	2	6	1	1	8	9	0	32
Average Stems per Plot (FAC or Wetter)		8.2					3	3	0	3	2	6	1	1	8	9	0	32
Mean trees/Acre	503																	
Amelanchier alnifolia	Service berry	FACU	native		4													
Cornus sericea	Red osier dogwood	FACW+	native		2		2	1						1				
Oemlaria cerasiformis	Indian plum	FACU	native		4													
Physocarpus capiaus	Pacific ninebark	FACW-	native		2		1											
Rosa nukana	Nooka rose	FAC	native	Yes	3		1	5	2	3	2		1	2	1			1
Rosa pisocarpa	Clustered rose	FAC	native		3			1	3	3	1		3	3				
Salix lasiandra	Pacific willow	FACW+	native		2			4	3	9	3	15	3	11	3		150	10
Spirea douglasii	Douglas spiraea	FAC	native		3		5	7	8		12		7					
Symphoricarpos albus	Snowberry	FACU	native		4		5											
Total # of Plots: 26																		
Total Stems per plot	**Mean=**	15.9					14	18	16	15	18	15	14	17	4	0	150	11
Average Stems per Plot (FAC or Wetter)		15.38					9	18	16	15	18	15	14	17	4	0	150	11
Mean Shrubs/Acre (FAC or Wetter)		949																
Average Stems per Plot (FAC or Wetter) W/O #13		10.00																
Mean Shrubs/Acre (FAC or Wetter) W/O #13		617																
Herbaceous Species - percent cover																		
Achillea millefolium	Yarrow	FACU	native		4	0.00												
Alisma triviale	Northern water plantair	OBL	native		1	0.00												
Camassia quamash	Camas	FACW	native	Yes	2	1.54												15
Carex obnupta	Slough sedge	OBL	native		1	0.38												
Carex unilateralis	One-sided sedge	FACW	native	Yes	2	1.15									5	15		10
Centaurium erythraea	Centaury	FAC	non		3	0.00												
Epilobium ciliatum	Fringed willoweed	FACW	native	Yes	2	5.77			25	15			20		10	10		
Epilobium densiflorum	Dense spike-primrose	FACW	native	Yes	2	0.00												
Eriophyllum lanatum	Oregon sunshine	NOL	native	Yes	5	6.73	75											
Galium trifidum var. pacificum	Small bedstraw	FACW	native		2	1.54												
Geum macrophyllum	Large leaf avens	FACW-	native		2	0.77												
Gnaphalium palusre	Cudweed	FAC+	native	Yes	3	0.00												
Gratiola ebracteata	Bractless hedgehyssop	OBL	native	Yes	1	0.00												
Juncus bufonius	Toad rush	FACW	native	Yes	2	0.00												
Juncus effusus	Soft rush	FACW	native		2	0.00												
Juncus tenuis	Slender rush	FACW	native	Yes	2	0.00												
Lupinus bicolor	two-colored lupine	NOL	native		5	0.00												
Lupinus polyphyllus	Bigleaf lupine	FAC	native	Yes	3	0.00												
Lythrum portula	Spatulaleaf loosestrife	OBL	non		1	0.00												
Kickxia elatine	Sharp point flevellin	NOL	non		5	0.00												
Madia saiva	Coast tarweed	NOL	native		5	0.58	15											
Myosotis laxa	Small-flowered forget n	OBL	native		1	0.38										10		
Poenilla gracilis	Northwest cinqufoil	FAC	native	Yes	3	3.85												30
Polygonum amphibium	Water smartweed	OBL	native		1	0.00												
Rorippa curvisiliqua	Western yellowcress	OBL	native	Yes	1	0.00												
Sidalcea campestris	Meadow checkermallov	FACU	native		4	3.08												10
Sidalcea cusickii	Cusick's checkermallov	FACW	native	Yes	2	5.00												
Veronica peregrina var. xalapei	Hairy purlane speedew	OBL	native	Yes	1	0.00												
Vicia hirsuta	Tiny vetch	NOL	Non		5	0.96												
						30.77												
Grass Species - percent cover																		
Agrosis exaraa	Spike bentgrass	FACW	native	Yes	2	0.38										10		
Alopecurus geniculatus	Water foxtail	OBL	native		1	0.00												
Beckmania syzigachne	Slough grass	OBL	native	Yes	1	1.15										30		
Deschampsia cespitosa	tufted hairgrass	FACW	native	Yes	2	5.38												
Deschampsia danthonioides	Annual hairgrass	FACW-	native	Yes	2	0.00												
Deschampsia elongata	Slender hairgrass	FACW	native	Yes	2	2.69							30	20				
Elymus glaucus	Blue wildrye	FACU	native		4	0.00												
Glyceria occidentalis	Western mannagrass	OBL	native		1	0.00												
Hordeum brachyantherm	Meadow barley	FACW	native	Yes	2	5.00	10		10	10		5		10	10	25		
Poa palustris	Fowl bluegrass	FAC	native		3	0.00												
Poa trivialis	Rough-stalk bluegrass	FAC	non		3	0.38												
Vulpia myuros	Rattail fescue	FAC	non		3	0.38												
						15.38												
Bareground (due to canopy closure)					**Mean=**	**52.88**		100	65	75	100	95	50	70	75		100	35
Relative % native cover, excluding bareground (herbaceous layer only):					**Mean=**	**45.38**	100	0	35	25	0	5	50	30	25	100	0	65
Relative % non-native invasive cover (herbaceous layer only):					**Mean=**	**0**	0	0	0	0	0	0	0	0	0	0	0	0
Sample plot weighted moisture index (herbaceous layer only)					**Mean=**	**1.94**	4.75		2.00	2.00		2.00	2.00	2.00	2.00	1.67		2.80
# of Wet Prairie Cohort Species = 15																		
Total # of Native Species = 32		Total Sample points = 26																

52	**63**	**64**	**65**	**66**	**67**	**68**	**69**	**70**	**76**	**82**	**88**	**94**	**95**
1									2				
			1	1						2	2	2	1
8							1	15	23	8	12	22	30
	1	2		1	2			1					
4										1		1	
13	1	2	1	2	2	0	1	16	25	11	14	25	31
13	1	2	1	2	2	0	1	16	25	11	14	25	31
					1		2						
							1		2				
	1				2	9	2	1					
		1	1	3			1	2				5	
1			2		2		2	3					1
13			3									2	12
		7	3	9	4	3	14	1					
	3			1	2								
14	4	8	9	13	11	12	22	7	2	0	0	7	13
14	1	8	9	12	8	12	20	7	2	0	0	7	13
								25					
												10	
	30	30							10				
					100								
		10									30		
								10				10	
	50			20									
10								40			20		
			50	30				25	25				
									25				
10		60		40					30				
	20												
									10	10	30		
											10		
											10		
80			50	10		100	100			90		80	100
20	100	100	50	90	100	0	0	100	75	10	80	20	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.00	2.30	2.00	2.00	2.20	3.80			2.65	2.00	2.00	2.33	2.00	

Evergreen Mitigation Bank

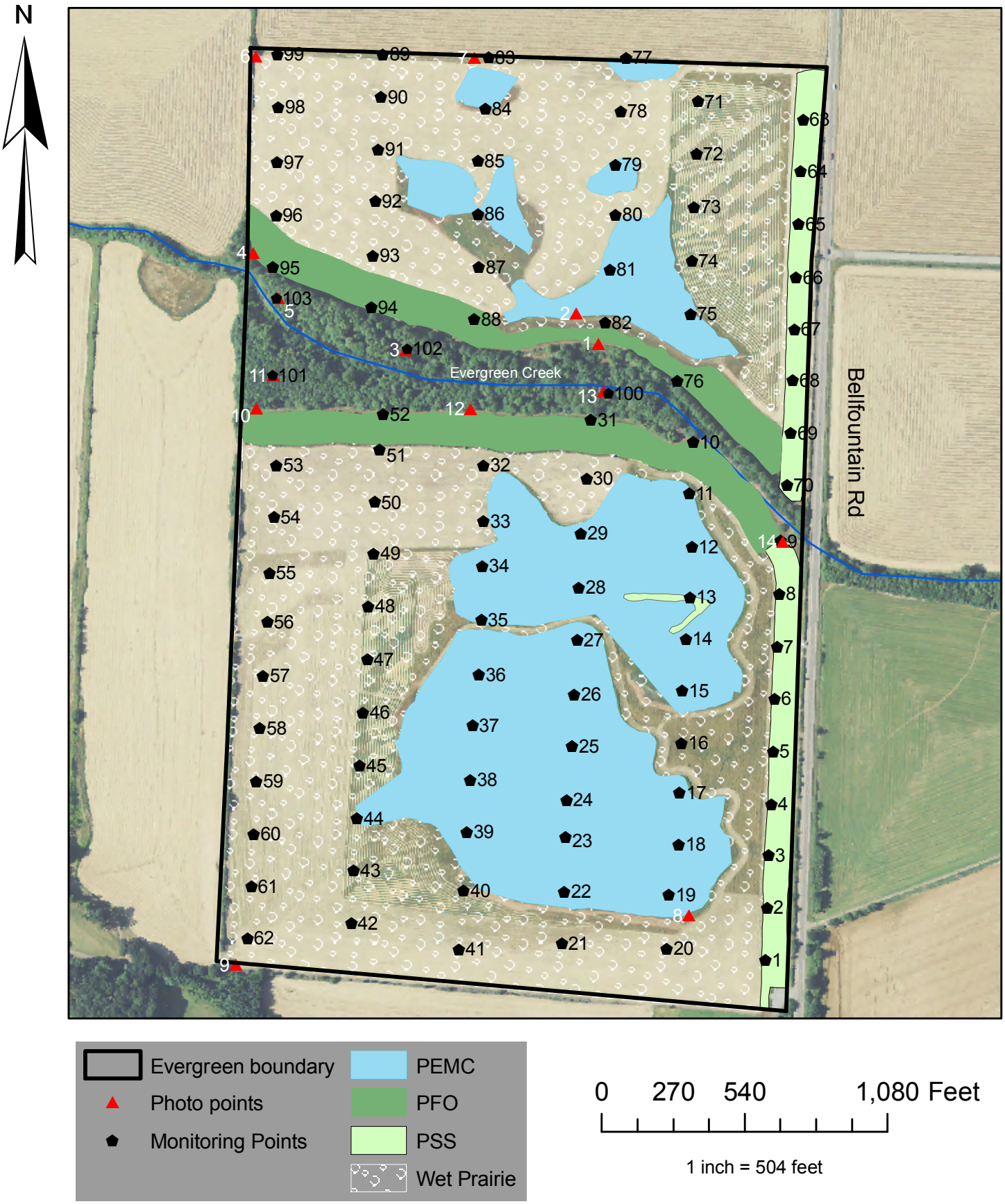
Existing and Enhanced Shrub/Forest (PFOE) Sample Plot Monitoring Results 2018

				Moisture				
Common Name	**Botanical Name**	**Status**	**Origin**	**Index**	**100 - SE**	**101 - SW**	**102 - NE**	**103 - NW**
Overstory Species. - stem count within 50' square								
Douglas Hawthorne	*Crataegus douglassi*	FAC	native	3	10	2	16	7
Oregon ash	*Fraxinus latifolia*	FACW	native	2	23	29	6	25
Scrub/Shrub Species -stem count within 50' square								
Cascara	Rhamnus purshiana	FAC-	native	3	10	1	3	5
Himalayan blackberry	*Rubis discolor*	FACU	non	4				
Nootka rose	*Rosa nutkana*	FAC	native	3	4	1		1
Snowberry	*Symphoricarpos albus*	FACU	native	4	10	5	10	40
Douglas spiraea	*Spirea douglasii*	FAC	native	3			4	
Trailing blackberry	*Rubus ursinus*	NL	native		24	10	30	40

* Mowing, non-native species control, flooding, and wind damage eliminated some Ash trees, while allowing the shrub layer to prosper.

Attachment 2: Monitoring Point Location Map

Evergreen Mitigation Bank Vegetation and Photo Monitoring Points



Evergreen Mitigation Bank 2018 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

Photo Taken June 5, 2018

Photo Point 4 North

Photo Point 4 East

Photo Point 4 South

Photo Point 4 West

Photo Point 5 North

Photo Point 5 East

Photo Point 5 South

Photo Point 5 West

Photo Point 6 North

Photo Point 6 East

Photo Point 6 South

Photo Point 6 West

Photo Taken June 5, 2018

Atachment 3: Monitoring Photos

Photo Point 7 North

Photo Point 7 East

Photo Point 7 South

Photo Point 7 West

Photo Point 8 North

Photo Point 8 East

Photo Point 8 South

Photo Point 8 west

Photo Point 9 North

Photo Point 9 East

Photo Point 9 South

Photo Point 9 West

Photo Taken June 5, 2018

Photo Point 10 North

Photo Point 10 East

Photo Point 10 South

Photo Point 10 West

Photo Point 11 North

Photo Point 11 East

Photo Point 11 South

Photo Point 11 West

Photo Point 12 North

Photo Point 12 East

Photo Point 12 South

Photo Point 12 West

Photo Taken June 5, 2018

Photo Point 13 North

Photo Point 13 East

Photo Point 13 South

Photo Point 13 West

Photo Point 14 North

Photo Point 14 East

Photo Point 14 South

Photo Point 14 West

Photo Taken June 5, 2018