Mitigation Monitoring Annual Report Template

1. Mitigation Monitoring Report Cover Sheet

1:__ *Project Name* W&M Butler Farm Mitigation Bank___ Identifiers:

DSL Permit # 46986__ Corps Permit #_____ Permittee: Wes and Marybell Butler Farm LLC
County- Washington_____ Report Date 12/1/2014 Monitoring Year 1 2x 3 4 5 Date
Removal-Fill Activity Completed: 9/2012, 7/3013, 9/2014, ongoing.
Date mitigation was completed: Grading 9/2012, 7/3013, 9/2014, ongoing.
Planting 12/2012, 3/2013, 3/2014, ongoing
Date(s) of data collection: 6/18/2014-6/20/2014
Report prepared by: George Kral, Ash Creek Forest Management

2: Monitoring Report Purpose:

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

- ❑ Compensatory **freshwater, non-tidal** 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 had a monitoring requirement.
- ❑ **Voluntary** wetland enhancement, creation or restoration (General authorization or individual permit) not funded with money from DSL's wetland mitigation fund.
- ❑ Voluntary wetland enhancement, creation or restoration (General authorization or individual permit) funded with money from DSL's **wetland mitigation fund**.
- **X** **Mitigation Bank** Report
- ❑ Other _____

3: Results: *(add more rows if needed)*

	Performance standards (verbatim from permit)	Fully Met? (Y/N)	Comments/Reason for shortfall (mark NA if doesn't apply this year)
1.	Herbaceous wetlands- native species cover is > 60%	Y	
2.	Herbaceous wetlands- invasive species cover is no more than 10%	Y	
3.	Herbaceous wetlands- Bare substrate is no more than 20%	N	Occasional areas of open water and narrow leaved, but dense vegetation skewed open water upward. As vegetation becomes more established, this will change.
4.	Herbaceous wetlands- After year 3, at least 6 different native species	N	NA
5.	Herbaceous wetlands- prevalence index is <3.0	Y	
6.	Shrub/Forested wetlands- native species cover is >60%	Y	
7.	Shrub/Forested wetlands- cover of invasive herbaceous species <10%	N	3 plots held high cover of LOCO, which had recently been sprayed with herbicide. Once gone, this standard will easily be met.

8.	Shrub/forested wetlands- cover of invasive trees and shrub species is no more than 10%	y	
9.	Shrub/forested wetlands- Cover of bare substrate is no more than 20%	N	Vegetation still establishing, will easily meet this standard in following monitoring year.
10.	Shrub/Forested wetlands- By year 3, at least 6 different native species	Y	
11.	Shrub/Forested wetlands- prevalence index is <3	Y	
12.	Shrub/Forested wetlands- native shrub and tree stem density is at least 1600/acre	Y	
13.	Upland buffers- cover of native species is at least 60%	N	Cover of native herbaceous species in established forests is low due to natural shrub dominance in understory. Cover of native shrub and tree species in newly planted areas is low due to newly establishing plants. In long-term (20 years) shrub and tree cover will easily exceed 60%, but native herbaceous species cover will remain naturally low.
14.	Upland buffers- cover of invasive species is no more than 10%	Y	

4: Further Actions:

Remedial work recommended	Yes ☒	No ☐
Deed Restriction or other protection instrument attached	Yes ☐	No ☒
Final Monitoring Report?	Yes ☐	No ☒
Requesting release or partial release of financial security?	Yes ☒	No ☐

Remedial actions recommended include ongoing weed treatments targeting LOCO, PHAR, TRRE, and other non-native weeds, plus infill planting of bare root shrubs and trees in buffer shrub wetlands as necessary to ensure density targets.

Partiial release of financial security is requested as all of phase I construction and revegetation is now complete, all riparian forest plantings are complete, and site preparation and some construction and seeding have been implemented on phase II.

2. W&M Butler Mitigation Bank Mitigation Plan Purpose and Overview

A. Location.

The mitigation site is located at: Township 2S Range 2W, Tax Lot 2S2110000200, Latitude 45 degrees, 24’ 38.55” N (45.410708) and Longitude 122 degrees, 54’ 18.04” W (-122.905011). The bank is located at 22242 SW Scholls Ferry Road, near the city of Beaverton, Oregon.

B. Mitigation goals and objectives.

The primary goals of the W&M Butler Mitigation Bank are to create, enhance, and restore emergent, scrub, and forested wetlands and to protect surrounding buffer areas. The project involves weed control, broadening of the riparian fringe with dense plantings of riparian forest and scrub species. The project has converted existing agricultural fields to a complex of emergent wetland, wet prairie, wetland and upland scrub, and wetland and riparian forest. Wetland restoration, enhancement, and creation will generate wetland credits that will be used for compensatory mitigation for unavoidable impacts to waters of the Unites states or waters of

the states that result from activities authorized under Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, Oregon's Removal-Fill Law (ORS) 196.800-196.990 and OAR 141-085 or to resolve enforcement cases resulting from activities subject to these regulations. This mitigation project is intended to create the functions and values shown in Table 1. The project is broken into two phases. Table 1 shows the total expected results of both phases. Phase 1 is substantially complete, including all eathwork and structures, seeding and planting. Phase 2 work completed to date includes weed control, grading, and initial seeding.

Table 1.

Plant Community	TOTALS	Restoration	Enhancement	Creation	Buffers
PEM (emergent wetland and wet prairie) Acres	47.01	13.80	12.80	21.40	
PFO Acres	6.54	3.50	0.69	2.40	
PSS Acres	2.70	1.68	0.19	0.81	
Forested buffers	14.20			33.70	33.70
TOTAL ACRES	**90.97**	**18.98**	**13.68**	**24.61**	**33.70**
Credit Ratio		1:1	2:1	1.5:1	10:1
Credits Expected	**TOTAL**	**Restoration**	**Enhancement**	**Creation**	**Buffers**
	45.60	18.98	6.84	16.41	3.37

** Until the post-project delineation has been completed, fill in 'pending'.*

C. Maintenance and management actions.
In the past year, the following activities were conducted:
3/2014- Broadcast spray of southern portion of east field.
3/2014- Interplanting in buffer areas in west field as needed, plus planting and seeding of wetland forest areas in southern portion of east field.
4/2014- Broadleaf weed treatments throughout west field and planted portions of east field, plus circle spraying in newly planted areas of east field.
5/2014- Spraying and discing of unplanted portions of eastern field.
6/2014- Spraying of reed canary grass throughout project area.
6/2014- Broadleaf weed treatments throughout west field and existing riparian buffers.
7/2014- Flail mowing of non-forested and non-emergent portions of west field to encourage herbaceous species growth.
7/2014- Spraying and discing of unplanted portions of eastern field.
8/2014-9/2014- Partial construction of east field wetlands. Most of fill and removal completed, though central ditch filling will take place in 2015.
10/2014- Drilling of annual grass along eastern field constructed edges to reduce erosion.
10/2014- Spraying of reed canary grass throughout project areas.

D. Monitoring methods.
Vegetation and hydrology monitoring followed the routine methods specified in the DSL Removal-Fill Guidelines with the following exceptions:

1. Vegetation monitoring only took place in the western half of the project area due to the phased approach to the project implementation.

2. In order to achieve the required number of monitoring plots for the forested buffers within the existing transects, the distance between plots landing in forested buffers was half the distance as those within the emergent wetland areas.

3. The forested wetland acreage in the sampled western field is very small and narrow and would not have been adequately sampled in the transect layout in the rest of the project area. Therefore, a single transect was installed down the middle of the forested wetland in a direction perpendicular to those in the rest of the project area. The distance between plots in this habitat type was 90 feet. This allowed for adequate sampling of this habitat type to achieve the minimum number of plots.

E. Monitoring data locations.

A systematic sampling methodology was utilized in order to produce representative data and avoid bias. A permanent baseline has been established between two fixed points on the site. The first point is the center of a large marked oak tree, located 10 feet NE of transect 6 plot 1 (see map 3.0). The second point is the southwest corner of the water control structure, which is located approximately 60' NE of transect 6 plot 2 (see map 3.0). Transects are positioned perpendicular to this baseline, 265 feet apart. A random starting point between 0 and 25 is selected to determine the number of feet along the baseline west of the oak tree where the first transect should begin. Each subsequent transect is located 265 feet NE along the baseline from the last. Monitoring plots in the herbaceous wetland units are located 300 feet apart from each other, with the first point's number of feet from the baseline being determined by using a number randomly selected between 0 and 50. Each subsequent point is 300 feet along that transect until reaching forested buffers or until reaching the mitigation bank boundary. When forested buffers are encountered, the distance between monitoring plots was reduced to 150 feet. Herbaceous data was collected from two, one meter quadrants placed on the NW and SE corners of each plot. Tree and shrub data was collected in 30ft diameter circles around center of the plot.

3. Results

A total of 72 one meter square plots were sampled for herbaceous vegetation in the mitigation bank. A total of 58 herbaceous species were found on the site. Two species were invasive, 17 were non-native, and 39 were native. This represents a significant increase in native species found on the site from the previous year. There were slightly more non-native species found as well. The vast majority of the vegetative cover in the plots was made up of native species. A total of 26 native and zero non-native tree and shrub species were identified in the 2014 monitoring. This represents a decrease of one from 2013.

Herbaceous Wetlands

Performance Standard 1. The cover of native species is at least 60%

This standard was fully met. The average cover of native herbaceous species was 69%.

Performance Standard 2. The cover of invasive species is no more than 10%;

This standard was fully met. The average cover of invasive species was 0%.

Performance Standard 3. Bare substrate represents no more than 20% cover;

This standard was not fully met. The average cover of bare substrate was 32%. This is due largely to two factors: the stature of existing emergent wetland vegetation and the fact that much of the vegetation is still establishing. Most of these species are tall, narrow leaved species with few branches that provide a generally small percent cover even when in large monocultures. This results in there being a surprisingly high percentage of open water despite dense and healthy vegetation. The second factor that led to this standard not being met is the fact that much of the vegetation is still becoming established. With another growing season, we expect far less bare ground and open water to be found during routine monitoring.

Performance Standard 4. By Year 3 and thereafter, there are at least 6 different native species. To qualify, a species must have at least 5% average cover in the habitat class, **and** occur in at least 10% of the plots sampled.

This standard is not yet applicable as this was only the second growing season. This year, there were 5 species that met this standard. These were: *Agrostis exarata, Alisma plantago-aquatica, Deschampsia elongata, Eleochaeris ovata, and Hordeum brachyantherum.*

Performance Standard 5. Prevalence Index is <3.0.
This standard was fully met. The prevalence index was 1.
(re-state the standard verbatim from the Authorization, summary metric, and confidence level)

Shrub Dominated and Forested Wetlands
Performance Standard 1. The cover of native herbaceous species is at least 60%.
This standard was fully met. The cover of native herbaceous species was 63%.

Performance Standard 2. The cover of invasive herbaceous species is no more than 10%. After the site has matured to the stage when desirable canopy species reach 50% cover, the cover of invasive understory species may increase but may not exceed 30%
This standard was not fully met. The coverage of invasive species was 12%. Three plots contained large patches of *Lotus corniculatus* with high percent coverage. While the remaining plots were dominated by native species, these plots threw off the overall averages. The *Lotus corniculatus* was treated with herbicides after plot data was collected and will be controlled in future years to ensure this standard is met.

Performance Standard 3. The cover of invasive shrub or tree species is no more than 10%
This standard was fully met. The cover of invasive shrub and tree species was 0%.

Performance Standard 4. Bare substrate represents no more than 20% cover
This standard was not fully met. Bare substrate represented approximately 24% of the cover in these plots. The failure of this standard was due to two factors: changing water levels, which reduced cover in some areas during the spring months, and to the fact that herbaceous species are not yet fully developed on the site. With another growing season, we expect that the percentage of bare ground will be well below 20%.

Performance Standard 5. By Year 3 and thereafter, there are at least 6 different native species. To qualify, a species must have at least 5% average cover in the habitat class, **and** occur in at least 10% of the plots sampled
This standard is not applicable yet. Currently, there are 2 species that meet this criteria: *Hordeum brachyantherum* and *Deschampsia caespitosa.* With another year of growth and development, we expect at least two or three other species to meet this criteria.

Performance Standard 6. Prevalence Index total for all strata is <3.0
This standard was fully met. The prevalence index was 2.

Performance Standard 7. The density of woody vegetation is at least 1,600 native plants (shrubs) and/or stems (trees) per acre (native species volunteering on the site may be included, dead plants/stems do not count)
This standard was fully met. The average density of woody vegetation was 1974 plants/acre.

Upland Buffers
Performance Standard 1. The cover of native species is at least 60%
This standard was not fully met. The coverage of native herbaceous species was approximately 42%, while the coverage of native shrubs and trees was approximately 58%. The reason for this failure was that many of the herbaceous sampling plots landed in areas of

established forest and many of the woody species sampling plots landed in areas that have been recently planted and therefore have very low percent cover. In these existing forested areas, shrubs and trees are the dominant species and ground cover. Herbaceous species represent a small percentage of the total cover. For this reason, if the areas of established forest are included in this sampling in subsequent years, we will continue to fail on this standard. However, in the areas with newly establishing forest, native herbaceous species easily passed the standard, but failed in the percent cover of woody species. If passing this performance standard is essential for the coming years, we recommend only sampling the newly planted forest buffer areas for herbaceous species and/or the established forest areas for woody species.

Performance Standard 2. The cover of invasive species is no more than 10%. After the site has matured to the stage when desirable canopy species reach 50% cover, the cover of invasive understory species may increase but may not exceed 30%.

This standard was fully met. The average cover of invasive species was 0%.

4. Conclusions and Recommendations

A. Project status.

The mitigation project is not in compliance with all performance standards. The trend from the previous years' monitoring is difficult to compare due to differences in monitoring methodology. Overall, a greater diversity of native species and non-native species was found in the 2014 monitoring year compared to the 2013 monitoring year. However, as significantly more plots were sampled in the latter year, it is not surprising that more species were found.

The native herbaceous species cover in the wetland habitat types is easily being met, and will continue to grow over the coming years. We also expect the number of species with significant cover to grow over the coming year and to easily meet the species diversity performance standards.

Cover of invasive species and non-native species is very low. Only two invasive species were identified across the site in 2014. These were *Lotus corniculatus* and *Cirsium arvense.* We aggressively treated these species this year, and will continue to aggressively treat these and other non-native species across the site in 2015.

In the herbaceous wetland and shrub/forested wetland habitat types, the most important and concerning performance standard failure was in the percentage of bare ground. These saw 32% and 24% cover of bare ground respectively. We anticipate that with an additional year of growth and natural seeding across the site, these numbers will be reduced to well below 20%. If the percentage of bare ground is not brought down significantly, additional mechanical seeding and the introduction of additional species may be necessary.

The only other performance standard failure was in the native species cover in the forested buffers. Due to existing shady and woody forest conditions in the established forest portions of these units, it is unlikely that we will achieve 60% cover in the herbaceous layer. Similarly, due to the small size of the planted trees and shrubs in newly planted portions of this habitat type, it's unlikely that we will achieve 60% cover of woody species in these areas. While each of these areas is thriving and in very good ecological condition, the average of the two makes the whole habitat type look as if it's in poor condition. In general, we do not find the failure of this performance measure to be concerning.

B. Recommendations.

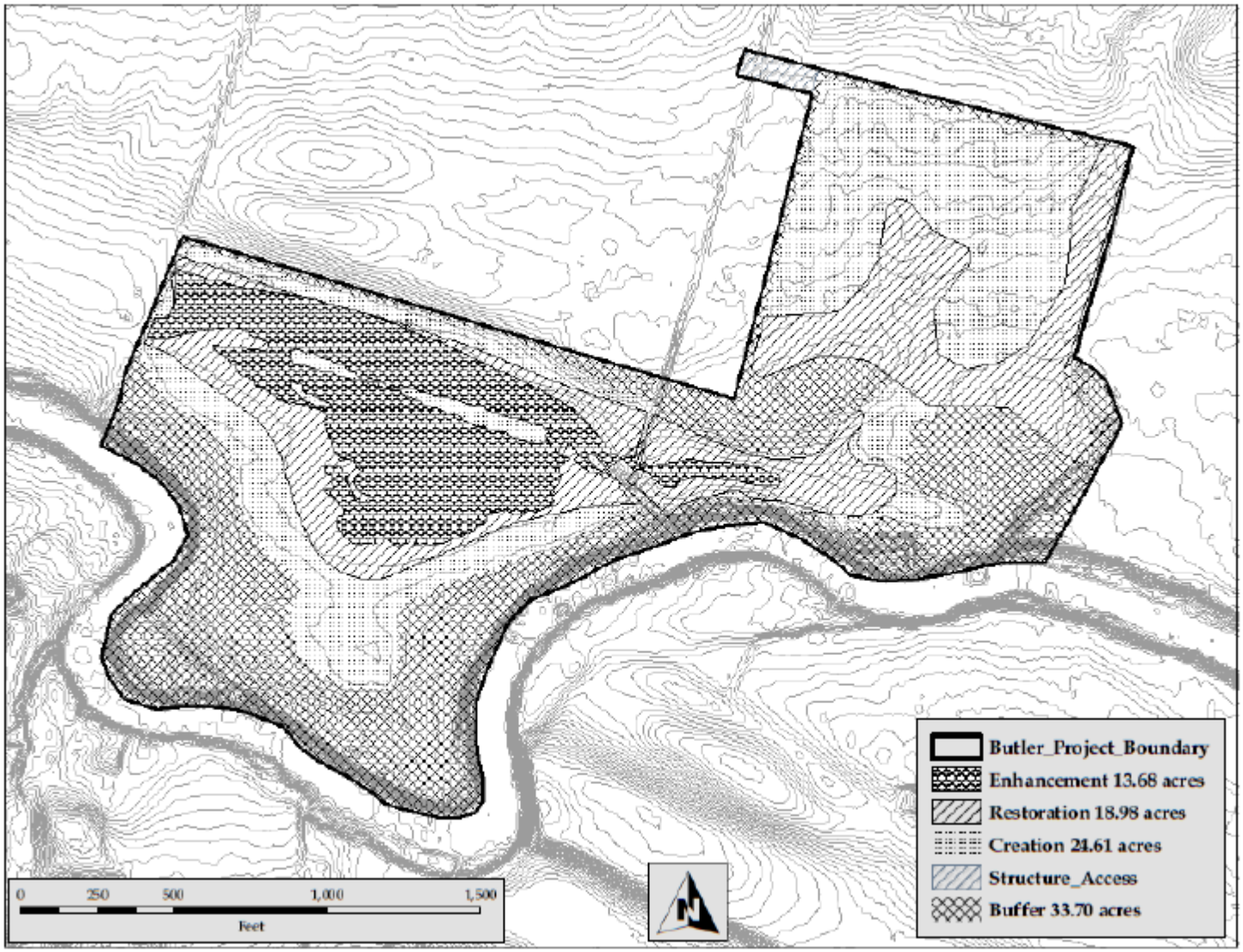
Continuing to aggressively control non-native species throughout the project area will be the most important follow-up action over the coming year. At this point, stocking of the woody forest areas seems more than sufficient, non-native species cover is generally low, and both diversity and cover of native species is high. Some additional interplanting may be necessary over the

coming two years to ensure forest closure and successful establishment across the site. Controlling *Lotus corniculatus, Cirsium arvense, Phalaris arundinaceae,* and *Trifolium repens* will be of utmost importance. Finally, close attention will need to be paid to the areas of bare ground and open water. If native plant species do not increase in their overall ground cover, additional seeding with forbs may be necessary to fulfill this performance standard.

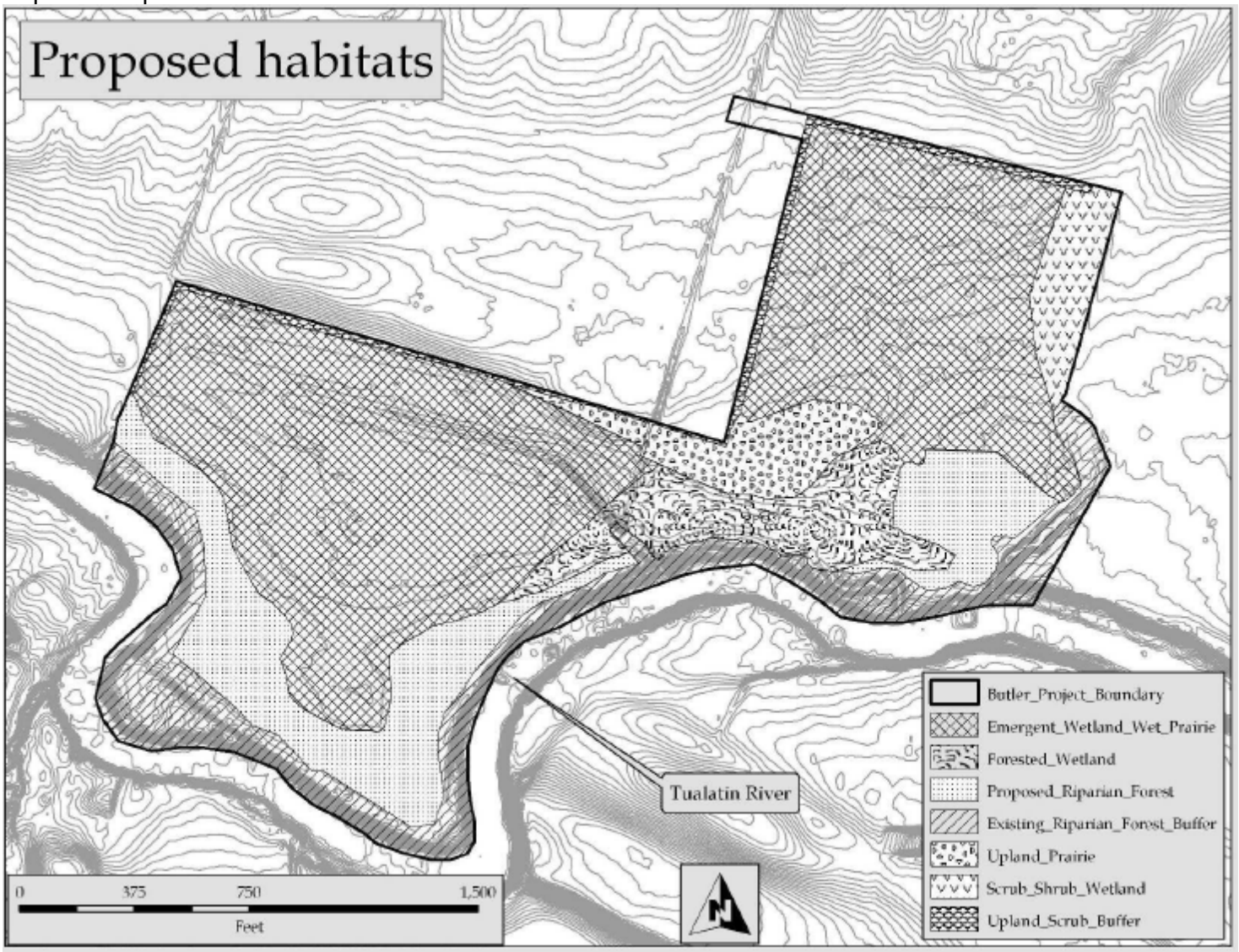
C. Financial Security status.
A (performance bond/ Letter of Credit/ other security) in the amount of $255,000 was established at permit issuance, and $255,000 is currently in the account. This report documents that conditions (*provide list*) have been met for partial release of 39 % of the original security, in accordance with (*DSL/Corps*) permit condition #38.

5. Maps and Figures

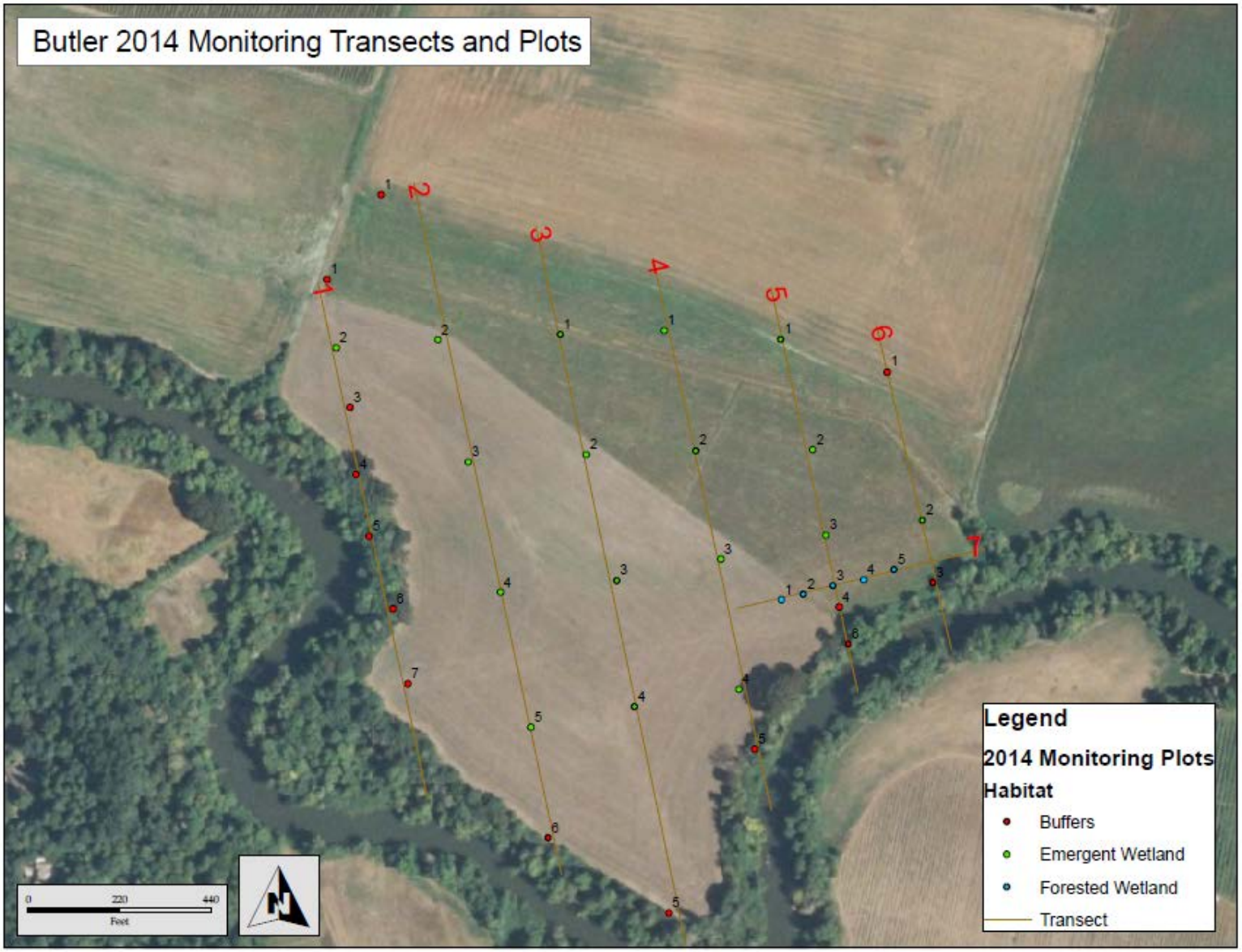
Map 1.0- Mitigation Plan



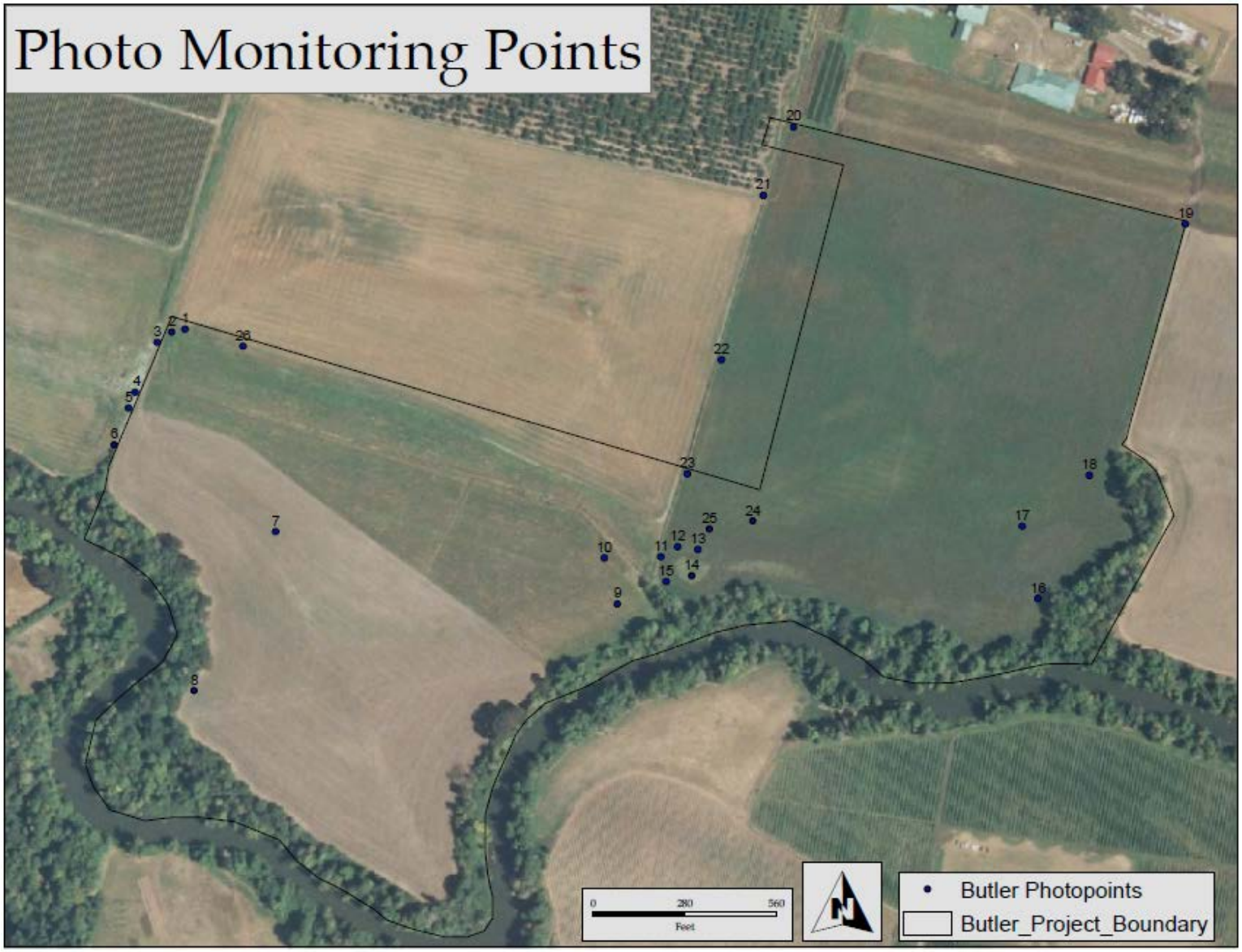
Map 2.0- Proposed Habitat Units



Map 3.0- Vegetation monitoring plot layout.



Map 4.0- Photo monitoring points



6. Appendices

Table 1- Baseline and transect layout details
Photo monitoring
Table 2. Data for Herbaceous Wetland Habitat Sampling Areas
Table 3. Data for Shrub Dominated and Forested Wetland Habitat Sampling Areas
Table 4. Data for Upland Buffer Habitat Sampling Areas

Table 1. Baseline and Transect Layout Details

	Closest Feature/Plot	End/intersection	Longitude	Latitude
Baseline	Oak Tree	Western end	122°54'36.45" W	45°24'35.16"N
	Water Control Structure	Eastern End	122°54'18.17" W	45°24'37.85"N
Transect 1	Plot 6	Baseline	122°54'36.82" W	45°24'35.14"N
Transect 2	Plot 4	Baseline	122°54'33.05" W	45°24'35.64"N
Transect 3	Plot 3	Baseline	122°54'29.44" W	45°24'36.21"N
Transect 4	Plot 3	Baseline	122°54'25.92" W	45°24'36.69"N
Transect 5	Plot 3	Baseline	122°54'22.15" W	45°24'37.20"N
Transect 6	Plot 2	Baseline	122°54'18.64" W	45°24'37.68"N
Transect 7	Plot 3	Transect 5	122°54'21.84" W	45°24'36.47"N

Photo monitoring
Photo Point 1

9/2012 Before seeding, planting
and closure of water control structure

3/2014- After seeding, planting, closure of water control structure and one growing season.

11/2014- After two growing seasons.

Photo Point 2

- 11/2012- Immediately after seeding, before planting.

3/2014- After planting and one growing season.

11/2014- After planting and two growing seasons

Photo point 3

11/2012- Immediately after seeding, before planting. 3/2014- After planting and one growing season. 11/2014- After planting and two growing seasons

Photo Point 4

8/2012 Before planting and installation of water control structure - 3/2014- After planting and one growing season 11/2014- After 2 growing seasons

Photo Point 5

Photo Point 5- 11/2012- Before planting. 3/2014- After seeding and one growing season 11/2014- After two growing seasons

Photo Point 6

11/2012- Immediately after seeding, before planting.

Photo Point 7

11/2012- Immediately after seeding, before planting.

3/2014- After seeding and one growing season

11/2014- After two growing seasons

4/2013- After seeding, during planting.

3/2014- After seeding and one growing season

11/2014- After two growing seasons

Photo Point 9

6/2013- After seeding and planting.

3/2014- After seeding and one growing season

11/2014- After two growing seasons

Photo Point 10

12/2012- After seeding and before planting.

3/2014- After seeding and one growing season

11/2014- After two growing seasons

Photo Point 11

11/2012- After seeding and before planting.

3/2014- After seeding and one growing season

11/2014- After two growing seasons

Photo Point 12

12/2012- After seeding, before planting west field.

3/2014- After seeding and planting west field and after planting southern part of east field.

11/2014- After two growing seasons

Photo Point 13-

12/2012- Before planting east field.

3/2014- Immediately after planting

11/2014- After one growing season

Photo Point 14

12/2012- Before planting east field.

3/2014- Immediately after planting

11/2014- After one growing season

Photo Point 15

12/2012- After seeding and before planting west field.

3/2014- Immediately After Planting

11/2014- After one growing season

Photo Point 16

8/2012- East field before initiation of project.

3/2014- During site prep phase for east field

11/2014- After initial construction and before planting

Photo Point 17-



8/2012- Southern portion of east field before initiation of project. 3/2014- After woody shrub planting 11/2014- After one growing season

Photo Point 18



8/2012- Northern portion of east field before initiation of project. 3/2014- During site prep phase for east field 11/2014- After initial construction and before planting

Photo Point 19

3/2014- Northern portion of east field after clearing of ground and before construction. Photo taken from NE corner.

11/2014- After initial phase of construction and before planting.

Photo Point 20

3/2014- Northern portion of east field after clearing of ground and before construction. Photo taken from NW corner of project area.

Photo Point 21

8/2012- Northern portion of east field before initiation of project 3/2014- Before construction 11/2014- After initial phase of construction

Photo Point 22

8/2012- Central/western portion of east field before initiation of project. 3/2014- Before construction 11/2014- After initial phase of construction

Photo Point 23

8/2012- West field before initiation of project. 3/2014- Before construction 11/2014- After initial phase of construction

Photo Point 24

8/2012- After seeding and before structure closed

3/2014- After woody shrub planting

11/2014- After one growing season

Photo Point 25

8/2012- After seeding and before structure closed

3/2014- After one growing season

11/2014- After two growing seasons

Photo Point 26

12/2012- West field after seeding and before planting

3/2014- After one growing season

11/2014- After two growing seasons

Table 2. Data for Herbaceous Wetland Habitat Sampling Areas

Site: W&M Butler Farms Mitigation Bank	**Sample Date(s):**	6/18/2014 - 6/20/2014																																				
Herbaceous Wetland Habitat Unit																																						
Transect/Plot number			**t1p2a**	**t1p2b**	**t2p2a**	**t2p2b**	**t2p3a**	**t2p3b**	**t2p4a**	**t2p4b**	**t2p5a**	**t2p5b**	**t3p1a**	**t3p1b**	**t3p2a**	**t3p2b**	**t3p3a**	**t3p3b**	**t3p4a**	**t3p4b**	**t4p1a**	**t4p1b**	**t4p2a**	**t4p2b**	**t4p3a**	**t4p3b**	**t4p4a**	**t4p4b**	**t5p1a**	**t5p1b**	**t5p2a**	**t5p2b**	**t5p3a**	**t5p3b**	**t6p2a**	**t6p2b**		
Species	Origin (N, NN, I)	Wetland Status (1 - 5)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	**24**	25	26	**27**	28	29	30	31	32	33	34	Row Average	
Native Herbaceous Species																																						
Agrostis exarata	N	2	55	65	0	0	53	58	12	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	5	x
Alisma plantago aquatica	N	1	0	0	18	31	0	0	0	0	0	0	60	45	35	45	15	10	0	0	75	60	20	10	25	22	0	0	0	0	15	10	55	40	1	1	19	x
Alopecurus geniculatus	N	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	55	18	0	0	0	0	3	0	2	
Beckmannia syzigachne	N	1	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	12	0	0	0	0	0	1	0	
Danthonia californica	N	3	0	1	0	0	3	2	3	2	0	12	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Deschampsia caespitosa	N	2	15	15	0	0	20	20	8	5	1	0	0	0	0	0	0	0	12	3	0	0	0	0	0	0	20	7	0	0	0	0	0	0	0	0	4	
Deschampsia elongata	N	2	5	0	0	0	0	0	20	23	1	6	0	0	0	0	0	0	48	20	0	0	0	0	0	0	20	45	0	0	0	0	0	0	0	0	7	x
Downingia elegans	N	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	
Eleocharis ovata	N	1	0	0	8	0	0	0	0	0	0	0	15	0	20	30	7	15	0	0	10	30	70	45	3	10	0	0	15	20	5	60	4	18	15	25	11	x
Eleocharis palustris	N	1	0	0	6	11	0	0	0	0	0	0	0	0	20	10	0	15	0	0	5	2	10	14	6	12	0	0	0	0	6	15	25	4	8	10	4	
Epilobium ciliatum	N	2	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
Grindelia integrifolia	N	2	2	0	0	0	0	2	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	
Hordeum brachyantherum	N	2	10	4	0	0	7	5	10	18	30	58	0	0	0	0	0	0	10	38	0	0	0	0	0	0	32	20	0	0	0	0	0	0	0	0	9	x
Kickxia elatine	N	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	
Leersia oryzoides	N	1	0	0	2	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	
Ludwigia palustris	N	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	1	0	0	0	0	0	0	0	0	
Potentilla gracilis	N	3	0	0	0	0	0	2	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	
Prunella vulgaris	N	4	0	1	0	0	2	0	15	5	40	0	0	0	0	0	0	0	12	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
Ranunculus occidentalis	N	2	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	0	0	0	0	0	
Rorippa curvisiliqua	N	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	
Rumex salicifolius	N	2	1	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	0	0	0	0	
Sagittaria latifolia	N	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	12	0	0	0	0	0	
Scirpus valetus	N	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	1	
Sidalcea campestris	N	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Torreyochloa pallida	N	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Typha latifolia	N	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	3	0	0	0	0	0	0	0	20	0	0	0	0	0	1	
Invasive Herbaceous Species			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	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	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	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	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	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	
Non-Native Herbaceous Species					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	0	0	0	
Plantago lanceolata	NN	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	
Lythrum portula	NN	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leontodon taraxacoides	NN	4	0	1	0	0	0	0	0	0	1	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	
Rumex crispus	NN	3	0	1	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	0	0	0	
Bare Substrate					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	0	0	0	
bare soil			10	12	0	0	16	11	32	48	18	22	0	0	0	0	0	0	18	33	0	0	0	0	0	0	24	27	25	48	0	0	0	0	0	0	11	
open water			0	0	66	58	0	0	0	0	0	0	33	30	25	20	58	60	0	0	10	8	0	30	51	53	0	0	0	0	44	5	16	38	74	58	20	
Summary Information			**1**	**2**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**Habitat Average**	**Standard Error**
Cover of Native Herbaceous Species			90	86	34	42	85	89	68	57	81	78	77	70	75	85	40	50	82	71	90	92	105	70	49	44	76	73	77	52	56	97	84	62	27	42	69	3.7
Lower CI (80%)																																					65	
Upper CI (80%)																																					74	
Cover of Invasive Herbaceous Species			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	0	0	0	0	0	0
Lower CI (80%)																																					0	
Upper CI (80%)																																					0	
Bare Substrate			10	12	66	58	16	11	32	48	18	22	33	30	25	20	58	60	18	33	10	8	0	30	51	53	24	27	25	48	44	5	16	38	74	58	32	4
Lower CI (80%)																																					27	
Upper CI (80%)																																					36	
Native Diversity																																						N/A
Prevalence Index			2	2	1	1	2	2	2	2	3	2	1	1	1	1	1	1	2	2	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	N/A
Weighted Prevalence Index			180	185	34	42	177	182	169	126	240	168	77	70	75	85	42	50	188	158	90	92	105	70	49	56	152	146	79	52	56	97	84	62	27	42	103	
Sum of plant cover			90	88	34	42	85	89	68	57	82	78	77	70	75	85	42	50	82	71	90	92	105	70	49	47	76	73	77	52	56	97	84	62	27	42	70	

Table 3. Data for Shrub Dominated and Forested Wetland Habitat Sampling Areas

Site: W&M Butler Farms Mitigation Bank	**Sample Date(s): 6/18/2014 - 6/20/2014**													
Shrub-Dominated and Forested Wetland Habitat Unit			**Percent Cover**											
	transect/plot number		**t5p4fw0a**	**t5p4fw0b**	**t5p4fw1a**	**t5p4fw1b**	**t5p4fw2a**	**t5p4fw2b**	**t5p4fw3a**	**t5p4fw3b**	**t5p4fw4a**	**t5p4fw4b**		
Species	Origin (N, NN, I)	Wetland Status (1 - 5)	1	2	3	4	5	6	7	8	9	10	Row Average	
Native Herbaceous Species														
Agrostis exarata	N	2	0	3	0	0	0	0	0	0	0	0	0	
Deschampsia caespitosa	N	2	31	72	10	12	1	3	0	1	8	5	14	
Deschampsia elongata	N	2	0	0	28	12	2	0	0	0	0	0	4	
Epilobium densiflorum	N	2	2	6	1	0	0	0	0	0	0	0	1	
Epilobium ciliatum	N	2	1	0	0	0	0	0	0	0	0	0	0	
Festuca romeri	N	4	3	0	0	0	0	0	0	0	0	0	0	
Gnaphalium palustre	N	2	3	1	0	0	0	1	0	0	0	0	1	
Grindelia integrifolia	N	2	0	0	0	0	15	0	0	0	0	0	2	
Hordeum brachyantherum	N	2	3	0	33	43	55	60	25	70	23	55	37	
Juncus bufonius	N	2	14	0	0	0	0	0	0	0	1	0	2	
Kickxia elatine	N	3	1	0	1	0	0	0	0	0	0	0	0	
Prunella vulgaris	N	4	0	0	5	15	0	0	0	0	0	0	2	
Rumex salicifolius	N	2	0	0	0	0	0	0	0	0	0	3	0	
Sidalcea campestris	N	4	1	0	0	0	0	0	0	0	0	0	0	
Invasive Herbaceous Species														
Lotus corniculatus	I	3	0	0	0	0	2	0	65	0	38	15	12	
			0	0	0	0	0	0	0	0	0	0	0	
Non-Native Herbaceous Species														
Anthemis cotula	NN	4	1	0	0	0	1	3	0	0	0	0	1	
daucus carota	NN	4	1	0	0	0	0	0	0	0	0	0	0	
lactuca serriola	NN	4	1	0	0	0	1	0	0	1	0	0	0	
Leontodon taraxacoides	NN	4	2	1	0	1	0	1	0	0	1	0	1	
Rumex crispus	NN	3	0	0	0	0	0	0	10	0	0	2	1	
			0	0	0	0	0	0	0	0	0	0	0	
Native Shrub and Tree Species														
Acer circinatum	N	3	0	0	1	0	1	0	1	0	0	0		
Cornus sericea	N	2	1	0	0	0	1	0	1	0	0	0		
Crataegus douglasii	N	3	1	0	2	0	0	0	1	0	1	0	1	
Fraxinus latifolia	N	2	0	0	0	0	1	0	1	0	1	0		
Mahonia aquifolium	N	4	0	0	0	0	0	0	0	0	1	0		
Quercus garryana	N	4	0	0	1	0	0	0	1	0	0	0		
Rosa pisocarpa	N	3	1	0	1	0	1	0	1	0	1	0	1	
Sambucus cerulea	N	5	0	0	0	0	0	0	1	0	1	0		
Spiraea douglasii	N	2	3	0	1	0	1	0	1	0	1	0	1	
Symphoricarpus albus	N	4	0	0	0	0	0	0	1	0	0	0		

Non-Native Shrub and Tree Species														
Invasive Shrub and Tree Species			0	0	0	0	0	0	0	0	0	0		
Bare Substrate														
			28	20	22	25	20	42	5	30	27	25	24	
Plant Count (Shrubs) + Stem Count (Trees														
Native Shrub and Tree Count														
Rosa pisocarpa	N	3	8		3		13		9		5		8	
Spiraea douglasii	N	2						24						
Crataegus douglasii	N	3	2	0	17	0	3	0	3	0	5	0	3	
Cornus serriola	N	2	6	0	0	0	0	0	3	0	0	0	1	
Quercus garryana	N	4	0	0	3	0	1	0	3	0	0	0	1	
Acer circinatum	N	3	0	0	6	0	0	0	6	0	0	0	1	
Fraxinus latifolium	N	2	0	0	0	0	3	0	2	0	5	0	1	
Mahonia aquifolium	N	4	0	0	0	0	2	0	0	0	1	0	0	
Sambucus cerulea	N	5	0	0	0	0	0	0	1	0	1	0	0	
Symphoricarpus albus	N	4	0	0	0	0	0	0	1	0	0	0	0	
Routine Performance Standards			**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Habitat Average**	**Standard Error**
Cover of Native Herbaceous Species			59	82	78	82	73	64	25	71	32	63	63	6.3
Lower CI (80%)													55	
Upper CI (80%)													71	
Cover of Invasive Herbaceous Species			0	0	0	0	2	0	65	0	38	15	12	7
Lower CI (80%)													3	
Upper CI (80%)													21	
Cover of Invasive Shrubs and Trees			0	0	0	0	0	0	0	0	0	0	0	0
Lower CI (80%)													0	
Upper CI (80%)													0	
Cover of Native Species in Overstory			6	0	6	0	5	0	9	0	6	0	3	1
Bare Substrate			28	20	22	25	20	42	5	30	27	25	24	3
Lower CI (80%)													21	
Upper CI (80%)													28	
Native Diversity (all layers)														N/A
Prevalence Index--All strata			2	2	2	2	2	2	3	2	2	2	2	N/A
Weighted Prevalence Index			143	168	147	138	160	144	275	146	182	177	168	
Sum of plant cover			70	83	84	83	82	68	109	72	77	80	81	
Density of Woody Vegetation		Average per acre	2468		2221		1728		1974		1481		1974	N/A
Plot Area (shrub/tree plot)	706													
Per acre multiplier: Input 4,047 if plot area entered in B84 is in sq.meters or 43,560 for sq.feet	43560													
Cover of Native Shrubs and Trees			6		6		5		9		6		6	1
Lower CI (80%)													6	
Upper CI (80%)													7	

7	6

Table 4. Data for Upland Buffer Habitat Sampling Areas

Site: W&M Butler Farms Mitigation Bank	**Sample Date(s): 6/18/2014 - 6/20/2014**																															
Upland Buffer Habitat Unit			**Percent Cover**																													
Transect/Plot number			**T1P1 A**	**T1P1 B**	**T1P3 A**	**T1P3 B**	**T1P4 A**	**T1P4 B**	**T1P5 A**	**T1P5 B**	**T1P6 A**	**T1P6 A**	**T1P7 A**	**T1P7 B**	**T2P1 A**	**T2P1 B**	**T2P6 A**	**T2P6 B**	**T3P5 A**	**T3P5 B**	**T4P5 A**	**T4P5 B**	**T5P4 A**	**T5P4 B**	**T5P5 A**	**T5P5 B**	**T6P1 A**	**T6P1 B**	**T6P3 A**	**T6P3 B**		
Species	Origin (N, NN, I)	Wetland Status (1 - 5)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	Row Average	
Native Herbaceous Species																																
Agrostis exarata	N	2	10	30	7	20	0	0	0	0	0	0	0	0	35	40	0	0	0	0	8	1	0	0	0	0	0	15	0	0	6	x
Beckmannia syzigachne	N	1	3	3	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		
Carex dewyana	N	3	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0		
Danthonia californica	N	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
Deschampsia caespitosa	N	2	10	15	15	7	0	0	0	0	0	0	4	5	20	10	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	
Deschampsia elongata	N	2	0	5	5	0	0	0	0	0	0	0	2	5	0	0	0	0	0	0	0	0	10	5	0	0	7	0	0	0	1	
Epilobium densiflorum	N	2	3	2	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium ciliatum	N	2	0	1	1	0	0	0	0	0	35	65	0	0	0	1	1	0	0	1	1	1	1	0	4	55	0	0	1	1	6	x
Grindelia integrifolia	N	2	12	1	1	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Hordeum brachyantherum	N	2	3	7	0	0	0	0	0	0	0	0	85	80	5	3	0	0	0	0	0	0	65	60	0	0	25	10	0	0	12	x
Kickxia elatine	N	3	1	0	0	1	0	0	0	0	0	0	0	0	5	15	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	
Lotus purshianus	N	4	1	2	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plagiobothyris figuratis	N	2	35	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	25	30	0	0	3	
Prunella vulgaris	N	4	0	0	7	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Pteridum aquilinium	N	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0		
Ranunculus occidentalis	N	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Rubus ursinus	N	4	0	0	0	0	15	3	4	10	0	3	0	0	0	0	2	5	4	3	0	0	0	0	0	0	0	0	0	0		
Rumex salicifolius	N	2	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	
Stachys cooleyae	N	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
Tellima grandiflora	N	4	0	0	0	0	25	30	33	20	0	0	0	0	0	0	10	4	1	1	0	0	0	0	1	1	0	0	0	0		
Trillium ovatum	N	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	2	0	0	0	0	0	0	0	0	0	0		
Vancouveria hexandra	N	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0		
Bareground	N		15	33	64	45	60	50	50	16	18	10	5	5	30	24	79	90	60	77	15	7	8	0	85	0	35	40	15	20		

Invasive Herbaceous Species																																
Cirsium arvense	I	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0		
Lotus corniculatus	I	3	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	4	4	0	
Non-Native Herbaceous Species																																
Anthemis cotula	NN	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	2	0		
Bidens sp.	NN	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0		
Convolvulus arvensis	NN	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0		
Gallium aparine	NN	4	0	0	0	0	15	5	0	0	2	25	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0		
Geranium disectum	NN	5	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	1	0		
Geranium molle	NN	5	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	1	0		
Lactuca serriola	NN	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	
Lapsana communis	NN	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	0	0	0	0	45	5	2	
Leontodon taraxacoides	NN	4	0	0	15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	20	5	2	
Rumex crispus	NN	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	1	0	
Taraxacum officinale	NN	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0		
Trifolium repens	NN	3	0	1	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		
Agrostis Capillaris	NN	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35	0	0	0	0	0	0	0	10		
Lolium perenne	NN	3	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	10		
Chenopodium album	NN	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	0		
Panicum capillare	NN	3	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Native Shrub and Tree Species			count	cover	count	cover	count	cover	count	cover	count	cover	count	cover	count	cover	count	cover	count	cover	count	cover	count	cover	count	cover	count	cover	count	cover		
Abies grandis	N	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	15	0	0	0	0	0	0	0	0	0	0	0	0		
Acer circinatum	N	3	0	0	0	0	2	2	7	15	0	0	0	0	0	0	5	7	3	2	0	0	2	1	0	0	0	0	0	0		
Acer macrophylum	N	4	0	0	1	1	3	80	3	60	2	65	1	1	3	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Amalanchier alnifolia	N	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	8	1	1	0	0	0	0	0	0	0	0	0	0		
Cornus serriola	N	2	0	0	0	0	1	1	0	0	11	2	0	0	4	1	0	0	0	0	4	2	1	1	7	25	0	0	11	3		
Corylus cornuta	N	4	0	0	0	0	0	0	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Crataegus douglasii	N	3	4	1	0	0	0		0	0	0	0	1	1	3	1	0	0	0	0	0	0	2	1	0	0	9	2	9	18		
Fraxinus latifolia	N	2	0	0	0	0	1	15	0	0	0	0	1	1	5	10	0	0	0	0	2	1	1	1	2	65	0	0	2	15		
Holodiscus discolor	N	4	1	1	0	0	0	0	4	10	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Lonicera involucrata	N	3	0	0	0	0	0	0	0	0	0	0	0	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	14	10	1	
Mahonia aquifolium	N	4	0	0	11	1	9	12	0	0	4	1	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1		

Oemleria cerasiformus	N	4	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	1	2		
Philadelphus lewisii	N	5	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1		
Physocarpus capitatus	N	2	0	0	0	0	5	1	0	0	7	2	0	0	15	1	0	0	0	0	4	2	0	0	0	0	7	2	14	6	2	
Populus trichocarpa	N	3	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Quercus garryana	N	4	1	1	0	0	1	5	0	0	1	15	1	1	0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	0		
Rhamnus purshiana	N	3	1	1	0	0	0	0	3	5	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0		
Ribes lacustre	N	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0		
Rosa pisocarpa	N	3	0	0	0	0	2	1	0	0	0	0	0	0	4	3	0	0	0	0	18	8	4	1	5	1	0	0	1	1		
Rubus spectabilis	N	3	0	0	0	0	14	5	0	0	0	0	0	0	0	0	0	0	46	15	0	0	0	0	0	0	0	0	0	0		
Sambucus cerulea	N	4	0	0	4	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Spiraea douglasii	N	2	29	7	0	0	0	0	0	0	0	0	1	1	26	1	0	0	0	0	0	0	2	1	11	10	44	4	0	0	5	
Symphoricarpus albus	N	4	0	0	2	1	26	3	65	35	0	0	0	0	0	1	60	20	37	10	0	0	0	0	12	10	0	0	5	2	10	
Thuja plicata	N	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	80	0	0	0	0	0	0	0	0	0	0		
Toxicodendron diversilobum	N	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0		
Viburnum ellipticum	N	5	0	0	0	0	0	0	5	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Routine Performance Standards			**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**Habitat Average**	**Standard Error**
Cover of Native Herbaceous Species			78	67	36	45	40	33	39	30	35	68	91	90	69	73	13	9	21	10	11	3	77	68	6	56	57	55	1	1	42	5.4
Lower CI (80%)																															35	
Upper CI (80%)																															49	
Cover of Invasive Herbaceous Species			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	4	4	0	0
Lower CI (80%)																															0	
Upper CI (80%)																															1	
Cover of Native Shrubs and Trees				12		4		125		136		85		8		85		53		110		13		7		111		8		59	58	13
Lower CI (80%)																															41	
Upper CI (80%)																															75	
Count of Native Shrubs and Trees			37		18		64		92		25		9		69		74		95		28		17		37		60		61		49	