

Monitoring Report Cover Sheet
Oregon Department of State Lands

Block 1: Report Information

DSL Permit Number: 60770-RF		COE Permit Number: NWP-2017-476
Permittee: <u>Oregon Wetlands LLC</u>		
County: <u>Benton</u>	Report Date: <u>08/2024</u>	Monitoring Year: <u>5</u>
Date Removal-Fill Activity Completed: <u>Year 1</u> (Year 1, 2, 3, 4, 5, etc.)		
Date mitigation was completed	Grading: <u>2019</u>	Planting: <u>2019/2020</u>
Report submitted by: <u>Oregon Wetlands LLC</u>		

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.
- ☐ Compensatory **non-wetland** mitigation.
- ☐ **Only rectification for temporary** impacts that had 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

Block 3: Results

	Success Criteria	Met? (Y/N)	Comments/Reason for failure*
1.	Hydrology	Yes, 5 of 5	
2.	Herbaceous Habitat Class	Yes, 5 of 5	
3.	Upland Buffer Habitat Class	Yes, 3 of 3	
4.	Scrub-Shrub Habitat Class	Yes, 6 of 6	
5.	Mixed Forested Riparian Buffer Habitat Class	Yes, 5 of 5	
6.	Sustainability Performance Standards	Yes, 3 of 4	PS Sus 4 N.A. this year

* see report for detailed information

Remedial work recommended

Yes ☐ No ☒

Deed Restriction or other protection instrument attached (note: if a filed deed restriction was required as a permit condition, please attach a copy):

Previously Submitted

Final Monitoring Report?

Yes ☐ No ☒

GIS Data Submitted?

Previously Submitted

Requesting release or partial release of bond/credits?

Yes ☒ No ☐

TABLE OF CONTENTS

1.0	REGULATORY BACKGROUND.....	2
2.0	WORK SUMMARY	2
3.0	AS-BUILT PLANS.....	3
4.0	HYDROLOGY PERFORMANCE STANDARDS, METHODOLOGY, AND RESULTS....	3
4.1	PERFORMANCE STANDARDS:.....	3
4.2	METHODOLOGY:	4
4.3	RESULTS	5
5.0	VEGETATION PERFORMANCE STANDARDS, METHODOLOGY AND RESULTS	5
5.1.	PERFORMANCE STANDARDS	5
5.2	METHODOLOGY	7
5.3	VEGETATION MONITORING RESULTS	8
5.3.1	Herbaceous Habitat Class	9
5.3.2	Upland Buffer Habitat Class	9
5.3.3	Scrub-Shrub Habitat Class.....	10
	Four of six performance criteria for Scrub-Shrub Habitat Class were met	10
5.3.4	Mixed Forested Riparian Buffer Habitat Class.....	10
6.0	SUSTAINABILITY PERFORMANCE STANDARDS, METHODOLOGY AND RESULTS	11
6.1.	PERFORMANCE STANDARDS	11
6.2	METHODOLOGY	11
6.3	SUSTAINABILITY MONITORING RESULTS	11
7.0	PHOTO POINT MONITORING.....	12
8.0	CREDIT/FINACIAL ASSURANCE RELEASE AND CREDIT SALES SUMMARY	12

LIST OF ATTACHMENTS

Attachment	1	Sample Plot Monitoring Data
Attachment	2	Vegetation Monitoring Point Location Map
Attachment	3	Photo Monitoring Point Location Map
Attachment	4	Monitoring Photos

1.0 REGULATORY BACKGROUND

The purpose of this report is to summarize the progress of the Marys River Wetland Mitigation Bank (Bank). The Bank is located in Benton County, Township 12 South, Range 5 West, Section 18&19, Tax Lot 1300, Longitude -123.341000°W and Latitude 44.522889°N. The address of the Bank is ~4702 Bellfountain Road, near the City of Philomath, Oregon. The letter of approval for the Bank was signed by DSL on May 15, 2020, and is permitted as DSL permit # 60770-RF and ACOE on May 18, 2020, and is permitted as ACOE permit# NWP-2017-476.

The Bank is 126.64 acres, with primary goals to create (establish) 47.62 acres, enhance (re-habilitate) 45.70 acres, restore (re-establish) 14.18 acres with 15.60 acres of buffer for a native wetland classified as Hydrogeomorphic (HGM) Flats, Depressional and Riverine class and Cowardin Palustrine Emergent (PEM)/Palustrine Scrub-Shrub (PSS)/Palustrine Forested (PFO) class of wetland and/or other aquatic resources. The total potential credits produced (updated 2022) included in Table 1:

Table 1: Credit generation

Method	Ratio	Acres	Credit
Restoration	1:1	14.18	14.18
Enhancement	2:1	45.70	22.85
Creation	1.5:1	47.62	31.74
Buffer (sloughs)	5:1	2.55	0.51
Buffer (upland prairie)	10:1	6.96	0.70
Buffer (riparian forest)	5:1	6.09	1.22
Roads, staging area and south easement	0	3.53	0
TOTAL		126.64	71.20

2.0 WORK SUMMARY

The site reached full saturation in mid-December with all pools at capacity. Much of the winter months were focused on observing hydrology, analyzing plant diversity, and weed control in the upland areas. The delineation light report was finalized and concurred with.

Spot spraying for all non-native species began in mid-April. Oregon Wetlands (OW) crew did the bulk of the early season work while mapping out priority areas and associated timing for contract crew. As anticipated with full establishment, work load was reduced again this year, with contract crews working 3 days in May and June. Early season work focused on upland areas, graminoid buffers and shrub plantings. Once the site began to dry out, work shifted to the wet prairie areas, with the last several weeks focused on the vernal pools. During wet weather, hoeing and hand pulling were utilized instead of spot treatments. Riverine habitats were targeted in late summer when river levels were lowest.

Mowing was utilized for access and as a management tool in various areas to prevent seed set of undesirable species and enhance detection for follow-up treatments. Access trails were mowed in early-

June to provide access through the site targeting areas of future vegetation control and avoid tall vegetation. Several sections in riparian buffer, prairies, and sections of the graminoid buffer were all mowed early to prevent non-native seed set and was followed with additional spot spraying. Once the majority of native species set seed, all the upland and wetland prairie areas as well as city berm were mowed in early September to spread seed and prepare for fall and subsequent spring weed control efforts. Once mowing was completed the vernal pool areas, tree/shrub plantings and small strips between vegetation types were the only un-mowed areas. Following mowing, OW crew covered the site weekly through early November targeting all non-natives and undesirable woody species.

Selective broadcast herbicide treatments were utilized in various areas to control non-native species. Upland prairie areas received a grass-specific treatment to control non-natives grasses but retain Roemers fescue in early November. The city berm and graminoid buffers received a broadleaf specific treatment in spring, with timing based on hydrology and weed germination in each area. Once grass species germinated from fall rains and sedge/rush species had adequate growth to prevent injury, the entire wet prairie area received a grass specific treatment.

Table 2 - Summary of Restoration Activities at Marys River Mitigation Bank from September 2023 through July 2024

Activity	Location
Spot treatment/manual weed control	All non-native vegetation and undesirable woody species targeted
Grass specific weed control	Upland prairie/wet prairie (fall)
Broadleaf specific weed control	City berm, graminoid buffer
Mowing 2023/24	Access trails, select vegetation control areas (June 23'), City berm and all accessible areas except vernal pools and woody plantings (September 22')

3.0 AS-BUILT PLANS

The as-built plans were submitted with as-built report in December 2019.

4.0 HYDROLOGY PERFORMANCE STANDARDS, METHODOLOGY, AND RESULTS

In addition to the description below, hydrology performance standards are summarized by year in Table 3, results are summarized in Table 4 and monitoring locations illustrated in Attachment 3. The delineation light was completed and concurred with this year and included in Attachment 5.

4.1 PERFORMANCE STANDARDS:

Most of the proposed hydrologic enhancements will have site-wide effects, therefore most of the performance criteria for hydrology relate to changes in hydroperiod in addition to typical wetland hydrology indicators. Table 3 summarizes the performance criteria by year as described below.

PS Hydro 1. Excavate vernal pools, construct low berms and eliminate extensive ditch network. This will be documented in year one with as-built report. For the purposes of this document, vernal pools are

defined as shallow vegetated wetlands that are inundated for at least 8 weeks from January through April, but typically dry completely by early to mid-summer and often, though not always, support annual members of native plant genera such as *Gratiola*, *Navaretia*, *Plagiobotrys*, and *Downingia*.

PS Hydro 2. At least 5 vernal pools will hold water for at least 8 weeks between January and April. This will be documented with November-March fills dates, depth of inundation and duration of ponding. This will be tracked for a minimum of 2 years with normal precipitation, prior to delineation “lite” completion and discontinued after concurrence.

PS Hydro 3. Ditches & tiles effectively disabled, there will be no evidence of ditch or tile outfalls continuing to flow. The east edge of the site will be patrolled at least twice in initial 2 winters after the soil profile is saturated to look for subsidence of ditch fills, tile blow-outs, or point-source flows into the Bellfountain roadside ditch. Any such occurrences will be mapped and remediated in the following dry season and described in the annual monitoring report.

PS Hydro 4. Absence of significant erosion. Erosion control BMP’s will be employed as needed to prevent downcutting where water spills over berms or other impoundments, to minimize erosion from the lagoon slopes, and to minimize deposition into Bellfountain roadside ditch. To document this PS, all berm tops and spillway areas, the toe of the lagoon slope, as well as the full length of the tax lot boundary along Bellfountain road will be monitored for evidence of erosion or sediment deposition shortly after major rain events in initial years, until vegetation is established. Deposits of more than a few inches of sediment will be tracked back to the source and additional BMPs applied in the same season, to be documented with photo points in the annual monitoring report.

PS Hydro 5. Final delineation. The extent of wetland restoration, creation, and enhancement achieved will be confirmed by a delineation conducted according to DSL’s “delineation light” protocols in spring of a year when precipitation is in normal range, during or after the 3rd growing season. When the delineation has been confirmed, the sponsor will provide the agencies with an updated Figure 8 and Exhibit D credit table showing any corresponding adjustments to the credit yield.

Table 3: Hydrology and construction performance standards summarized by year.

Year	Hydrology Performance Standard	Monitoring Method
1	PS 1	As-built Report
2	PS 2	November-March fill dates, depth of inundation and duration of ponding
2	PS 3, PS 4	Visual observations following major precipitation events
3	PS 2	November-March fill dates, depth of inundation and duration of ponding
3	PS 3, PS 4	Visual observations following major precipitation events
3 or later	PS 5	DSL’s “delineation light” protocol
4 (only if needed)	PS 2, PS 3, PS 4	Will follow above protocols until final delineation is completed

4.2 METHODOLOGY:

Site visits will be conducted throughout the winter and spring (November-May) to document fill dates and depth of inundation for at least 5 vernal pools and to ensure they are holding water for at least eight weeks from January-April. The east edge of the site will be patrolled at least twice in the initial 2 winters after the soil profile is saturated to look for subsidence of ditch fills, tile blow-outs, or point-source flows into the Bellfountain roadside ditch. All berm tops and spillway areas, the toe of the lagoon slope, as well as the full length of the tax lot

boundary along Bellfountain road will be monitored for evidence of significant erosion or sediment deposition shortly after major rain events in initial years, until vegetation is established.

Delineation: The extent of wetland restoration, creation, and enhancement achieved will be confirmed by a delineation conducted according to DSL's "delineation light" protocols in spring of a year when precipitation is in normal range, during or after the 3rd growing season. When the delineation has been confirmed, the sponsor will provide the agencies with an updated Figure 8 and Exhibit D credit table showing any corresponding adjustments to the credit yield.

4.3 RESULTS

The site met all hydrology performance standards in spring 2022. Extensive hydrology monitoring of all elevated areas, and areas that were not previously wetland was completed in spring 2022. Additional data plots were collected in spring 2023 to complete field data sheets. The full delineation light report is included in attachment 5 and was concurred with in July 2023.

- *Hydrology PS 1: Met*, As-built report submitted December 2019.
- *Hydrology PS 2: Met*, 2022.
- *Hydrology PS 3: Met*, 2022.
- *Hydrology PS 4: Met*, 2022
- *Hydrology PS 5: Met*, completed spring 2022, finalized spring 2023 and concurred.

5.0 VEGETATION PERFORMANCE STANDARDS, METHODOLOGY AND RESULTS

In addition to the description below, vegetation performance standards are summarized by year in Table 4, data sheets are in Attachment 1 and monitoring locations illustrated in Attachment 2.

5.1. PERFORMANCE STANDARDS

Herbaceous Habitat Class

- PS Herb 1. Absolute native vascular plant cover is $\geq 40\%$ by year 2, $\geq 50\%$ by year 3, $\geq 60\%$ by year 4 and $\geq 75\%$ by year 5.
- PS Herb 2. Bare ground is $\leq 40\%$ by year 2, $\leq 30\%$ by year 3, and $\leq 20\%$ for the remainder of the monitoring period, excluding areas meeting the definition of vernal pool hydrology.
- PS Herb 3. Non-native invasive plant species cover does not exceed 10% cover in years 2, 3, 4, and 5.
- PS Herb 4. For years 3-5, the herbaceous habitat class will contain a minimum of 6 native species, or groupings of native species, each with at least 5% cover averaged across plots. To qualify as one of the species or groupings to be counted, the species or group will occur in at least 10% of the herbaceous plots and have at least 1% average cover across all herbaceous plots.
- PS Herb 5. Woody cover is $\leq 5\%$ throughout the herbaceous habitat class.

Upland Buffer Habitat Class

- PS Upl 1. Absolute native plant cover is $\geq 40\%$ by year 2, $\geq 50\%$ by year 3, $\geq 60\%$ by year 4 and 5.
- PS Upl 2. Bare ground is $\leq 40\%$ by year 2, $\leq 30\%$ by year 3, and $\leq 20\%$ for the remainder of the monitoring period.
- PS Upl 3. Non-native invasive plant species cover does not exceed 10% cover in years 2, 3, 4, and 5.

Scrub-Shrub Habitat Class

- PS Pss 1. Herbaceous absolute native vascular plant cover is $\geq 40\%$ by year 2, $\geq 50\%$ by year 3, and $\geq 60\%$ by year 4.
- PS Pss 2. Native woody plant/stem counts $\geq 1,200/\text{ac}$ by year 2, $\geq 1,300/\text{ac}$ with measurable cover by year 3 with cover values increasing at least 5% over previous year in years 4-6.
- PS Pss 3. Bare ground is $\leq 40\%$ by year 2, $\leq 30\%$ by year 3 and $\leq 20\%$ by year 4.
- PS Pss 4. For years 3-5, the scrub-shrub habitat class will contain a minimum of 6 native species, or groupings of native species, each with at least 5% cover averaged across plots. To qualify as one of the species or groupings to be counted, the species or group will occur in at least 10% of the scrub-shrub plots and have at least 1% average cover across all scrub-shrub plots.
- PS Pss 5. Native absolute cover (all strata) $\geq 70\%$ by year 5.
- PS Pss 6. Non-native invasive plant species cover does not exceed 10% cover in years 2, 3, 4, and 5.

Mixed Forested Riparian Buffer Habitat Class

- PS Rip 1. Native shrubs and herbaceous species will increase cover at least 5% per year after year 3 until native shrub and herbaceous absolute cover reaches 60%.
- PS Rip 2. Bare ground is $\leq 30\%$ by year 3, and $\leq 20\%$ for the remainder of the monitoring period, excluding inundation zone within sloughs and areas with 100% canopy closure.
- PS Rip 3. For years 3-5, the mixed forested riparian buffer habitat class will contain a minimum of 6 native species, or groupings of native species, each with at least 5% cover averaged across plots. To qualify as one of the species or groupings to be counted, the species or group will occur in at least 10% of the mixed forested riparian buffer plots and have at least 1% average cover across all mixed forested riparian plots.
- PS Rip 4. Non-native invasive plant species cover does not exceed 10% cover in years 2, 3, 4, and 5.

Table 4: Vegetation Performance Standards

Year	Habitat Class	Vegetation Performance Standard	Monitoring Method
2	Herbaceous	PS Herb 1, PS Herb 2, PS Herb 3 and PS Herb 5	stratified systematic plot
3	Herbaceous	PS Herb 1, PS Herb 2, PS Herb 3, PS Herb 4 and PS Herb 5	stratified systematic plot
3	Herbaceous	PS Herb 1, PS Herb 2, PS Herb 3, PS Herb 4 and PS Herb 5	stratified systematic plot
4	Herbaceous	PS Herb 1, PS Herb 2, PS Herb 3, PS Herb 4 and PS Herb 5	stratified systematic plot
5	Herbaceous	PS Herb 1, PS Herb 2, PS Herb 3, PS Herb 4 and PS Herb 5	stratified systematic plot
2	Upland buffer	PS Upl 1, PS Upl 2 and PS Upl 3	stratified systematic plot
3	Upland buffer	PS Upl 1, PS Upl 2 and PS Upl 3	stratified systematic plot
4	Upland buffer	PS Upl 1, PS Upl 2 and PS Upl 3	stratified systematic plot
5	Upland buffer	PS Upl 1, PS Upl 2 and PS Upl 3	stratified systematic plot
2	Scrub-Shrub	PS Pss 1, PS Pss 2, PS Pss 3, PS Pss 4 and PS Pss 6	stratified systematic plot
3	Scrub-Shrub	PS Pss 1, PS Pss 2, PS Pss 3, PS Pss 4 and PS Pss 6	stratified systematic plot
4	Scrub-Shrub	PS Pss 1, PS Pss 2, PS Pss 3, PS Pss 4 and PS Pss 6	stratified systematic plot
5	Scrub-Shrub	PS Pss 1, PS Pss 2, PS Pss 3, PS Pss 4, PS Pss 5 and PS Pss 6	stratified systematic plot
2	Mixed forested riparian buffer	PS Rip 4	Belt transects
3	Mixed forested	PS Rip 1, PS Rip 2, PS Rip 3 and PS Rip 4	Belt transects

	riparian buffer		
4	Mixed forested riparian buffer	PS Rip 1, PS Rip 2, PS Rip 3 and PS Rip 4	Belt transects
5	Mixed forested riparian buffer	PS Rip 1, PS Rip 2, PS Rip 3 and PS Rip 4	Belt transects

5.2 METHODOLOGY

Monitoring will be conducted using a stratified systematic plot method for the sampling points. Six Transect lines are oriented north/south and are located 280 feet apart with monitoring plots 300 feet apart. Transect T1 is inset 30 feet from the West property line to adequately represent the PSS area, with subsequent transects located 280 feet apart. The first plot at the south end of the T1 is located 50 feet north of the southern property boundary, while the first plot on T2 is 100 feet north of property line, alternating in subsequent transects. Each subsequent plot is located 300 feet apart, until the upland buffer area on T1 and T2. In order to gain additional plots in the buffer area to meet DSL's minimum sample size per habitat class, buffer distance between plots is 100 feet in upland. Plot numbering starts at the southwest corner on T1 and runs north to end of T1 and then south on T2, anticipating likely monitoring pattern, and advantage of entering data in successive order.

In the mixed forested riparian habitat class, belt transects were utilized to document vegetation. Three large trees were selected as representative areas of the entire unit as the starting point for each transect. The transects will be 3 feet wide and 150 ft long, with aspect oriented to pick up multiple habitats. Initial sampling will occur every 45 ft along transects with the ability to increase sampling if additional plots are needed.

The herbaceous sample plots in wetland and upland buffer will be 9 ft² quadrats (3'x 3'), placed to the northwest of each point, nested within a 100 ft² shrub sampling plot (10'x10') centered on the same point. The absolute cover for each plot will be determined for each herbaceous species. If a plot includes bare substrate, the reason will be noted, and the percent coverage of each plot included. Plant counts, in conjunction with herbaceous sampling, will be utilized in the scrub-shrub habitat class for the first 3 monitoring periods until the shrub component naturally expands, at which time absolute cover of each strata will be utilized. In addition to herbaceous sampling in the herbaceous habitat class, absolute cover of the shrub strata within the 100 ft² shrub sampling plot will be assessed to ensure no greater than 5% cover for the duration of the monitoring period. For the belt transects, plots will be 9 ft² quadrats (3'x 3') centered on the belt line. Plant counts, in conjunction with herbaceous sampling will be utilized for the first monitoring period after shrub planting, then absolute cover of each strata will be utilized.

Spread sheets were utilized to group data for each habitat class for comparative analysis. The sample plot data will then be assessed according to the performance standards for diversity, percent cover of each species present, native/non-native, and invasive status, bare substrate, and mean cover of each. The sample mean, standard error and 80% confidence interval will be reported for each performance standard to ensure the estimate reported is within ± 10 units of the true population. Confidence interval will only apply to the herbaceous strata in shrub-scrub habitat class until woody plant counts are replaced with absolute cover. For the upland buffer and mixed forested riparian buffer, the sampling will focus on representative areas rather than confidence interval and will be verified by the annual agency walk-through inspections.

During the first year monitoring, all plots were evaluated in early May. Data was collected on all plots with substantial cover, while plots which had little or no cover due to extended hydroperiod were skipped until a second monitoring visit. The dates will be closely replicated throughout subsequent monitoring years until all performance standards are met, but not less than five years. After the site has matured with sample plot data repetitive and all performance standards met, a reduced monitoring effort will be implemented. DSL has to verify standards are being met as long as credits are available; if annual walk-through raises concerns that areas are not meeting standards, continued monitoring of those areas may be required.

5.3 VEGETATION MONITORING RESULTS

Vegetation monitoring was conducted by Ray Fiori on May 21, 2024, and July 26, 2024. Monitoring was timed to correspond with similar stages of plant development from previous years. During first year monitoring, all plots were visited during the first monitoring, with data collection delayed for plots with little cover or inundated until vegetation was established at a second monitoring date. This pattern will be replicated throughout the monitoring period. The split monitoring picks up the early flowering species before they senesce as well as later flowering species that are just beginning to grow in late spring and flowering into the fall. All species on data sheets were either planted on the site or observed during maintenance activities, with remarkably high species diversity. Within the monitoring plots, 56 native species were recorded in the herbaceous plots, 26 species in Scrub Shrub, 27 species in upland buffer and 31 species in the mixed forested riparian area.

2022 was the first year that US Fish and Wildlife service (USFWS) conducted formal species surveys for threatened and endangered species on the site. Two rounds of site visits were conducted to catch peak bloom periods of their target species this year. Surveys were conducted along transects with population estimates included in Table 5. The site will be monitored for the next 10 years as outlined in the downlisting monitoring plan for several species. Within the plan, monitoring will alternate sites each year for the various species, with USFWS and Oregon department of agriculture splitting responsibilities. This table will be updated as additional data is provided by cooperating agencies with 2025 being the next monitoring year.

Table 5: USFWS Population Estimates for T&E Species

Species	Dates	Population Estimate	95% Confidence	Number of Transects	Transect dimensions
Bradshaw's lomatium	4/18/2022, 5/6/2022	5,013	35.5% (3,235-6,792)	33	1 x 470 m
Nelson's checker-mallow	6/15/2022, 6/16/2022	21,021	31% (14,498-27,544)	18	1 x 470 m
Willamette daisy	6/15/2022, 6/16/2022	10	NA – patches mapped	NA	NA
Penstemon	6/15/2022, 6/16/2022	3	NA – patch mapped	NA	NA

5.3.1 Herbaceous Habitat Class

The native herbaceous cover averaged 134.08%, with 56 species occurring within plots. There was 0.61% cover by non-native species and 0.31% non-native invasive species. Overall average bareground was 1.63% and only 0.77% excluding vernal pools. The species diversity standard was met with 24 native species represented in more than 10% of the plots with over 1% cover throughout all plots, and within those plots average cover exceeded 5%.

Five of five of the performance criteria for **Herbaceous Habitat Class** vegetation were met.

Required: PS Herb 1. Absolute native vascular plant cover is $\geq 40\%$ by year 2, $\geq 50\%$ by year 3, $\geq 60\%$ by year 4 and $\geq 75\%$ by year 5. -- **Met**, with 134.08% of the absolute cover is native species.

Required: PS Herb 2. Bare ground is $\leq 40\%$ by year 2, $\leq 30\%$ by year 3, and $\leq 20\%$ for the remainder of the monitoring period, excluding vernal pools (NOTE: standard error is too high if we exclude VP plots from calculation, so both means are reported). --**Met**, overall average bareground was 1.63% and only 0.77% excluding vernal pools.

Required: PS Herb 3. Non-native invasive plant species cover does not exceed 10% cover in years 2, 3, 4, and 5. --**Met**, non-native invasive cover was 0.31%.

Required: PS Herb 4. For years 3-5, the herbaceous habitat class will contain a minimum of 6 native species, or groupings of native species, each with at least 5% cover averaged across plots and present in 10% of plots with greater than 1% cover across all plots --**Met**, 24 native species met criteria with 56 native species present in monitoring plots.

Required: PS Herb 5. Woody cover is $\leq 5\%$ throughout the herbaceous habitat class. -- **Met**, woody cover was 0.1%.

5.3.2 Upland Buffer Habitat Class

The native herbaceous cover averaged 138.89%, with 27 species occurring within plots. There was no cover by non-native invasive species, 3.33% cover of non-native species. Bareground represented 0% cover.

All performance criteria for **Upland Buffer Habitat Class** were met.

Required: PS Upl 1. Absolute native plant cover is $\geq 40\%$ by year 2, $\geq 50\%$ by year 3, $\geq 60\%$ by year 4 and 5. **Met**, Absolute native cover was 138.89%.

Required: PS Upl 2. Bare ground is $\leq 40\%$ by year 2, $\leq 30\%$ by year 3, and $\leq 20\%$ for the remainder of the monitoring period. **Met**, Bare ground was 0%

Required: PS Upl 3. Non-native invasive plant species cover does not exceed 10% cover in years 2, 3, 4, and 5. **Met**, non-native invasive cover was 0%.

5.3.3 Scrub-Shrub Habitat Class

The native herbaceous cover averaged 100.83%, with 17 species occurring within plots. Native woody cover averaged 60.83% with 9 species occurring within plots. There is 0% cover by non-native invasive species. Bareground represented 6.67% cover. The species diversity standard was met with 18 species represented in more than 10% of the plots with over 1% cover throughout all plots, and within those plots average cover exceeded 5%.

Five of six performance criteria for Scrub-Shrub Habitat Class were met

Required: PS Pss 1. Herbaceous absolute native vascular plant cover is $\geq 40\%$ by year 2, $\geq 50\%$ by year 3, and $\geq 60\%$ by year 4. **Met**, *absolute native cover is 100.83%*

Required: PS Pss 2. Native woody plant/stem counts $\geq 1,200/\text{ac}$ by year 2, $\geq 1,300/\text{ac}$ with measurable cover by year 3 with cover values increasing at least 5% over previous year in years 4-6. **Met**, *average native woody cover 2023=51.75%, 2024=60.83%.*

Required: PS Pss 3. Bare ground is $\leq 40\%$ by year 2, $\leq 30\%$ by year 3 and $\leq 20\%$ by year 4. **Met**, *bare ground was 6.67%.*

Required: PS Pss 4. For years 3-5, the scrub-shrub habitat class will contain a minimum of 6 native species, or groupings of native species, each with at least 5% cover averaged across plots and present in 10% of plots with greater than 1% cover across all plots. **Met**, *18 native species met criteria with 26 native species present in monitoring plots.*

Required: PS Pss 5. Native absolute cover (all strata) $\geq 70\%$ by year 5. **Met**, *year 5= 161.66%.*

Required: PS Pss 6. Non-native invasive plant species cover does not exceed 10% cover in years 2, 3, 4, and 5. **Met**, *non-native invasive plant cover was 0%.*

5.3.4 Mixed Forested Riparian Buffer Habitat Class

The native cover averaged 169.17%, with 31 species occurring within plots. There was only 4.58% cover by non-native species, and no invasive species. Bareground represented 2.22% cover excluding areas with canopy closure or within inundation zones and 16.25% cover overall. The species diversity standard was met with 18 species represented in more than 10% of the plots with over 1% cover throughout all plots, and within those plots average cover exceeded 5%. Belt transect #4 was added in 2022 to be representative of riverine wetland areas, sharing the same starting point as belt #2 and oriented westerly.

Five of five of the performance criteria for **Mixed Forested Riparian Buffer Habitat Class** vegetation were met.

Required: PS Rip 1. Native shrubs and herbaceous species will increase cover at least 5% per year after year 3 until native shrub and herbaceous absolute cover reaches 60%. **Met**, *native absolute cover was 169.17%.*

Required: PS Rip 2. Bare ground is $\leq 30\%$ by year 3, and $\leq 20\%$ for the remainder of the monitoring period, excluding inundation zone within sloughs and areas with 100% canopy

closure **Met**, bareground was 2.22% cover excluding areas with canopy closure or within inundation zones.

Required: PS Rip 3. For years 3-5, the mixed forested riparian buffer habitat class will contain a minimum of 6 native species, or groupings of native species, each with at least 5% cover averaged across plots and present in 10% of plots with greater than 1% cover across all plots. **Met**, 18 native species met criteria with 31 native species present in monitoring plots..

Required: PS Rip 4. Non-native invasive plant species cover does not exceed 10% cover in years 2, 3, 4, and 5. **Met**, non-native invasive cover was 0%.

6.0 SUSTAINABILITY PERFORMANCE STANDARDS, METHODOLOGY AND RESULTS

6.1. PERFORMANCE STANDARDS

In addition to the description below, sustainability performance standards are summarized by year in Table 6.

- PS Sus 1. By the end of the 3rd growing season year, submit an updated long term management plan and endowment budget to DSL, Corps, and preferred steward, addressing section V. Maintenance and Monitoring of the Bank section F of MBI for approval.
- PS Sus 2. By the end of 4th growing season, submit evidence that 60% of estimated endowment has been deposited in an escrow account or transferred to a steward approved by DSL & Corps. This standard may be delayed, coinciding with credit releases if sales are below average.
- PS Sus 3. By end of the 5th growing season, submit evidence that 80% of estimated endowment has been deposited in an escrow account or transferred to a steward approved by DSL & Corps. This standard may be delayed, coinciding with credit releases if sales are below average.
- PS Sus 4. For the final credit release, submit the final site protection instrument after review & resolution of drafts by steward & agencies and submit evidence that 100% of the endowment amount approved by agencies has been transferred to the steward approved by DSL & Corps.

Table 6: Sustainability Performance Standards

Year	Sustainability Performance Standard	Monitoring Method
3 or sooner	PS Sus 1	Document verification
4	PS Sus 2	Document verification
5	PS Sus 3	Document verification
6	PS Sus 4	Document verification

6.2 METHODOLOGY

Sustainability standards are intended to ensure that the site protection, long term management plan and endowment are adequate and secured. Benchmarks in this standard are intended to provide a timeline for reviews of management plan, targets for endowment funding associated with credit release schedule, and ensure long term site protection.

6.3 SUSTAINABILITY MONITORING RESULTS

The Wetlands Conservancy and Oregon Wetlands LLC will continue our stewardship partnership and have no proposed changes to the long term management plan or endowment funding. Any final updates to these documents will be completed while finalizing the site protection instrument for the final credit release. An initial contribution to endowment account of \$50,000 was completed in December 2021. An additional \$60,000 was contributed in September 2022, funding 75% of the proposed endowment. An additional \$35,000.00 was

contributed in December 2023, funding 100% of the proposed endowment. A final contribution will be completed this fall in conjunction with final approval of long-term stewardship package..

7.0 PHOTO POINT MONITORING

Photos from the photo points are included as Attachment 4 and a map of photo point locations is located in Attachment 3. Photos were taken on 05/21/2024.

8.0 CREDIT/FINACIAL ASSURANCE RELEASE AND CREDIT SALES SUMMARY

CREDIT SUMMARY

An initial 21.423 credits (30%) were released in May 2020, due to meeting all the requirements for Release #1 and Release #2. Release #3 (2.524 credits) was authorized March 2021 due to meeting all requirements. Release #4 (2.524 credits) was completed 12/13/22. Release #5 (9.521 credits) was completed 1/25/23. Release #6 (6.997 credits) was completed 6/6/23. Release #7 (6.998 credits) was completed 10/09/23. With submittal of this report we are requesting Release #8 (7.141 credits) as we are meeting all applicable performance standards. Credit release schedule is included in Table 7 and all credit sales to date are included in Table 9.

FINANCIAL ASSURANCE SUMMARY

Initial financial assurance was secured from Farm Credit Services in December 2019 for \$209,943.00 and amended to meet Corps requirements for notification in April 2020. The first reduction of \$66,916.00 was completed in March 2021, for a total amount carried forward of \$142,926.00. The second reduction of \$42,826.00, for a total amount carried forward of \$100,100.00 was completed in December 2021. The third reduction of \$34,100.00, for a total amount carried forward of \$66,000.00 was completed November 2022. The fourth reduction of \$22,000.00 was completed October 2023, for a total amount carried forward of \$44,000.00. With submission of this report we are requesting a fifth reduction of \$17,600.00, for a total amount carried forward of \$26,400.00. A summary of the financial assurance release schedule is included in Table 8.

Table 7: Credit Release Schedule

% of Enhancement & buffer credits released (cumulative)	Number of Enhancement credits (cumulative)	% of Restoration & Creation credits released (cumulative)	Number of Restoration & Creation credits (cumulative)	Total Credit Release (cumulative)	Performance Standards to be met	Year
25%	6.309	25%	11.543	17.852	Approval of MBI, recording of deed restriction, subordination of any liens on title, and posting of financial assurance.	2019
5% (30%)	1.262 (7.571)	5% (30%)	2.309 (13.852)	3.571 (21.423)	Initial seeding/planting, as-built report	2019 or 2020
Up to 10% (40%)	2.524 (10.095)			2.524 (23.947)	1st growing season performance standards,	2020
Up to 10% (50%)	2.524			2.524	2 nd growing season	2021

	(12.619)			(26.471)	performance standards	
Up to 10% (60%)	2.524 (15.143)			2.524 (28.995)	3 rd growing season performance standards, draft LTMP & steward acceptance submitted	2022
Up to 10% (70%)	2.524 (17.666)	Up to 40% (70%)	18.468 (32.320)	20.992 (49.987)	4 th growing season performance standards, post-construction delineation concurred*, 60% of endowment funded	2023
Up to 10% (80%)	2.524 (20.190)	10% (80%)	4.617 (36.937)	7.141 (57.128)	5 th growing season performance standards, 80% of endowment funded	2024
Up to 20% (100%)	5.048 (25.237)	20% (100%)	9.234 (46.171)	14.282 (71.408)	** DSL approval of any additional site protection; Co-chair Agencies approve updates to the LTMP & stewardship docs; 100% of endowment funded.	2025

* Credits >30% for wetland creation and restoration areas will be released after a delineation proves that wetland criteria have been achieved. If wetland acreage gains are apparent earlier, Co-chairs may make a partial release earlier.

**The release associated with approval of the long-term stewardship package may occur as soon as performance standards have been met for 3 years and the % of the endowment funded is equal to the % of credits released. Thereafter, each incremental credit release must have an equivalent % of the endowment funded. If the funding is via an endowment, it will be fully funded two years before handoff to the long-term steward, or an additional two years annual costs provided so the steward need not diminish the principal before it can grow.

Table 8: Financial Assurance Release Schedule

Assurance Amount	Release Benchmark	Est. Date of Release	Amount Released	Total Remaining
All Credit Sales	As-Built Report	December 2019	TBD	\$209,843.00
\$209,843.00	1st Monitoring Report	December 2020	\$66,916.00	\$142,926.00
\$142,926.00	2nd Monitoring Report	December 2021	\$42,826.00	\$100,100.00
\$100,100.00	3rd Monitoring Report/Delineation "lite"	December 2022	\$34,100.00	\$66,000.00
\$66,000.00	4th Monitoring Report	December 2023	\$22,000.00	\$44,000.00
\$44,000.00	5th Monitoring Report	December 2024	\$17,600.00	\$26,400.00
\$26,400.00	6th Monitoring Report	December 2025	\$15,400.00	\$11,000.00
\$11,000.00	Bank Closure	2030	\$11,000.00	

Table 9: Credit Sales Summary

<i>DATE</i>	<i>NAME</i>	<i>LOCATION</i>	<i>DSL</i>	<i>CORP</i>	<i>ADDED</i>	<i>HGM/COWARDIAN</i>	<i>SOLD</i>	<i>REFUNDED</i>	<i>SUSPENDED</i>	<i>BALANCE</i>
05/18/2020	CORPS/DSL INITIAL RELEASE- 30%		Permit Number		21.423					21.42
08/01/2019	Oregon Wetlands LLC	T12S, R05W, sect. 18	60770-RF	NWP-2017- 476		Flats/PEM	0.19			21.23
5/21/2020	Georgia- Pacific	Sect. 3, T 14 S, Range 4 W	62090-RF	NWP- 2014-238		Flats/PEM & PSS	2.57			18.663
11/30/2020	Alliance Storage	Sect. 24, T 11 S, Range 5 W	62799-RF	N.A.		Flats/PEM, PFO & PSS	0.37			18.293
03/02/21	CORPS/DSL RELEASE 2 - 10%				2.524					20.817
1/13/21	New Holland	Sect. 11, T 12 S, Range 5 W, 2625 SE 3rd Street, Corvallis, OR	62220-RF	NWP- 2019-406		Flats/PEM & PSS	2.69			18.127
3/3/21	West 18th Avenue Eugene	Sect. 04, T 18 S, Range 04 W, Eugene, OR	62462 -RF	NWP- 2020-058		Flats/PEM	0.69			17.437
5/5/21	Linn Economic Development	Millersburg	62699-RF	NWP- 2020- 085-1		Depressional/PEM& PSS	5.266			12.171
5/27/21	Wilco Eugene	West 11th Avenue & Willow Creek Road, Eugene, OR	63008-RF	NWP- 2020-473		Flats/PEM & PSS	0.75			11.421
6/21/21	Forest Meadows MHC 62 Home Expansion	1284 N 19th Street, Philomath, OR	62322-RF	2018- 545-1		Flats, Depressional/PEM, PSS & PFO	1.78			9.641
8/25/21	ODOT OR569: Green Hill Rd. - Coburg Rd. (Eugene) Sec.	T 17S, Range 04W, Sections 15 and 32	63437-GP	NWP- 2021-188		Flats, Depressional/PEM & PSS	0.056			9.585

Table 9: Credit Sales Summary

9/23/21	Knighton Seed Warehouse	T 12S, Range 03W, Section 7, Tangent, OR	63266-RF	NWP-2020-330 (non-jurisdictional)		Flats/PEM & PFO	0.46			9.125
12/13/22	CORPS/DSL RELEASE 3 - 10%				2.524					11.649
3/8/22	US 20 Philomath Couplet	T 12S, Range 06W, Section 12, Philomath, OR	63595-GP	NWP 43		Flats/PEM & PSS	0.18			11.469
6/30/22	Copart - Eugene - Storage Lot Expansion	T 17S, Range 04W, Section 04, Eugene, OR	63198-RF	NWP-2021-156		Depressional/PEM	3.61			7.859
9/23/22	Upper Division and Graduate Student Housing	T 11S, Range 05W, Section 35CC, Corvallis, OR	63921-RF	NWP-2018-00088		Flats/PEM	1.12			6.739
9/20/22	TGC Structural - Albany	T 11S, Range 03W, Section 30, Albany, OR	63943-GP	NWP-2022-342		Flats/PEM	0.13			6.609
9/30/22	Wake Robin	T 12S, Range 05W, Section 11, Corvallis, OR	63134-RF	N.A.		Flats/PEM	2.19			4.419
1/25/23	CORPS/DSL RELEASE 4- 10% enhancement and 1/3 of 40% Restoration/Creation, 10% enhancement, endowment funding and delineation light				9.521					13.94
6/6/23	CORPS/DSL RELEASE 5- 1/3 of 40%				6.997					20.937

Table 9: Credit Sales Summary

	Restoration/ Creation, 10% enhancement, endowment funding and delineation light									
6/12/23	Chapel Drive Road Widening Project	Chapel Drive (19th to Bellfountain), Philomath, OR	64269-RF	NWP- 2023-124		Flats, Depressional/PEM, PSS & PFO	0.34			20.597
10/23/23	CORPS/DSL RELEASE 6 - 1/3 of 40% Restoration/C reation, 10% enhancement, endowment funding, delineation light CREDITS				6.998					27.595
12/4/23	Applegate Landing No. 4 and 5	T18S, R06W, Section 01, Veneta, OR	63317-RF	NWP- 2021-257		Depressional/PEM	1.4			26.195
4/4/24	Benton County Boardwalk	3600 NE Lancaster Street Corvallis, OR 97330	64663-RF	N.A.		Flats, PEM/PSS	0.15			26.045
						TOTAL	23.942			

Attachment 1: Sample Plot Monitoring Data

Marys River Wetland Mitigation Bank																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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Botanical Name	Common Name	Origin	Avg. % Cover	Present		20*	21*	22	23	24	25*	26*	27*	28	29*	30*	31*	32	33*	34*	35	36*	37*	38*	39*	40	41	42	43	46	47	48	49*	50*	51	52	53	54*	55*	56	57	58	59*	60*	61	62*	63	64*	65*	66*	67*	68*	69	70																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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Attachment 1: Sample Plot Monitoring Data

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Attachment 1: Sample Plot Monitoring Data

Marys River Wetland Mitigation Bank																
Scrub-Shrub Habitat Class Plot Data																
May 21, 2024																
Species Observed		100ft ² Plot	Avg. % Cover	Present in	Plots #'s											
Botanical Name	Common Name	Origin	ea. Species	10% of Plots	1	2	3*	4	5	6*	7*	8*	9*	10*	11	12
<i>amelanchier alnifolia</i> var. <i>semiintegrifolia</i>	Service berry	native	0.83													10
<i>Cornus sericea</i>	Red osier dogwood	native	0.00													
<i>Malus (pyrus) fusca</i>	Pacific crabapple	native	4.17	Yes					10	15						25
<i>Physocarpus capitatus</i>	Pacific nine bark	native	0.83			10										
<i>Populus trichocarpa</i>	Black cottonwood	native	3.33										40			
<i>Rosa nutkana</i>	Nooka rose	native	6.67	Yes	35		5	15	5						10	10
<i>Salix hookeriana</i>	Hookers willow	native	16.67	Yes		20	50	30	20			30	40		10	
<i>Salix scouleriana</i>	Scoulers willow	native	6.25	Yes					10	10	20			35		
<i>Salix sitchensis</i>	Sitka willow	native	10.83	Yes						15	40			35	40	
<i>Spiraea douglasii</i>	Spirea	native	11.25	Yes	25	25	25	5	10	15		25				5
Total Cover			60.83													
Herbaceous Forb Species - Absolute cover		9ft ² Plot														
<i>Achillea millefolium</i>	Yarrow	native	0.00													
<i>Alisma triviale</i>	Northern water plantain	native	0.00													
<i>Camassia quamash</i>	Camas	native	0.00													
<i>Centaurea erythraea</i>	Centaury	non-native	0.00													
<i>Clarkia amoena</i>	Farewell-to-Spring	native	0.00													
<i>Downingia elegans</i>	Common downingia	native	0.00													
<i>Epilobium ciliatum</i>	Fringed willowweed	native	0.42						5							
<i>Epilobium densiflorum</i>	Dense spike-primrose	native	0.83							10						
<i>Eriophyllum lanatum</i>	Oregon sunshine	native	7.92	Yes		5	30								60	
<i>Galium trifidum</i> var. <i>pacificum</i>	Small bedstraw	native	0.42											5		
<i>Geranium dissectum</i>	Cutleaf geranium	non-native	0.42													5
<i>Geum macrophyllum</i>	Large leaf avens	native	3.75	Yes		5	40									
<i>Gnaphalium palusre</i>	Cudweed	native	0.00													
<i>Gratiola ebracteata</i>	Bractless hedgehyssop	native	0.00													
<i>Hypochaeris radicata</i>	Catsear dandelion	non-native	0.00													
<i>Lotus unifoliolatus</i>	Spanish clover	native	0.83			10										
<i>Lupinus bicolor</i>	two-colored lupine	native	0.00													
<i>Lupinus polyphyllus</i>	Bigleaf lupine	native	0.00													
<i>Lythrum hyssopifolium</i>	Hyssop loosestrife	non-native	0.00													
<i>Lythrum portula</i>	Spatulaleaf loosestrife	non-native	0.00													
<i>Kickxia elatine</i>	Sharp point fleveillin	non-native	0.00													
<i>Madia elegans</i>	Showy Tarweed	native	0.00													
<i>Madia glomerata</i>	Cluster tarweed	native	0.00													
<i>Mimulus guttatus</i>	Common monkey-flower	native	0.00													
<i>Navarretia intertexta</i>	Navarretia	native	0.00													
<i>Plagiobothrys figuratus</i>	Fragrant popcorn flower	native	0.00													
<i>Poenilla gracilis</i>	Northwest cinquefoil	native	2.92	Yes		10	10			15						
<i>Polygonum amphibium</i>	Water smartweed	native	0.00													
<i>Prunella vulgaris</i>	Common selfheal	native	20.00	Yes		15	5		75	70				40	15	20

Attachment 1: Sample Plot Monitoring Data

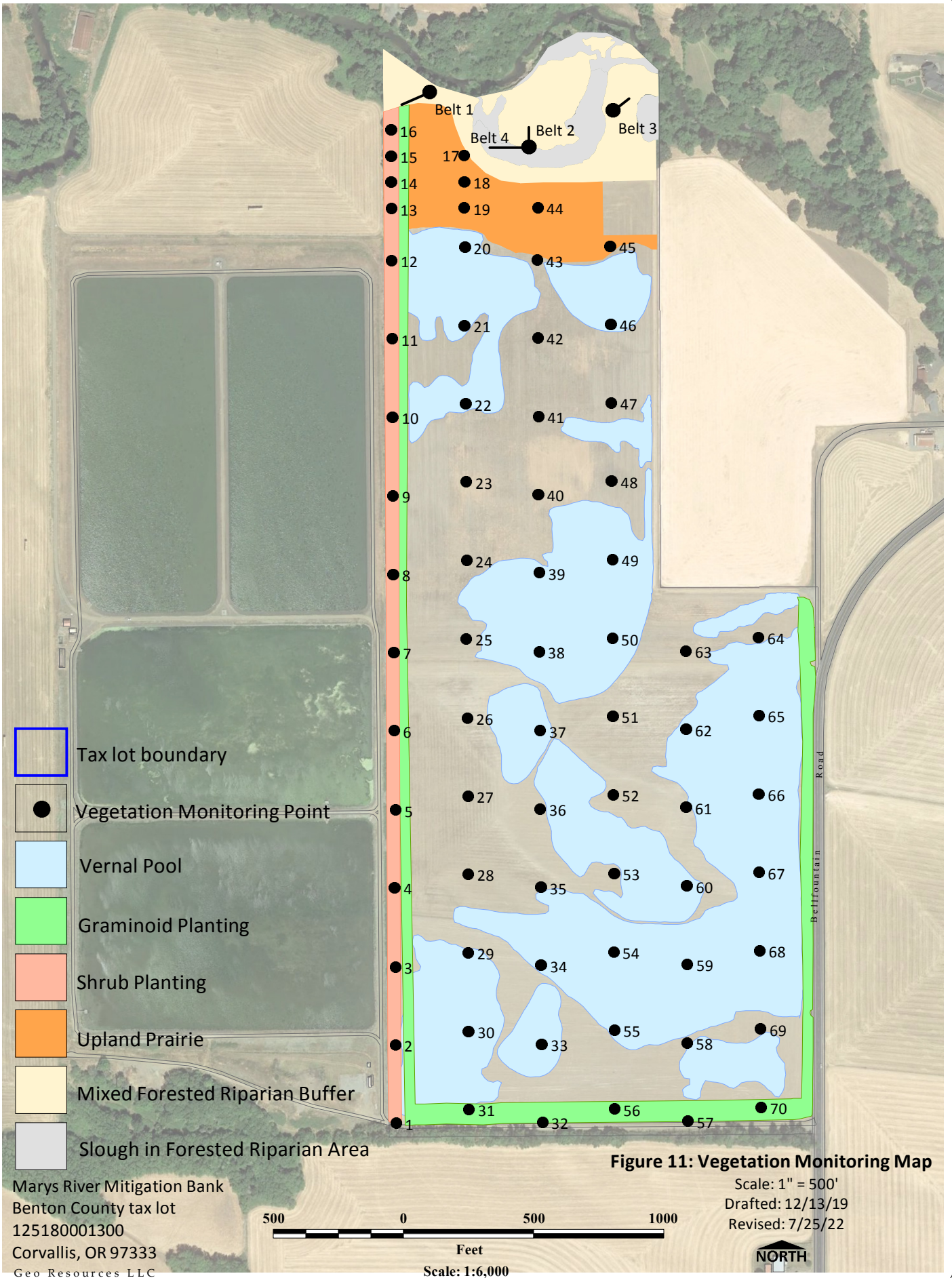
<i>Rorippa curvisiliqua</i>	Western yellowcress	native	0.00													
<i>Sidalcea campestris</i>	Meadow checkermallow	native	0.00													
<i>Veronica peregrina</i> var. <i>xalapensis</i>	Hairy purlane speedewell	native	0.00													
<i>Vicia hirsuta</i>	Tiny vetch	non-native	0.00													
Herbaceous Graminoid Species - Absolute cover		9ft ² Plot														
<i>Agrostis exarata</i>	Spike bentgrass	native	15.00	Yes	10	30	20		15	10	10			40	25	20
<i>Agrostis stolonifera</i>	Colonial bentgrass	non-native	0.00													
<i>Alopecurus aequalis</i>	Short-awned foxtail	native	5.83	Yes				60			10					
<i>Beckmania syzigachne</i>	American sloughgrass	native	4.17	Yes				10				10	30			
<i>Carex obnupta</i>	Slough sedge	native	0.00													
<i>Carex unilateralis</i>	One-sided sedge	native	2.50										30			
<i>Danthonia californica</i>	CA oatgrass	native	4.58	Yes				30		5	10	10				
<i>Deschampsia caespitosa</i>	Tufted hairgrass	native	19.58	Yes	45			30			60	70	30			
<i>Deschampsia danthonioides</i>	Annual hairgrass	native	0.00													
<i>Deschampsia elongata</i>	Slender hairgrass	native	4.17	Yes		20									10	20
<i>Eleocharis ovata</i>	Ovoid spike rush	native	0.00													
<i>Eleocharis palustris</i>	Creeping spike-rush	native	0.00													
<i>Glyceria occidentalis</i>	Western mannagrass	native	0.00													
<i>Hordeum brachyantherm</i>	Meadow barley	native	5.42	Yes	45											20
<i>Juncus bufonius</i>	Toad rush	native	0.00													
<i>Juncus tenuis</i>	Slender rush	native	2.50	Yes		15				15						
<i>Lolium multiflorum</i>	Annual rye grass	invasive	0.00													
<i>Panicum capillare</i>	Common witchgrass	native	0.00													
<i>Poa annua</i>	Annual bluegrass	non-native	0.00													
<i>Poa trivialis</i>	Rough-stalk bluegrass	non-native	2.08						10	5						10
<i>Vulpia myuros</i>	Rattail fescue	non-native	0.00													
Bare Substrate:	Mean =	6.67	Standard Error =	2.2	0	0	20	0	0	10	10	10	10	20	0	0
Lower CI (80%)				3.79												
Upper CI (80%)				9.55												
% Native herbaceous cover :	Mean =	100.83	Standard Error =	4.5	100	110	105	130	95	125	90	90	90	85	110	80
Lower CI (80%)				95.04												
Upper CI (80%)				106.62												
% Total non-native cover :	Mean =	2.50	Standard Error =	1.4	0	0	0	0	10	5	0	0	0	0	0	15
Lower CI (80%)				0.65												
Upper CI (80%)				4.35												
% non-native invasive cover:	Mean =	0.00	Standard Error =	0.0	0	0	0	0	0	0	0	0	0	0	0	0
Lower CI (80%)				0.00												
Upper CI (80%)				0.00												
Total # of native Species: 26																
Total Number of Sample Plots: 12																
*Bareground due to: Structure																

Attachment 1: Sample Plot Monitoring Data

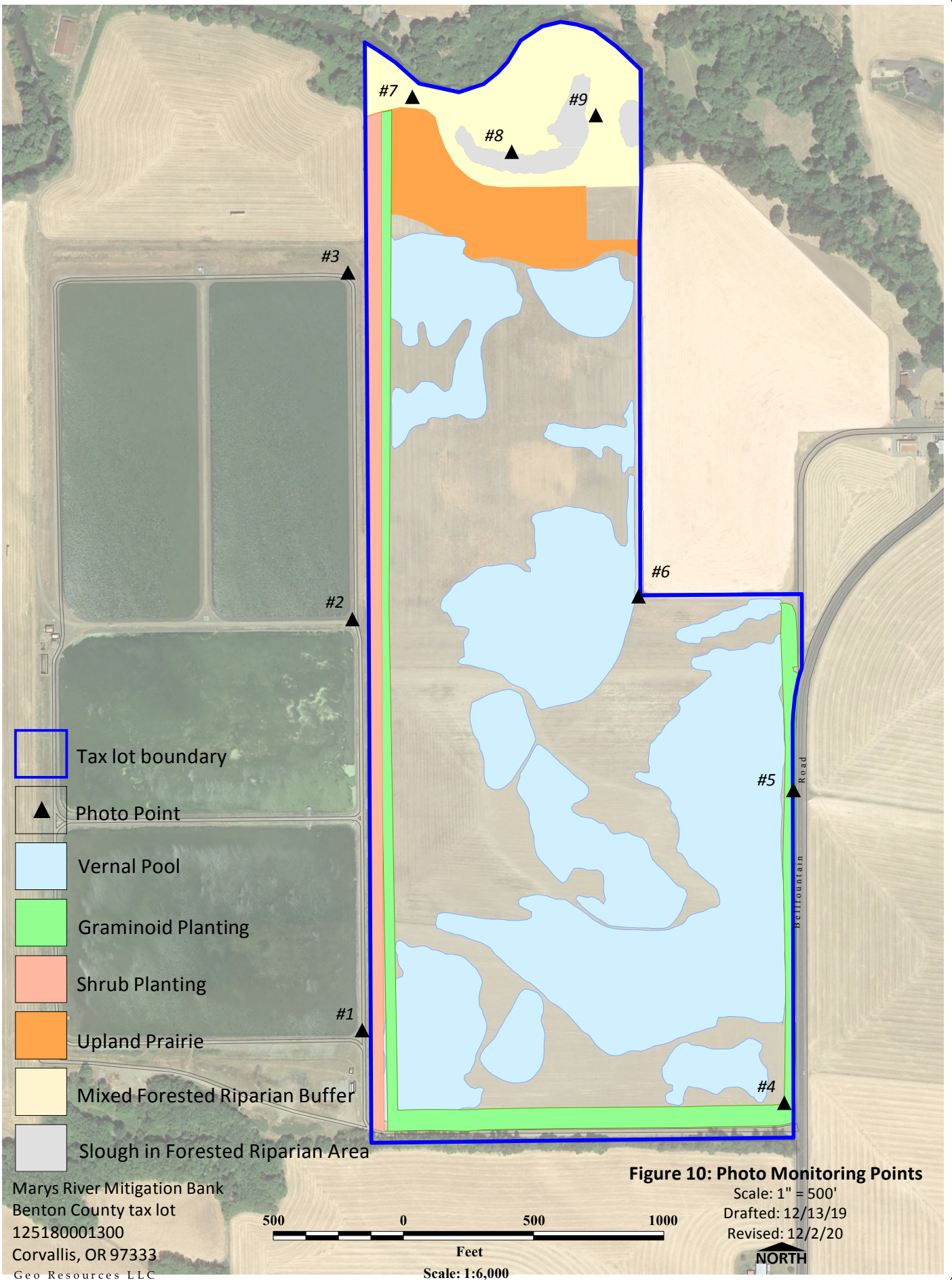
Marys River Wetland Mitigation Bank															
Mixed Forested-Riparian Habitat Class Plot Data															
May 21, 2024 and *July 26, 2024 (Belt 4)															
Species Observed		100 ft ² Plot	Avg. % Cover	Present in	Belt 1			Belt 2			Belt 3			*Belt 4	
Botanical Name	Common Name	Origin	ea. Species	10% of Plots	1	2	3	4	5*	6**	7	8	9**	10	11** 12*
<i>Acer macrophyllum</i>	Bigleaf maple	native	35.83	Yes	60	50	60		70	50	60	20	40	20	
<i>amelauchier alnifolia</i> var. <i>serotina</i>	Service berry	native	0.00												
<i>Baccharis pilularis</i>	Coyote bush	native	0.00												
<i>Cornus sericea</i>	Red osier dogwood	native	0.00												
<i>Fraxinus latifolia</i>	Oregon ash	native	26.67	Yes				50					10	70	100 90
<i>Mahonia aquifolium</i>	Oregon Grape	native	0.00												
<i>Malus (pyrus) fusca</i>	Pacific crabapple	native	0.00												
<i>Oemleria cerasiformis</i>	Indian plum	native	0.00												
<i>Physocarpus capitatus</i>	Pacific nine bark	native	0.00												
<i>Ribes sanguineum</i>	Red flowering currant	native	2.92	Yes	20	15									
<i>Rosa nutkana</i>	Cluster rose	native	1.67										20		
<i>Rubus discolor</i>	Himalayan blackberry	invasive	0.00												
<i>Rubus ursinus</i>	Trailing blackberry	native	0.00												
<i>Salix scouleriana</i>	Scoulers willow	native	0.00												
<i>Sambucus caerulea</i>	Blue elderberry	native	0.00												
<i>Spiraea douglasii</i>	Douglas spirea	native	0.00												
<i>Symphoricarpos albus</i>	Snow berry	native	7.92	Yes	20		20		15	40					
Total Cover			75.00												
Herbaceous Forb Species - Absolute cover		9ft ² Plot													
<i>Achillea millefolium</i>	Yarrow	native	1.25			15									
<i>Angelica geniflexa</i>	kneeling angelica	native	1.25					15							
<i>Amsinckia menziesii</i>	Common Fiddleneck	native	0.00												
<i>Aquilegia formosa</i>	Western Red Columbine	native	0.83							10					
<i>Bidens cernua</i>	Nodding beggarticks	native	5.83	Yes										50	20
<i>Camassia leichtlinii</i>	Great Camas (tall)	native	1.25	Yes		5	5	5							
<i>Cardamine nuttalli</i>	Nuttall's toothwort	native	1.25	Yes					5	10					
<i>Centaurium erythraea</i>	European centuary	non-native	0.00												
<i>Cerastium fontanum</i>	Mouse-ear chickweed	non-native	0.00												
<i>Clarkia amoena</i>	Farewell-to-Spring	native	0.00												
<i>Clarkia purpurea</i> ssp. <i>quadricolor</i>	Small-flowered Godeti	native	0.00												
<i>Collinsia grandiflora</i>	Large-flowered Blue-eyed Ma	native	4.17			50									
<i>Collomia grandiflora</i>	Large-flowered Collomia	native	0.00												
<i>Delphinium trollifolium</i>	Poison Larkspur	native	11.67	Yes					60	80					
<i>Epilobium angustifolium</i>	Fireweed	native	0.83							10					
<i>Epilobium ciliatum</i>	Fringed willowweed	native	2.50	Yes				10		20					
<i>Eriophyllum lanatum</i>	Oregon sunshine	native	0.83			10									
<i>Galium aparine</i>	Catchweed	native	6.25	Yes	5		10	10	10	10	20		10		
<i>Galium trifidum</i> var. <i>pacificum</i>	Small bedstraw	native	0.00												
<i>Geranium dissectum</i>	Cutleaf geranium	non-native	0.83									10			
<i>Geum macrophyllum</i>	Large-leaves Avens	native	0.00												
<i>Gilia capitata</i>	Bluefield gilia	native	0.00												
<i>Hydrophyllum occidentale</i>	Western waterleaf	native	7.50	Yes										30	60
<i>Lapsana communis</i>	Nipplewort	non-native	3.75			15		10	10					10	
<i>Ligusticum apifolium</i>	Celeryleaf-Licoriceroot	native	9.58	Yes	40	10	30	20					15		
<i>Lomatium nudicaule</i>	Bare-stem Lomatium	native	1.67										20		
<i>Lomatium triternatum</i>	Spring gold	native	0.00												
<i>Lotus purshianus</i>	Spanish clover	native	0.00												
<i>Lupinus albicaulis</i>	Sickle-keeled Lupine	native	0.00												
<i>Lupinus polyphyllus</i>	Large-leaf Lupine	native	0.00												
<i>Madia gracilis</i>	Grassy tarweed	native	0.00												
<i>Marah oregana</i>	Wild cucumber	native	0.00												
<i>osmorrhiza occidentalis</i>	western sweetroot	native	4.58	Yes	15			10				30			
<i>Perideridia oregana</i>	Oregon Yampah	native	0.00												
<i>Phacelia heterophylla</i>	Varileaf phacelia	native	0.00												
<i>Phacelia linearis</i>	threadlike phacelia	native	0.00												
<i>Plagiobothrys nothofolius</i>	Rusty Popcorn Flower	native	0.00												
<i>Potentilla glandulosa</i>	Sticky Cinquefoil	native	0.83					10							
<i>Potentilla gracilis</i>	Slender Cinquefoil	native	0.00												
<i>Prunella vulgaris</i> var. <i>lanceolata</i>	Common selfheal	native	4.17									50			
<i>Ranunculus occidentalis</i>	Western buttercup	native	0.00												
<i>Ranunculus orthorhyncus</i>	Straightbeak buttercup	native	0.00												
<i>Rumex occidentalis</i>	Western dock	native	1.67					20							
<i>Rumex salicifolius</i>	Willow Dock	native	0.00												
<i>Sidalcea malviflora</i> ssp. <i>virga</i>	Rose Checkermallow	native	2.92	Yes		5	10					20			
<i>Sidalcea nelsonii</i>	Nelson's checkermallow	native	10.00	Yes	10	15	30	30					35		
<i>Sisyrinchium idahoense</i>	Blue-eyed grass	native	0.83									10			
<i>Tellima grandiflora</i>	Fringe cup	native	1.67	Yes	10			10							
<i>Viola glabella</i>	stream violet	native	0.00												
<i>Viola praemorsa</i>	Prairie Violet	native	0.00												
Herbaceous Graminoid Species - Absolute cover		9ft ² Plot													
<i>Agrostis exarata</i>	Spike bentgrass	native	0.00												
<i>Bromus stichensis</i>	Alaska brome	native	0.83			10									
<i>Carex deweyana</i>	dewey sedge	native	0.00												
<i>Danthonia californica</i>	CA oatgrass	native	0.00												
<i>Deschampsia caespitosa</i>	Tufted hairgrass	native	0.00												
<i>Deschampsia elongata</i>	Slender hairgrass	native	0.00												
<i>Elymus glaucus</i>	Blue wildrye	native	4.17	Yes	10		40								
<i>Festuca idahoensis</i> ssp. <i>Roemer's</i>	Roemer's fescue	native	5.83	Yes	40	15	15								
<i>Juncus bufonius</i>	Toad rush	native	0.00												
<i>Lolium multiflorum</i>	Annual rye grass	invasive	0.00												
<i>Poa annua</i>	Annual bluegrass	non-native	0.00												
<i>Vulpia myuros</i>	Rattail fescue	non-native	0.00												
Bare Substrate overall:		Mean =	16.25		0	0	0	0	20	20	0	0	20	15	100 20
Bare Substrate(excluding canopy cover/inundation):		Mean =	2.22		0	0	0	0	0	0	0	0	0	0	0 20
% Native cover:		Mean =	169.17		230	200	220	190	160	150	160	130	150	170	100 170
% non-native cover :		Mean =	4.58		0	15	0	10	10	0	0	10	0	10	0 0
% non-native invasive cover:		Mean =	0.00		0	0	0	0	0	0	0	0	0	0	0 0
Total # of native Species: 31															
Total Number of Sample Plots: 12															
* Bareground due to: Organic Litter															
** Bareground due to: Canopy Cover															

Attachment 1: Sample Plot Monitoring Data

Marys River Wetland Mitigation Bank														
Upland Buffer Habitat Class Plot Data														
May 21, 2024														
Species Observed		100 ft ² Plot	Avg. % Cover	Plot #'s										
Botanical Name	Common Name	Origin	ea. Species	13	14	15*	16	17	18	19	44	45		
<i>amelanchier alnifolia</i> var. <i>serotina</i>	Service berry	native	2.50	10										
<i>Baccharis pilularis</i>	Coyote bush	native	7.50			30								
<i>Cornus sericea</i>	Red osier dogwood	native	0.00											
<i>Mahonia aquifolium</i>	Oregon Grape	native	3.75			15								
<i>Malus (pyrus) fusca</i>	Pacific crabapple	native	3.75				15							
<i>Oemleria cerasiformis</i>	Indian plum	native	0.00											
<i>Physocarpus capitatus</i>	Pacific nine bark	native	0.00											
<i>Ribes sanguineum</i>	Red flowering currant	native	2.50		10									
<i>Rosa nutkana</i>	Nooka rose	native	32.50	40	40	45	5							
<i>Sambucus caerulea</i>	Blue elderberry	native	0.00											
<i>Spiraea douglasii</i>	Douglas spirea	native	0.00											
<i>Symphoricarpos albus</i>	Snow berry	native	8.75				35							
Total Cover			61.25											
Herbaceous Forb Species - Absolute cover		9 ft² Plot												
<i>Achillea millefolium</i>	Yarrow	native	2.22									20		
<i>Amsinckia menziesii</i>	Common Fiddleneck	native	1.11						10					
<i>Aquilegia formosa</i>	Western Red Columbine	native	0.00											
<i>Camassia leichtlinii</i>	Great Camas (tall)	native	0.00											
<i>Centaurium erythraea</i>	European centuary	non-native	0.00											
<i>Cerastium fontanum</i>	Mouse-ear chickweed	non-native	0.00											
<i>Clarkia amoena</i>	Farewell-to-Spring	native	1.11						10					
<i>Clarkia purpurea</i> ssp. <i>quadricolor</i>	Small-flowered Godetia	native	0.00											
<i>Collinsia grandiflora</i>	Large-flowered Blue-eyed M	native	0.56						5					
<i>Collomia grandiflora</i>	Large-flowered Collomia	native	0.00											
<i>Eriophyllum lanatum</i>	Oregon sunshine	native	9.44	25			15					10	35	
<i>Galium trifidum</i> var. <i>pacificum</i>	Small bedstraw	native	1.11					10						
<i>Geranium dissectum</i>	Cutleaf geranium	non-native	1.11									10		
<i>Geum macrophyllum</i>	Large-leaves Avens	native	0.00											
<i>Gilia capitata</i>	Bluefield gilia	native	0.00											
<i>Gnaphalium palustre</i>	Cudweed	native	0.00											
<i>Kickxia elatine</i>	Sharp-point fluellin	non-native	1.11						10					
<i>Ligusticum apiifolium</i>	Celeryleaf-Licoriceroot	native	0.00											
<i>Lomatium nudicaule</i>	Bare-stem Lomatium	native	0.00											
<i>Lomatium triternatum</i>	Spring gold	native	0.56										5	
<i>Lotus purshianus</i>	Spanish clover	native	0.00											
<i>Lupinus albus</i>	Sickle-keeled Lupine	native	7.22					50		15				
<i>Lupinus bicolor</i>	Two-colored lupine	native	0.00											
<i>Lupinus polyphyllus</i>	Large-leaf Lupine	native	0.00											
<i>Madia gracilis</i>	Grassy tarweed	native	5.56					10			30		10	
<i>Madia sativa</i>	Coast tarweed	native	6.67									20	40	
<i>Microseris laciniata</i>	cutleaf silverpuffs	native	2.22					10					10	
<i>Plectritis congesta</i>	Rosy Plectritis	native	0.56										5	
<i>Phacelia heterophylla</i>	Varleaf phacelia	native	0.00											
<i>Plagiobothrys nothofulvus</i>	Rusty Popcorn Flower	native	0.00											
<i>Polygonum aviculare</i>	Common Knotweed	non-native	0.00											
<i>Potentilla glandulosa</i>	Sticky Cinquefoil	native	1.11						10					
<i>Potentilla gracilis</i>	Slender Cinquefoil	native	1.11				10							
<i>Prunella vulgaris</i> var. <i>lanceolata</i>	Common selfheal	native	6.67	30			30							
<i>Ranunculus occidentalis</i>	Western buttercup	native	12.78					10	30	15	50	10		
<i>Ranunculus orthorhyncus</i>	Straightbeak buttercup	native	0.00											
<i>Rumex salicifolius</i>	Willow Dock	native	0.00											
<i>Sanguisorba annua</i> (occiden	Western Burnet	native	0.00											
<i>Sidalcea malviflora</i> ssp. <i>virga</i>	Rose Checkermallow	native	8.33						15	40	10	10		
<i>Sisyrinchium idahoense</i>	Blue-eyed grass	native	0.00											
<i>Veronica peregrina</i> var. <i>xalap</i>	Hairy purslane speedewell	native	0.00											
<i>Vicia sativa</i>	Common vetch	non-native	1.11					10						
<i>Viola praemorsa</i>	Prairie Violet	native	0.00											
Herbaceous Graminoid Species - Absolute cover		9 ft² Plot												
<i>Agrostis exarata</i>	Spike bentgrass	native	3.33	20	10									
<i>Alopecurus aequalis</i>	Short-awned foxtail	native	0.00											
<i>Beckmania syzigachne</i>	American sloughgrass	native	0.00											
<i>Carex unilateralis</i>	One-sided sedge	native	0.00											
<i>Danthonia californica</i>	CA oatgrass	native	0.00											
<i>Deschampsia caespitosa</i>	Tufted hairgrass	native	0.00											
<i>Deschampsia danthonioides</i>	Annual hairgrass	native	0.00											
<i>Deschampsia elongata</i>	Slender hairgrass	native	12.22	20	40	30	20							
<i>Eleocharis ovata</i>	Ovoid spike rush	native	0.00											
<i>Eleocharis palustris</i>	Creeping spike-rush	native	0.00											
<i>Festuca idahoensis</i> ssp. <i>Roe</i>	Roemer's fescue	native	27.78	15	40		45	40	50	30		30		
<i>Glyceria occidentalis</i>	Western mannagrass	native	0.00											
<i>Hordeum brachyantherum</i>	Meadow barley	native	0.00											
<i>Juncus bufonius</i>	Toad rush	native	0.00											
<i>Juncus tenuis</i>	Slender rush	native	0.00											
<i>Lolium multiflorum</i>	Annual rye grass	invasive	0.00											
<i>Panicum capillare</i>	Common witchgrass	native	0.00											
<i>Poa annua</i>	Annual bluegrass	non-native	0.00											
<i>Vulpia myuros</i>	Rattail fescue	non-native	0.00											
Bare Substrate:		Mean =	0.00											
% Native cover:		Mean =	138.89	160	140	120	175	130	130	130	110	155		
% Total non-native cover :		Mean =	3.33	0	0	0	0	10	10	0	10	0		
% non-native invasive cover:		Mean =	0.00	0	0	0	0	0	0	0	0	0		
Total # of native Species: 27														
Total Number of Sample Plots: 9														
* Bareground due to structure:														



Attachment 3: Photo Monitoring Point Location Map



Marys River Mitigation Bank 2024 Monitoring Photos

Photo Point 1 Northeast



Photo Point 1 East



Photo Point 1 Southeast



Photo Point 2 Northeast



Photo Point 2 East



Photo Point 2 Southeast



Photo Point 3 Northeast



Photo Point 3 East



Photo Point 3 Southeast



Attachment 4: Monitoring Photos

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



Attachment 4: 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

