Montana Department of Transportation Wetland Mitigation Monitoring Report

EASTON RANCH MITIGATION SITE

Project Overview

Watershed: Watershed #13 – Upper Yellowstone River Basin

Monitoring Year: 2024

Years Monitored: 15th year of monitoring

Corps Permit Number: NWO-2006-90370-MTB

Monitoring Conducted By: Confluence Consulting Inc

Dates Monitoring Was Conducted: June 19, 2024

Purpose of the Approved Project:

The site was constructed to provide 27.41 acres of compensatory wetland mitigation credits for wetland impacts associated with future transportation project-related wetland impacts in Watershed #13 – Upper Yellowstone River Basin. Construction entailed excavating a series of wetland cells and a flood channel that bisects the 34.31-acre mitigation site, which is protected under a perpetual Montana Department of Transportation (MDT) Wetland Conservation Easement. The wetland project was designed to increase flood storage, improve wildlife habitat, and restore riparian and wetland habitat that had been impacted by past agricultural practices within the Shields River Watershed. The project includes creating, restoring, and preserving wetlands as well as establishing a 50-foot upland buffer around the perimeter of the site for the purpose of developing mitigation credits within the Easton Ranch Wetland Conservation Easement.

Site Location:

Latitude: 46.058174 **Longitude:** –110.638937

County: Park **Nearest Town:** Wilsall, MT

Map Included: See Figure 1, page 12

Mitigation Site Construction Started: 2009 **Construction Ended:** 2009

Dates of Any Recent Corrective or Maintenance Activities (since previous report):

Activity: Weed spraying was conducted in June and October of 2024**.**

Specific recommendations for any additional corrective actions: The MDT has an ongoing weed-control program and will continue weed treatments. Soil lifts and riprap installed along the bank of the Shields River in the northwestern corner of the site continue to erode. This bank area is generally dominated by shallow-rooting pasture grasses that provide little resistance to bank erosion. MDT will assess this bank erosion and discuss the potential need for adaptive management actions with the landowner and US Army Corps of Engineers. In addition, five bird boxes are broken or have fallen off their posts and need repair.

Anticipated Wetland Credit Acres: 27.41

Wetland Credit Acres Generated to Date: 14.56

Previous Monitoring Reports: https://www.mdt.mt.gov/publications/brochures/wetland-mitigation.aspx

Requirements:

Monitoring Period: 5 years from construction completion or until concurrence by the US Army Corps of Engineers (USACE).

Performance Standards: A summary of performance standards, associated success criteria, and 2024 achievement status for the Easton Ranch site is provided in Table 1.

Table 1. Summary of Performance Standards

Performance Standards	Success Criteria	Criteria Achieved (Y/N)	Discussion
Wetland Characteristics	Meet the three parameter criteria for hydrology, vegetation, and soils as outlined in the 1987 Wetland Delineation Manual and 2010 Mountains, Valleys, Coast Region.	Y	Areas identified as wetland habitat within the mitigation site meet the three parameter criteria.
Wetland Hydrology	Soil saturation present for at least 12.5 percent of the growing season.	Y	All wetland data points met the USACE criteria for wetland hydrology, hydric soils, and vegetation, which reflects wetlands are saturated for 12.5 percent of the growing season.
	Groundwater is filling the depressional wetlands excavated into the upland areas of the site.	Y	Hydrologic indicators observed within the excavated wetlands include high water table, saturation, geomorphic position, and a positive FAC-Neutral test.
	Constructed stream channel is stable.	Y	The constructed floodplain channel is stable with minimal bank erosion identified throughout the mitigation area.
Hydric Soil	Hydric soil conditions present or appear to be forming.	Y	All constructed wetlands exhibit hydric soil development (e.g., depleted matrix, hydrogen sulfide, and redox dark surface).
	Soil is sufficiently stable to prevent erosion.	Y	Disturbed soil is stable and does not exhibit signs of erosion.
	Soil is able to support plant cover.	Y	Plant cover has continued to develop across disturbed soils.
Hydrophytic Vegetation	Achieved when wetlands delineated as hydrophytic using technical guidelines.	Y	Areas identified as wetland habitat within the mitigation site support a prevalence of hydrophytic vegetation (OBL, FACW, and FAC).
Woody Plants	Trees and shrubs will be installed and survival assessed.	Y	Trees and shrubs were planted throughout the mitigation site and are assessed during each yearly monitoring visit.
	Scrub/shrub wetlands habitat will be achieved where 30 percent absolute cover by cuttings, planted, and volunteer woody plants is reached within the defined monitoring period or site is showing signs of	Y	Approximately 39 percent of the wetland areas identified within the site are dominated by woody vegetation. Planted woody species were observed with high vigor along the constructed flood channel. Natural recruitment of aspen, willows, and cottonwoods continue to establish across the site. The site has achieved this success criterion because the percent cover of woody plants is greater than 30 percent cover.

Performance Standards	Success Criteria	Criteria Achieved (Y/N)	Discussion
	progression toward that goal at the end of the defined monitoring period.		Woody plant cover greater than 30 percent was not achieved until 2024.
Herbaceous Plants	At least 80 percent ocular vegetation coverage by desirable hydrophytic vegetation.	Y	Desirable hydrophytic vegetation comprises greater than 80 percent of total vegetation cover within delineated wetlands.
Wetland Acreage Development	Provide 27.41 net credit acres for the project area.	N	A total of 14.56 net wetland credit acres has been generated for the mitigation site and includes 12.33 acres of established wetland, 1.64 acres of restored wetland, 0.28 acres of preserved wetland, and 0.98 acres upland buffer, and 0.67-acre debit from project impacts (See Table 7).
Wetland Acreage Development	Emergent wetland habitat will be 70–75% of mitigation wetland.	Y	Emergent wetland habitat comprises approximately 61 percent of total wetland areas delineated in 2024. This decrease in cover is due to an increase in scrub-shrub wetland habitat.
	Scrub/shrub wetland habitat will be 15–20% of wetland area.	Y	Scrub/shrub wetland habitat comprises approximately 39% of total wetland areas delineated in 2024, exceeding the success criteria of 15-20%.
	Open water will be < 5% of wetland area.	Y	Open water comprised less than .003% of total wetland areas delineated in 2024. The open water area (<3 feet deep) supports a diversity of submergent plant species and less than 5% emergent vegetation. The intent of this criterion was to minimize the amount of deep open-water habitat greater than 3 feet in depth.
Floodplain Channel Restoration	Considered stable when banks are vegetated with a majority of deep-rooting riparian and wetland plant species.	Y	Streambanks along the constructed channel are vegetated with a diversity of deep-rooting riparian and wetland plant species.
	Bank stability will be evaluated by reference reach comparison.	Y	Banks within the constructed floodplain channel are stable and compare to reference reach conditions with no signs of erosion or channel movement.
	Vegetation transect across the floodplain will be monitored.	Y	Vegetation transect across the floodplain has been monitored yearly and supports a prevalence of species with a root-stability index greater than 6.
Bank Stabilization (Shields River)	Area visually inspected and photo-documented.	Y	The results of annual inspection and photo documentation along the Shields River in the northwestern corner of the site are presented in the mitigation monitoring reports.
	Stability achieved when the banks are vegetated with a majority of deep-rooting riparian and wetland plant species.	N	In 2024, soil lifts and the riprap installed along the the banks of the Shields River continue to slowly erode away near the northwestern corner of the site. This area has been eroding since a 2013 high flow event damaged the reconstructed bank, and the river downcut several feet at this location.
Upland Buffer	Noxious weeds do not exceed 10 percent cover within upland buffer area.	Y	Noxious weed cover is estimated at less than 5 percent within the upland buffer.

Performance Standards	Success Criteria	Criteria Achieved (Y/N)	Discussion
	Any area disturbed within creditable buffer zone must have at least 50 percent aerial cover of non-weed species by end of monitoring period.	Y	Disturbed areas have successfully established greater than 50 percent aerial cover by non-weed species.
Weed Control	Less than 5 percent absolute cover of state-listed noxious weed species across the site.	Y	Absolute cover of state-listed noxious weed species is estimated at 2 percent across the site in 2024.
Fencing	Install wildlife-friendly fencing along the easement boundaries.	Y	Wildlife-friendly fencing has been removed from the western and southern portions of the easement boundaries to promote wildlife movement across the wetland and the Shields River riparian corridor. The remaining fences are in good condition.
Monitoring	Monitor the site for a minimum period of 5 years or longer as determined by the USACE.	Y	Comprehensive site monitoring has been ongoing for 15 years since the completion of construction activities in 2009.

Summary Data

Wetland Delineation – The total wetland and aquatic habitat acreage delineated in 2024, including pre-existing wetland areas, was 15.12 acres, which is a decrease of 0.51 acre since 2023 (Table 2; Figures A-2 and A-3, Appendix A). The total wetland area at the site ranged from a low in 2010 of 11.53 acres to a high of 15.99 acres in 2021 with 15.12 acres delineated in 2024. Overall, the wetland acreage within the Easton site showed a slight decline of approximately 0.51 acres between 2023 and 2024. The decrease in wetland coverage occurring in the NE corner of the project site is likely due to the dry conditions seen caused by the ongoing drought conditions and below average precipitation in the region from 2022 to present.

In 2020, the USACE (N. Green, personal communication, May 6, 2020) provided guidance on open water, defining it as "areas of open water of any depth with less than 5% rooted emergent vegetation, no vegetation, submerged non-rooted vegetation, and/or submerged vegetation rooted in the substrate that does not extend above the water surface." In accordance with this recent USACE guidance, open water accounted for 0.05-acre of the mitigation site in 2024.

Table 2. Upland, Wetland & Aquatic Habitat Acreage Delineated in 2024 at the Easton Ranch Site

Habitat Type	2024 Acreage
Uplands	19.19
Wetlands & Aquatic Habitat	
Emergent	9.16
Scrub-Shrub	5.91
Open Water	0.05
Subtotal	*15.12*
Project Area	**34.31**

Vegetation – A total of 179 plant species were identified on the site from 2010 through 2024. Vegetation communities were identified by species composition and dominance. The following three upland and ten wetland vegetation community types were identified and mapped in 2024:

- Upland Type 10 – *Bromus inermis/Populus tremuloides*
- Upland Type 13 – *Bromus inermis/Phleum pratense*
- Upland Type 18 – *Lotus corniculatus/Phleum pratense*
- Wetland Type 4 – *Salix* spp.
- Wetland Type 5 – *Populus balsamifera*
- Wetland Type 7 – Aquatic Macrophytes
- Wetland Type 11 – *Juncus* spp.
- Wetland Type 12 – *Eleocharis palustris/Typha latifolia*
- Wetland Type 14 – *Juncus* spp./*Populus balsamifera*
- Wetland Type 15 – *Juncus* spp./*Salix* spp.
- Wetland Type 20 – *Lotus corniculatus/Populus balsamifera*
- Wetland Type 21 – *Carex spp./Juncus* spp.
- Wetland Type 24 – *Phleum pratense*

The community composition for each community type is provided in full detail on the Wetland Mitigation Site Monitoring form (Appendix B), and the community boundaries are shown in Figure A-3 (Appendix A). The most prevalent upland community within the site is Upland Type 13 – *Bromus inermis/Phleum pratense,* while the most prevalent wetland community is Wetland Type 11 – *Juncus spp*.

Vegetation cover was measured along three transects in 2024 (Figure A-2, Appendix A). Details of each transect are provided in the site monitoring form in Appendix B. Photographs of the transect endpoints are provided in Appendix C. Table 3 summarizes the data for Transect T-1. Transect 1 is 1,376 feet long; runs south to north across the east side of the site (Figure A-2, Appendix A); and intersects Upland Types (UT) 10, 13, and 18 and Wetland Types (WT) 7, 11, 14, 15, and 21. In 2024, 33.4 percent of the transect intercepted wetland habitat, a decrease from 58.2 percent in 2023. Total number of vegetation species and upland species increased by three while hydrophytic species stayed the same. Total vegetative cover has remained relatively constant at 90–91 percent from 2020 to 2024.

Table 3. Data Summary for T-1 From 2010 and 2020 Through 2024 at the Easton Ranch Site

Monitoring Year	2010	2020	2021	2022	2023	2024
Transect Length (feet)	**1,376**	**1,376**	**1,376**	**1,376**	**1,376**	**1,376**
Vegetation Community Transitions Along Transect	11	13	17	17	17	16
Vegetation Communities Along Transect	3	9	12	12	9	8
Hydrophytic Vegetation Communities Along Transect	1	5	7	7	6	5
Total Vegetative Species	33	54	53	62	60	63
Total Hydrophytic Species	15	38	40	42	43	43
Total Upland Species	18	16	13	19	17	20
Estimated % Total Vegetative Cover	65	90	91	91	91	91
Estimated % Unvegetated	35	10	9	9	9	9
% Transect Length Comprising Hydrophytic Vegetation Communities	28	42.2	61.7	61.7	58.2	33.4
% Transect Length Comprising Upland Vegetation Communities	70	57.8	38.3	38.3	41.8	66.6
% Transect Length Comprising Unvegetated Open Water	2.5	0.0	0.0	0	0.0	0.0
% Transect Length Comprising Mud Flat	0.0	0.0	0.0	0	0.0	0.0

Data collected on T-2 (Wetland Mitigation Site Monitoring form, Appendix B) are summarized in Table 4. T-2 is 1,333 feet long, runs north to south across the west side of the site, and intersects Upland Types 13 and 18 and Wetland Types 7, 11, 14, 15, and 21. Hydrophytic vegetation communities comprised 61 percent of the transect in 2024, a 3.7 percent decrease since 2023. Total vegetative species decreased by one in 2024 due to the loss of one upland species. Total vegetative cover has remained relatively constant at 90–91 percent from 2020 to 2024.

Table 4. Data Summary for T-2 From 2010 and 2020 Through 2024 at the Easton Ranch Site

Monitoring Year	2010	2020	2021	2022	2023	2024
Transect Length (feet)	**1,333**	**1,333**	**1,333**	**1,333**	**1,333**	**1,333**
Vegetation Community Transitions Along Transect	11	13	11	11	10	10
Vegetation Communities Along Transect	4	9	9	9	7	7
Hydrophytic Vegetation Communities Along Transect	2	6	6	6	5	5
Total Vegetative Species	35	61	60	61	61	60
Total Hydrophytic Species	17	46	47	45	46	46
Total Upland Species	18	15	13	17	15	14
Estimated % Total Vegetative Cover	65	90	91	91	91	91
Estimated % Unvegetated	35	10	9	9	9	9
% Transect Length Comprising Hydrophytic Vegetation Communities	38.7	46.5	61.7	61.7	64.7	61.0
% Transect Length Comprising Upland Vegetation Communities	61.3	53.5	38.3	38.3	35.3	39.0
% Transect Length Comprising Unvegetated Open Water	0.0	0.0	0.0	0.0	0	0
% Transect Length Comprising Mud Flat	0.0	0.0	0.0	0.0	0	0

Data collected on T-3 (Wetland Mitigation Site Monitoring form, Appendix B) are summarized in Table 5. T-3 is 732 feet long and runs west to east across the south end of the site. The transect intersects Upland Type 13 and Wetland Types 11, 14, and 15. In 2024, T-3 gained an additional wetland community. Approximately 55 percent of the transect crossed wetland habitat in 2024, returning to a similar coverage as in 2022. The total number of species increased by four, with the addition of four wetland species. Total vegetative cover has remained relatively constant at 90–91 percent from 2020 to 2024.

Table 5. Data Summary for T-3 From 2010 and 2020 Through 2024 at the Easton Ranch Site

Monitoring Year	2010	2020	2021	2022	2023	2024
Transect Length (feet)	**732**	**732**	**732**	**732**	**732**	**732**
Vegetation Community Transitions Along Transect	11	6	6	6	6	7
Vegetation Communities Along Transect	3	4	4	4	3	4
Hydrophytic Vegetation Communities Along Transect	1	2	2	2	2	3
Total Vegetative Species	24	29	27	27	28	32
Total Hydrophytic Species	11	19	19	19	19	23
Total Upland Species	13	10	8	8	9	9
Estimated % Total Vegetative Cover	65	90	91	91	91	91
Estimated % Unvegetated	35	10	9	9	9	9
% Transect Length Comprising Hydrophytic Vegetation Communities	45	54.8	54.5	54.5	57.8	54.9
% Transect Length Comprising Upland Vegetation Communities	55	45.2	45.5	45.5	42.2	45.1
% Transect Length Comprising Unvegetated Open Water	0.0	0.0	0.0	0.0	0	0
% Transect Length Comprising Mud Flat	0.0	0.0	0.0	0.0	0	0

Several hundred cuttings and containerized plant materials were planted along the constructed flood channel to increase channel stability. A thorough inventory of planted woody species is no longer possible 15 years after construction because it is difficult to identify planted versus naturally occurring trees and shrubs. The difficulty in counting the planted materials was largely due to the success of natural recruitment on the site. In 2021, approximately four red-osier dogwood (*Cornus alba*), 51 narrow-leaf willow (*Salix exigua*), 99 speckled alder (*Alnus incana*), and 85 willow cuttings were identified as surviving. During the 2024 monitoring event, only healthy trees and shrubs were observed, so it can be assumed all the woody species counted in 2021 were surviving in 2024.

The abundance and canopy cover of woody volunteer species continues to increase across the site. Quaking aspen (*Populus tremuloides*) saplings are thriving and spreading along the north and northeastern project boundaries. Volunteer speckled alder, narrow-leaf willow, and balsam poplar (*Populus balsamifera*) were noted along the channel and are establishing well. Volunteer narrow-leaf willow, Bebb's willow (*Salix bebbiana*), and yellow willow *(Salix lutea*) have increased in areas outside of the channel and were observed in abundance within Wetland Type (WT) 11, WT14, WT15, and WT21 across the site. Salix spp. coverage has increased noticeably in the southeastern region of the site. Young cottonwoods were also observed within WT14, WT18, and WT21 along Transects 1 and 2 and around the perimeter of WT5 and WT14 in the western and southern portions of the project area. Speckled alder and red-osier dogwood were primarily observed along or within the excavated channel. Despite many of the younger saplings experiencing substantial herbivory by deer and moose across the site, total scrub-shrub wetland cover has increased by 1.52 acres in 2024.

During the June 2024 monitoring, infestations of Canada thistle (*Cirsium arvense*), a Priority 2B noxious weed in Montana, were identified (Figure A-3, Appendix A). Many Canada thistle infestations found in 2023 were eradicated. However, new infestations were seen in 2024, keeping the number of infestations consistent with 2023 at 14 populations. Several of the infestations were rated as trace (< 1%), other infestations were rated low (1%–5%), and three infestations were rated moderate (6%-25%). Canada thistle infestations were found in both upland and wetland habitats. Canada thistle was observed in WT's 11, 14, 15, 20, 21, 24 and UT 10, 13, and 18. Infestations of gypsy-flower (*Cynoglossum officinale*), a Priority 2B noxious weed in Montana, were observed in 2024 (Figure A-3, Appendix A). All gypsy-flower infestations were rated as occurrences trace and located in UTs 13 and 18. A trace number of the noxious weed sulphur cinquefoil (*Potentilla recta*), a Priority 2B noxious weed in Montana, was found in the southcentral portion of the site. Overall, MDT's annual weed management efforts have effectively controlled the spread of noxious weed populations across the site. Bird's-foot trefoil (*Lotus corniculatus*) has significantly decreased in 2024 due to vegetation management efforts. MDT's ongoing weed-management program conducted weed management actions in June and October of 2024.

Hydrology – The hydrology for the site is supplied from multiple sources, including a shallow seasonal groundwater table, direct precipitation, surface runoff, flood flows from the adjacent Shields River, and surface-water flows from two sources in the northcentral and northeastern corners of the site. The surface-water flows into the northcentral portion of the site, emanating from an old flood channel draining a beaver pond complex to the north of the Easton site along the northcentral boundary fence. Irrigation flows are diverted from an existing irrigation feeder ditch located at the northeastern corner of the mitigation site. These sources of surface flow were not flowing during the June 2024 site visit. Approximately 3% of the site was inundated during the 2024 monitoring event, a 2% increase from 2023. During the 2024 visit the depressional areas in the south and east-central portions of the site were inundated as well as some of the wetland cells. However, the wetlands cells in the northeastern portion of the site were not inundated as irrigation flows had not been diverted into the site by the landowner. Inundation depths ranged from 0.1 to 1.5 feet across the site. As in 2023, there was no evidence of overland flows from the adjacent Shields River within Transect 2 or the overflow channel. The overflow channel remained well-vegetated, and the channel bottom remained stable. On the day of monitoring, the Shields River reached a gage height of 2.86 feet according to the USGS gage near Wilsall, MT (06192980).

Soils – Paired soil pits were excavated at ten locations within the mitigation area. The mitigation site was mapped as containing the Meadowcreek and Nesda loam soil series by the Natural Resources Conservation Service (NRCS, 2024a), which are not classified as hydric soils (Figure A-2, Appendix A). Soil textures within wetland soil pits ranged from silty clay loam to sandy loam. Hydric soil indicators were observed within all wetland soil pits and included the following indicators: depleted matrix, hydrogen sulfide, and redox dark surface.

Soil textures within upland soil pits ranged from silty clay loam to clay loam. Upland point DP03u had hydric soil indicators but lacked hydrophytic vegetation and wetland hydrology. The area in which DP03u was sampled was previously wetland, explaining the presence of relict hydric soils. The USACE wetland determination data forms in Appendix B provide additional field observations for the paired data points.

Photographs – Photographs taken at photo points 1–7 (PP1 to PP7), transect endpoints, and paired data points are provided in Appendix C, with comparisons between 2024 and the first year of monitoring. Please refer to previous year's monitoring reports for all previous annual photographs. https://www.mdt.mt.gov/publications/brochures/wetland-mitigation.aspx

Functional Assessment – The 2024 results of the functional assessments are summarized in Table 6. Montana Wetland Assessment Method (MWAM) forms for the Easton Ranch Site are provided in Appendix B. Since monitoring began in 2010, the site has been divided into three Assessment Areas (AA) for the purpose of functional assessment. Creation, Restoration, and Preservation AAs all rate as Category II wetlands with moderate to high ratings for many parameters, including MT Natural Heritage Program Species Habitat, General Wildlife Habitat, Flood Attenuation, Short- and Long-Term Surface-Water Storage, Sediment/Nutrient/Toxicant Removal, and Production Export/Food Chain Support.

Table 6. Montana Wetland Assessment Method Summary for the Easton Ranch Site

Function and Value Parameters From the 2008 Montana Wetland Assessment Method	2024 Restoration	2024 Preservation	2024 Creation
Listed/Proposed Threatened & Endangered (T&E) Species Habitat	Low (0.1)	Low (0.1)	Low (0.1)
Montana Natural Heritage Program Species (MTNHP) Habitat	High (0.9)	High (0.9)	High (0.9)
General Wildlife Habitat	Mod (0.7)	High (0.7)	High (0.9)
General Fish/Aquatic Habitat	NA	NA	NA
Flood Attenuation	Mod (0.6)	High (0.9)	High (0.8)
Short- and Long-Term, Surface-Water Storage	Mod (0.6)	Mod (0.6)	High (0.8)
Sediment/Nutrient/Toxicant Removal	High (1.0)	High (1.0)	High (0.9)
Sediment/Shoreline Stabilization	High (0.9)	NA	High (0.9)
Production Export/Food Chain Support	Mod (0.7)	Mod (0.7)	High (1.0)
Groundwater Discharge/Recharge	Mod (0.7)	Mod (0.7)	Mod (0.7)
Uniqueness	Mod (0.4)	Mod (0.4)	Mod (0.6)
Recreation/Education Potential (bonus points)	NA	NA	NA
Actual Points/Possible Points	**6.60 / 10**	**6.00 / 9**	**7.60 / 10**
% of Possible Score Achieved	**66%**	**67%**	**76%**
Overall Category	**II**	**II**	**II**

Wildlife – Seventeen bird species were again identified at the site in 2024, including two Bald Eagles (*Haliaeetus leucocephalus*) (Site Monitoring Form Appendix B). In addition to the bird species, white-tailed deer (*Odocoileus virginianus*) and a yellow-bellied marmot (*Marmota flaviventris*) were observed during the 2024 monitoring visit.

Stream Bank Stabilization – During the spring 2013 high-flow event, significant bank erosion occurred immediately upstream of PP4B. This erosion exposed the riprap and undermined the riprap and coir-wrapped soil lifts along an approximately 85-foot-long reconstructed bank, which caused significant loss of soil and willow cuttings. Photo point PP4B, located at the south end of the reconstructed bank, had to be relocated because of bank erosion and woody debris accumulation. Additional bank erosion has been noted since the dramatic lateral cutting event of 2013, and this bank section remains exposed and vulnerable. The 2018 runoff period was supported by above-average precipitation in June. From 2019 through 2024, bank erosion continued along the downstream (south) portion of the 85-foot-long bank and resulted in areas of undercutting and loss of finer textured subsoils. Photographs showing the bank erosion are provided in Appendix C.

Functional Units Summary – The 2024 functional units summary is summarized in Table 7. A total of 106.21 functional units were generated at the Easton site after applying the appropriate mitigation ratios to the 2024 wetland acreage and multiplying that value by the points generated from the assessment area. Functional units have decreased in 2024 due to the decrease in wetland acreage and lack of structural diversity in the restored and preserved wetlands.

Table 7. Summary of Functional Units for Easton wetland mitigation site

Mitigation Type	2024 Delineated Acreage	Ratio	2024 Mitigation Credit Acres	MWAM Actual Points	Functional Units
Restoration (Re-establishment)	1.64	1:1	1.64	6.60	10.82
Preservation	1.10	4:1	0.28	6.00	1.68
Establishment (Creation)	12.33	1:1	12.33	7.60	93.71
Functional Units (Mitigation Credit Acres × Actual Points)					**106.21**

Credit Summary – Table 8 summarizes the estimated wetland credits based on the USACE-approved credit ratios and the wetland delineation completed in June 2024. Proposed mitigation included creating 24.95 acres of emergent and shrub/scrub wetlands, reestablishing a 1.56-acre flood channel, preserving 1.10 acres of pre-existing wetland and maintaining 6.43 acres of upland buffer. Proposed wetland credits for the project site totaled 27.41 credit acres, which accounted for 0.67 acres of temporary impacts associated with constructing the mitigation wetland. The total mitigation credit estimated in 2024 totaled 14.56 credit acres, which is slightly less than observed in 2023. The site is approximately 12.85 acres short of the original goal of 27.41 credit acres. This shortfall is caused by the anticipated wetland acreage not developing as planned in the site's eastern, west central, and southwest portions of the site.

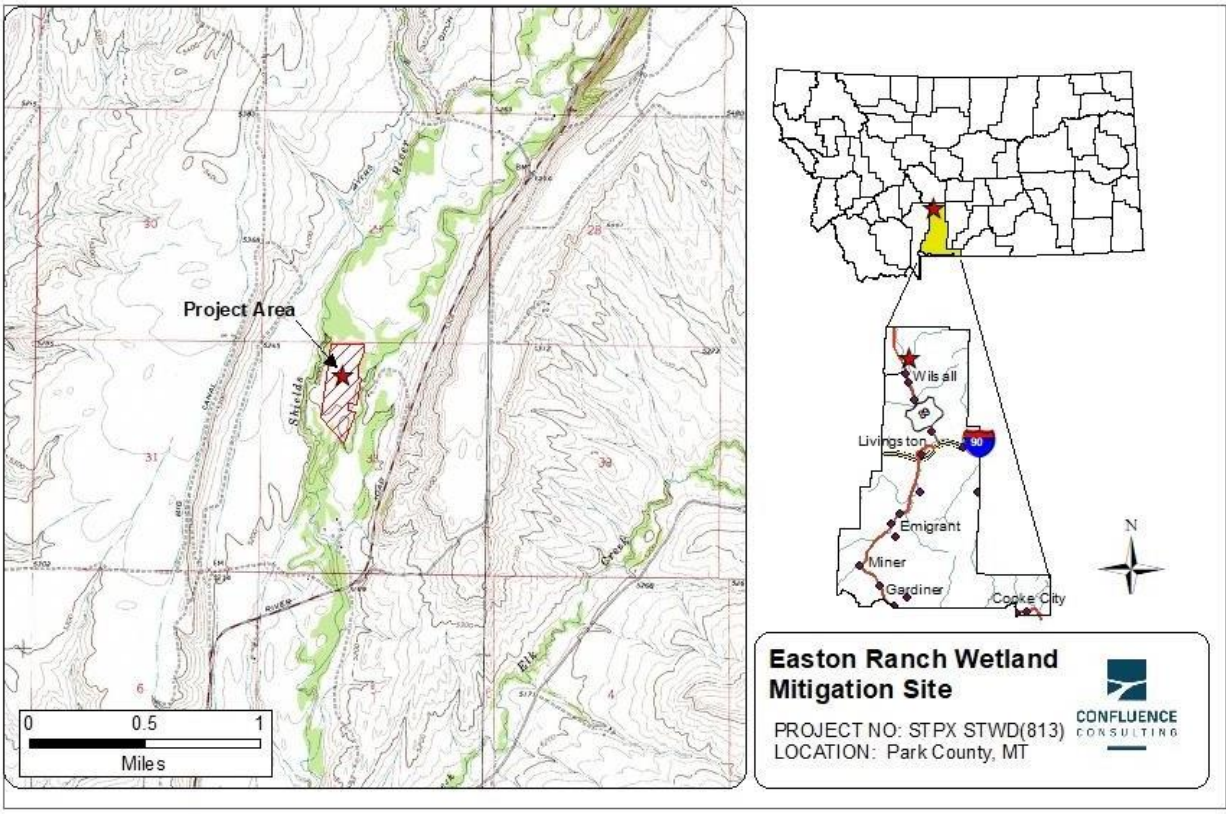
Table 8. Wetland Mitigation Credits Estimated for the Easton Ranch Site (2021–2024)

Proposed Mitigation Features	Compensatory Mitigation Type	USACE Mitigation Ratios	Anticipated Final Credit Acreages	Proposed Final Wetland Credits (Acres)	2021 Wetland Acreages	2021 Credit Estimated (Acres)	2022 Wetland Acreages	2022 Credit Estimated (Acres)	2023 Wetland Acreages	2023 Credit Estimated (Acres)	2024 Wetland Acreages	2024 Credit Estimated (Acres)
Creation of palustrine emergent wetland via shallow excavation	Establishment (Creation)	1:1	24.95	24.95	13.25	13.25	13.24	13.24	12.84	12.84	12.33	12.33
Reestablishment of relic flood channel	Restoration (Reestablishment)	1:1	1.56	1.56	1.64	1.64	1.64	1.64	1.64	1.64	1.64	1.64
Preservation of existing shrub/scrub and palustrine emergent wetland	Preservation	4:1	1.10	0.28	1.10	0.28	1.10	0.28	1.10	0.28	1.10	0.28
Establish a 50-foot-wide upland buffer on the perimeter of the site[a]	Upland Buffer	5:1	6.43	1.29	5.07	1.01	4.77	0.95	4.92	0.98	4.89	0.98
Temporary Project impacts			–0.67	–0.67	–0.67	–0.67	–0.67	–0.67	–0.67	–0.67	–0.67	–0.67
Total Mitigation Credit Acres:				**27.41**		**15.51**		**15.44**		**15.07**		**14.56**

[a] Upland buffer around perimeter of site does not include wetland areas.

Maps, Plans, Photos

Figure 1. Site Location Map



Project Area Maps/Figures: See Appendix A (Figure A-2 – 2024 Monitoring Activity Locations; Figure A-3 – 2024 Mapped Site Features; and Figure A-4 – 2024 Wetland Delineation)

Data Forms: See Appendix B (Site Monitoring form, USACE data forms, and MWAM forms)

Plant List: See Appendix B (Table B-1)

Photos: See Appendix C

Plans: See Appendix D of 2018 Easton Monitoring Report found at this link: https://www.mdt.mt.gov/publications/brochures/wetland-mitigation.aspx

Conclusions

Based on the results of the fifteenth year of monitoring, the mitigation site is continuing an upward trend toward a diverse wetland ecosystem. The site meets all performance standards except for wetland acreage development and bank stabilization (deep-rooting riparian vegetation establishment). MDT will coordinate with the US Army Corps of Engineers to discuss meeting these performance standards and potential adaptive management actions.

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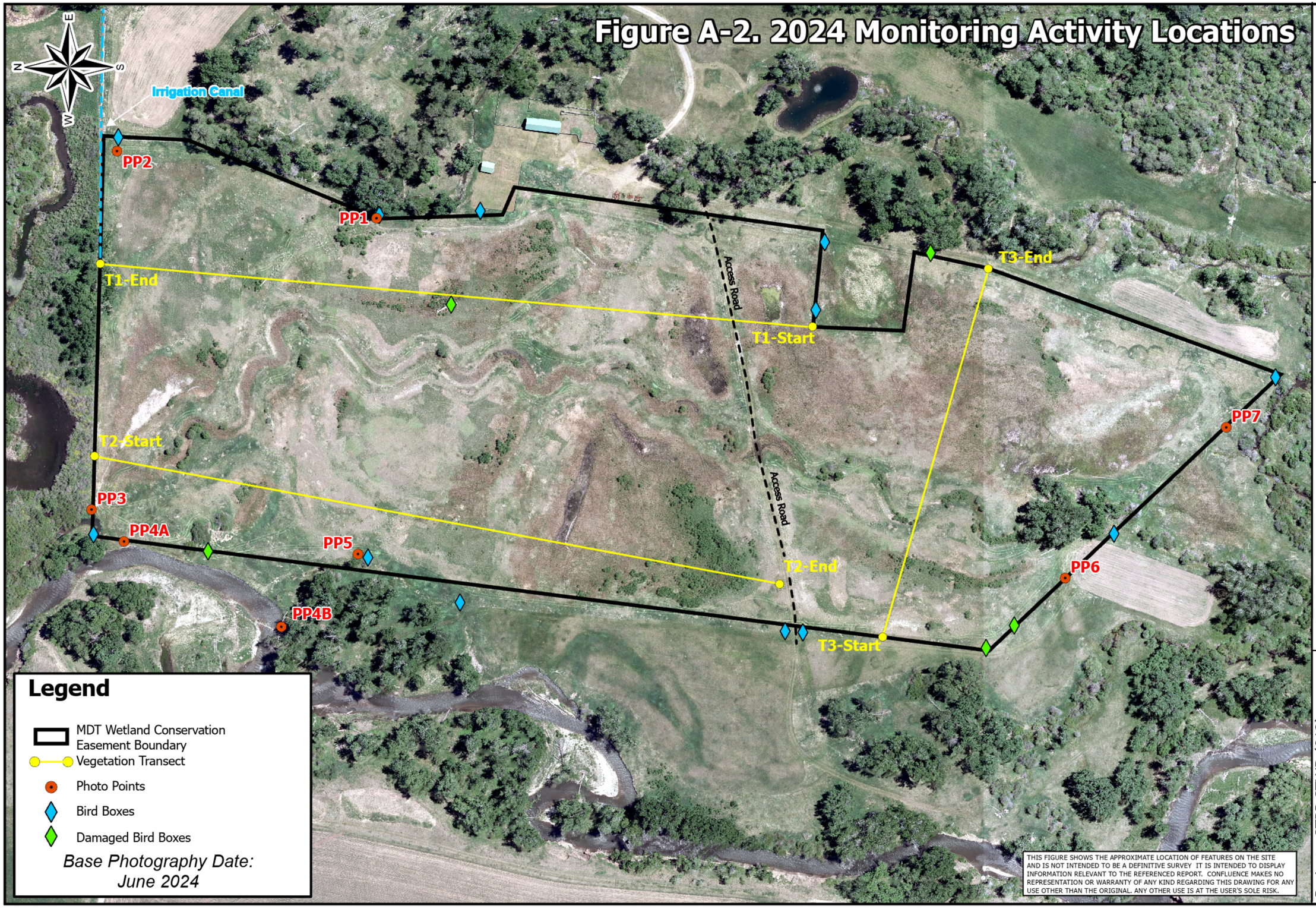
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APPENDIX A
PROJECT AREA MAPS

MDT Wetland Mitigation Monitoring
Easton Ranch
Park County, Montana

Figure A-2. 2024 Monitoring Activity Locations



Legend

- MDT Wetland Conservation Easement Boundary
- Vegetation Transect
- Photo Points
- Bird Boxes
- Damaged Bird Boxes

Base Photography Date: June 2024

THIS FIGURE SHOWS THE APPROXIMATE LOCATION OF FEATURES ON THE SITE AND IS NOT INTENDED TO BE A DEFINITIVE SURVEY IT IS INTENDED TO DISPLAY INFORMATION RELEVANT TO THE REFERENCED REPORT. CONFLUENCE MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND REGARDING THIS DRAWING FOR ANY USE OTHER THAN THE ORIGINAL. ANY OTHER USE IS AT THE USER'S SOLE RISK.

CONFLUENCE CONSULTING

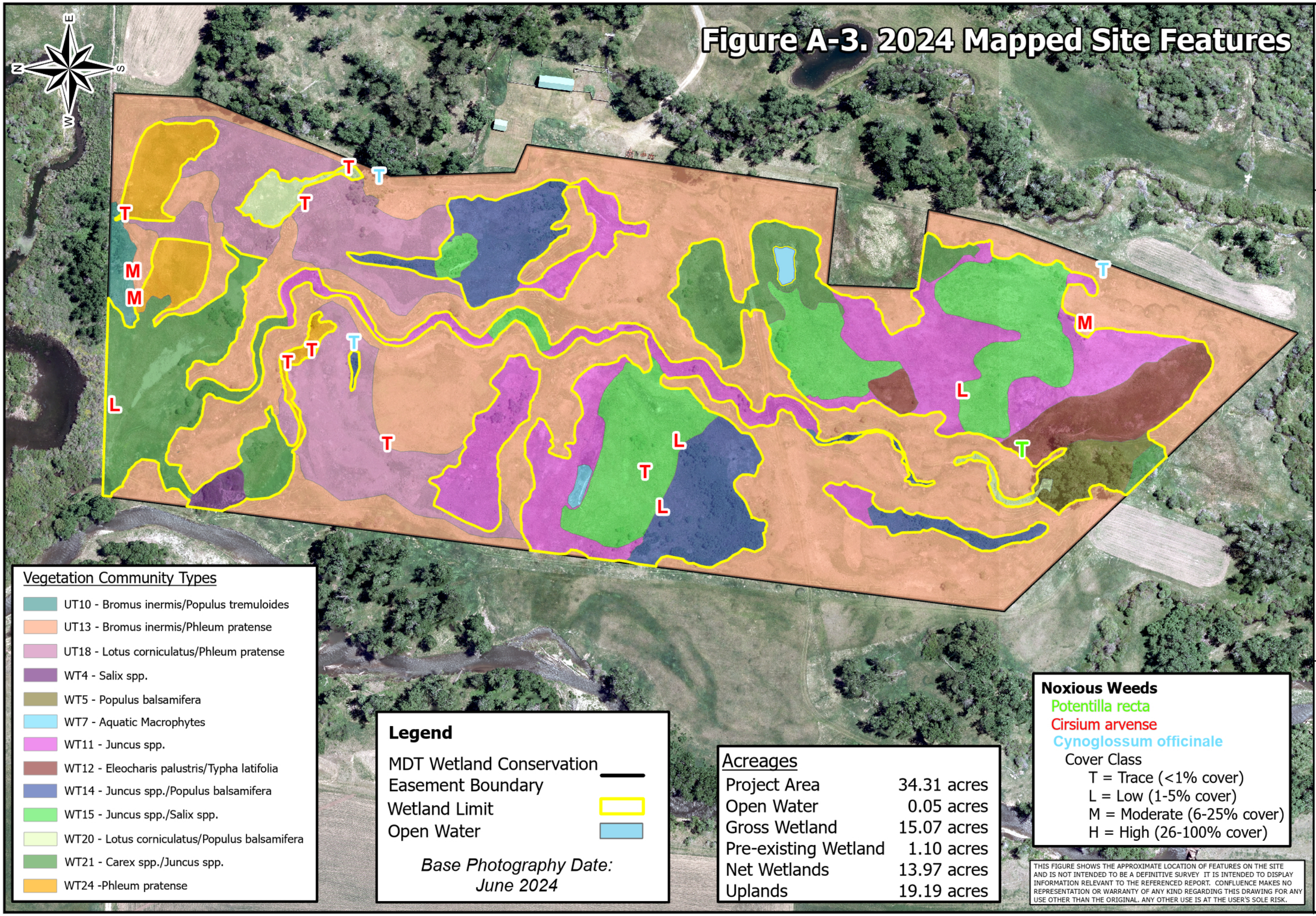
Easton Ranch Wetland Mitigation
2024 Monitoring Activity Locations

0 75 150 300 450 600 750 Feet

Project:	STPP STWD (813)
Location:	Park Co., Montana
Date Map Created:	September 2024
Project Manager:	R McEldowney
Drawn By:	EIR

File: X:\Project\MDT Wetland Mitigation 2\ArcGIS Pro\Easton\Easton.aprx

Figure A-3. 2024 Mapped Site Features



CONFLUENCE CONSULTING

Easton Ranch Wetland Mitigation
2024 Mapped Site Features

0 75 150 300 450 600 750 Feet

Project: STPX-STWD(813)
Location: Park Co., Montana
Date Map Created: September 2024
Project Manager: R McEldowney
Drawn By: EIR

File: X:\Project\MDT Wetland Mitigation 2\ArcGIS Pro\Easton\Easton.aprx

Vegetation Community Types

- UT10 - Bromus inermis/Populus tremuloides
- UT13 - Bromus inermis/Phleum pratense
- UT18 - Lotus corniculatus/Phleum pratense
- WT4 - Salix spp.
- WT5 - Populus balsamifera
- WT7 - Aquatic Macrophytes
- WT11 - Juncus spp.
- WT12 - Eleocharis palustris/Typha latifolia
- WT14 - Juncus spp./Populus balsamifera
- WT15 - Juncus spp./Salix spp.
- WT20 - Lotus corniculatus/Populus balsamifera
- WT21 - Carex spp./Juncus spp.
- WT24 -Phleum pratense

Legend

MDT Wetland Conservation Easement Boundary
Wetland Limit
Open Water

Base Photography Date: June 2024

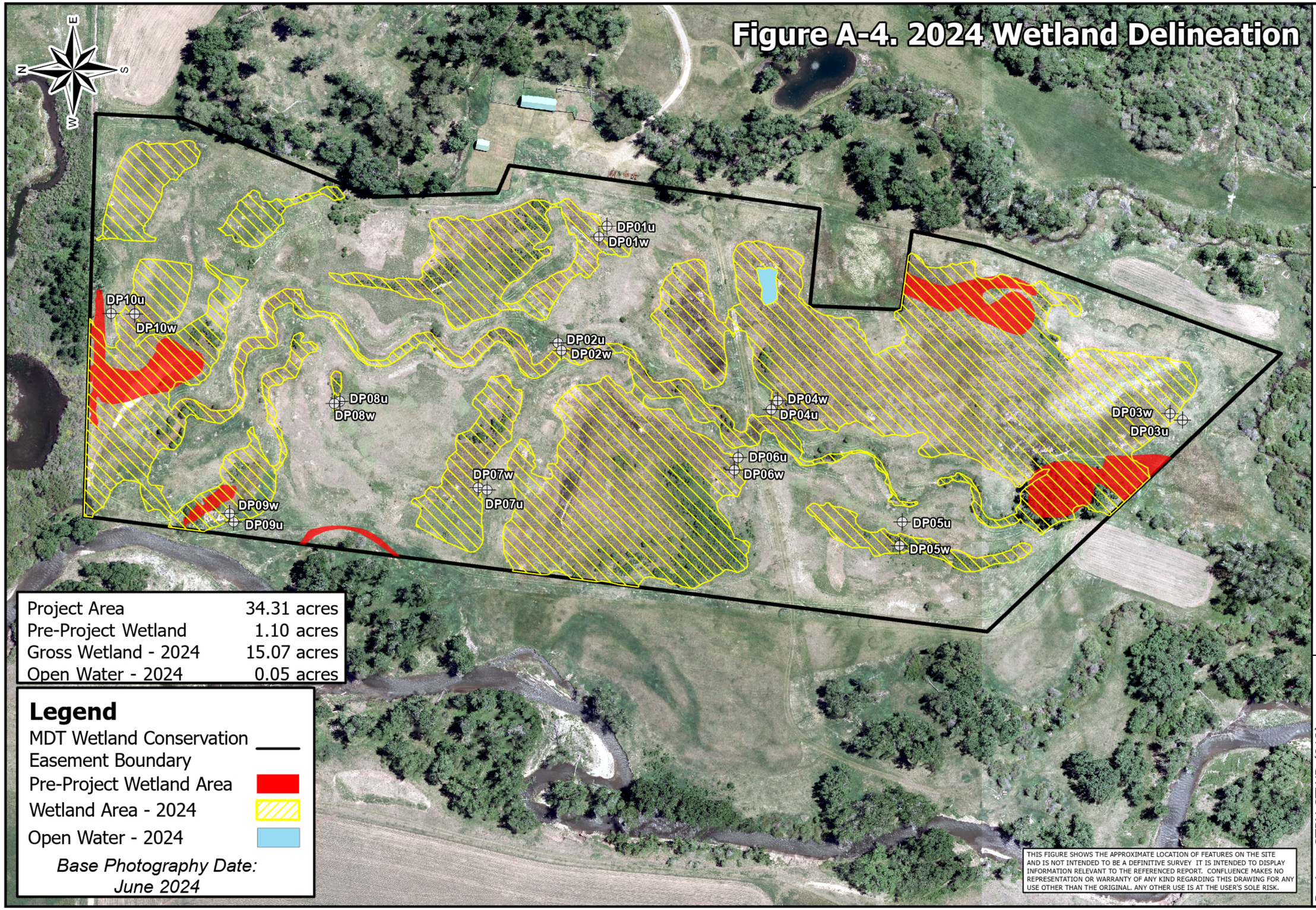
Acreages

Project Area	34.31 acres
Open Water	0.05 acres
Gross Wetland	15.07 acres
Pre-existing Wetland	1.10 acres
Net Wetlands	13.97 acres
Uplands	19.19 acres

Noxious Weeds
Potentilla recta
Cirsium arvense
Cynoglossum officinale
Cover Class
T = Trace (<1% cover)
L = Low (1-5% cover)
M = Moderate (6-25% cover)
H = High (26-100% cover)

THIS FIGURE SHOWS THE APPROXIMATE LOCATION OF FEATURES ON THE SITE AND IS NOT INTENDED TO BE A DEFINITIVE SURVEY. IT IS INTENDED TO DISPLAY INFORMATION RELEVANT TO THE REFERENCED REPORT. CONFLUENCE MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND REGARDING THIS DRAWING FOR ANY USE OTHER THAN THE ORIGINAL. ANY OTHER USE IS AT THE USER'S SOLE RISK.

Figure A-4. 2024 Wetland Delineation



CONFLUENCE CONSULTING

Easton Ranch Wetland Mitigation
2024 Wetland Delineation

0 75 150 300 450 600 750 Feet

Project: STPX-STWD (813)
Location: Park Co., Montana
Date Map Created: September 2024
Project Manager: R McEldowney
Drawn By: EIR

File: X:\Project\MDT Wetland Mitigation 2\ArcGIS Pro\Easton\Easton.aprx

APPENDIX B
MONITORING FORMS

MDT Wetland Mitigation Monitoring
Easton Ranch
Park County, Montana

MDT WETLAND MITIGATION SITE MONITORING FORM

Project Site: Easton Assessment Date/Time 6/19/2024

Person(s) conducting the assessment: E Reynaud, J Trilling, R Cutler

Weather: 78 degrees, sunny, clear Location: Northeast of Wilsall

MDT District: Butte Milepost: NA

Legal Description: T 4N R 9E Section(s) 32 NW 1/4

Initial Evaluation Date: 8/25/2010 Monitoring Year: 15 #Visits in Year: 1

Size of Evaluation Area: 34.31 (acres)

Land use surrounding wetland:

Agriculture, Shields River, Scrub/Shrub and Forested Riparian corridors.

HYDROLOGY

Surface Water Source: High groundwater, periodic overbank flow from the Shields River, irrigation

Inundation: ☑ Average Depth: 0.2 **(ft)** Range of Depths: 0.1-1.5 **(ft)**

Percent of assessment area under inundation: 3 %

Depth at emergent vegetation-open water boundary: 0.3 **(ft)**

If assessment area is not inundated then are the soils saturated within 12 inches of surface: Yes

Other evidence of hydrology on the site (ex. – drift lines, erosion, stained vegetation, etc:

Soil saturation, high water table, geomorphic position, positive FAC-Neutral test

Groundwater Monitoring Wells

Record depth of water surface below ground surface, in feet.

Additional Activities Checklist:

☐ Map emergent vegetation-open water boundary on aerial photograph.

☐ Observe extent of surface water during each site visit and look for evidence of past surface water elevations (drift lines, erosion, vegetation staining, etc.)

☐ Use GPS to survey groundwater monitoring well locations, if present.

Hydrology Notes:

Saturation within wetland cells was more prevalent than the 2023 monitoring event. This was likely caused by significant rain/snow events that occurred shortly before the 2024 monitoring. In general, saturation was much more prevalent within the southern portion of the site.

VEGETATION COMMUNITIES

Site Easton

(Cover Class Codes **0** = < 1%, **1** = 1-5%, **2** = 6-10%, **3** = 11-20%, **4** = 21-50% , **5** = >50%)

Community # 4 **Community Type:** Salix spp. / **Acres** 0.14

Species	Cover class	Species	Cover class
Carex nebrascensis	2	Elymus repens	2
Mentha arvensis	1	Phalaris arundinacea	3
Phleum pratense	1	Ribes inerme	1
Ribes lacustre	2	Salix bebbiana	3
Salix drummondiana	3	Salix lasiandra	3
Scirpus microcarpus	1	Urtica dioica	1

Comments:

Preserved scrub-shrub community along the banks of the Shields River. Dominated by Salix drummondiana and Salix lasiandra. Salix bebbiana cover increased in 2024.

Community # 5 **Community Type:** Populus balsamifera / **Acres** 0.41

Species	Cover class	Species	Cover class
Bromus inermis	2	Cirsium arvense	2
Glyceria striata	2	Populus angustifolia	4
Populus balsamifera	4	Salix bebbiana	2
Salix lasiandra	2	Scirpus microcarpus	1
Scutellaria lateriflora	2		

Comments:

Preserved forested wetland area along the southern project boundary.

Community # 7 Community Type: Aquatic macrophytes / **Acres** 0.09

Species	Cover class	Species	Cover class
Algae, green	3	Alopecurus geniculatus	0
Bare Ground	2	Beckmannia syzigachne	1
Carex nebrascensis	0	Carex pellita	1
Carex utriculata	2	Cornus alba	0
Eleocharis palustris	2	Glyceria grandis	1
Hippuris vulgaris	0	Juncus balticus	2
Juncus effusus	2	Juncus ensifolius	0
Mentha arvensis	1	Open Water	4
Ranunculus aquatilis	0	Ranunculus gmelinii	0
Ruppia maritima	1	Salix lutea	1
Schoenoplectus pungens	1	Scirpus microcarpus	1
Typha latifolia	2		

Comments:

This CT consists of two cells. The eastern cell qualifies as Open Water because it contains less than 5% emergent vegetation, while the western cell contains more than 5% rooted emergent vegetation and therefore does not qualify as Open Water.

Community # 10 Community Type: Bromus inermis / Populus tremuloides **Acres** 0.2

Species	Cover class	Species	Cover class
Agrostis stolonifera	1	Bromus inermis	4
Carum carvi	1	Cirsium arvense	0
Dactylis glomerata	2	Elymus repens	1
Leymus cinereus	1	Lotus corniculatus	1
Phleum pratense	3	Poa palustris	1
Poa pratensis	1	Populus balsamifera	0
Populus tremuloides	3	Taraxacum officinale	1
Trifolium pratense	1		

Comments:

Small CT along the northern project boundary.

Community # 11 **Community Type:** Juncus spp. / **Acres** 4.05

Species	Cover class	Species	Cover class
Agrostis stolonifera	1	Alopecurus arundinaceus	1
Alopecurus pratensis	1	Bare Ground	1
Bromus inermis	1	Carex aquatilis	1
Carex atherodes	1	Carex bebbii	1
Carex nebrascensis	1	Carex utriculata	2
Carum carvi	1	Cirsium arvense	1
Deschampsia caespitosa	0	Equisetum arvense	2
Juncus balticus	4	Juncus effusus	2
Juncus ensifolius	0	Juncus longistylis	2
Juncus tenuis	0	Lotus corniculatus	2
Lysimachia ciliata	0	Mentha arvensis	0
Phalaris arundinacea	1	Phleum pratense	1
Poa palustris	1	Poa pratensis	1
Populus balsamifera	1	Salix bebbiana	1
Salix lutea	1	Schedonorus pratensis	0
Scirpus microcarpus	1	Solidago gigantea	0
Stachys pilosa	1		

Comments:

The coverage of This CT decreased in 2024 primarily due to the expansion of Wetland Type 15 Juncus spp./Salix spp. Similarly to the rest of the site, Lotus corniculatus has decreased due to vegetation management. This CT contains a wide diversity of native wetland vegetation.

Community # 12 **Community Type:** Eleocharis palustris / Typha latifolia **Acres** 0.95

Species	Cover class	Species	Cover class
Agrostis stolonifera	1	Alopecurus pratensis	1
Beckmannia syzigachne	1	Carex aquatilis	1
Carex utriculata	2	Eleocharis palustris	1
Glyceria elata	1	Juncus balticus	1
Mentha arvensis	1	Phalaris arundinacea	1
Ruppia maritima	1	Typha latifolia	4

Comments:

The coverage of This CT decreased slightly in 2024.

Community # 13 **Community Type:** Bromus inermis / Phleum pratense **Acres** 14

Species	Cover class	Species	Cover class
Achillea millefolium	0	Agrostis stolonifera	1
Alopecurus arundinaceus	0	Alopecurus pratensis	0
Alyssum alyssoides	0	Bare Ground	1
Bromus arvensis	0	Bromus ciliatus	0
Bromus inermis	3	Camelina microcarpa	1
Carex nebrascensis	0	Carum carvi	1
Cirsium arvense	1	Dactylis glomerata	1
Elymus repens	2	Equisetum arvense	0
Glycyrrhiza lepidota	0	Juncus balticus	1
Leymus cinereus	1	Lotus corniculatus	3
Lysimachia ciliata	0	Medicago sativa	0
Melilotus officinalis	0	Phalaris arundinacea	0
Phleum pratense	3	Poa palustris	1
Poa pratensis	2	Populus balsamifera	1
Ranunculus macounii	0	Salix exigua	1
Salix lutea	0	Schedonorus pratensis	0
Sisyrinchium idahoense	0	Stachys pilosa	0
Taraxacum officinale	1	Thlaspi arvense	0
Trifolium hybridum	1	Trifolium pratense	1

Comments:

This CT makes up the majority of upland acreage in the site. The coverage has continued to increase from 2023 to 2024.

Community # 14 **Community Type:** Juncus spp. / Populus balsamifera **Acres** 2.12

Species	Cover class	Species	Cover class
Agrostis stolonifera	1	Alnus incana	1
Alopecurus arundinaceus	1	Bare Ground	1
Carex nebrascensis	1	Carex pachystachya	1
Carex pellita	1	Carex utriculata	1
Carum carvi	0	Carum carvi	0
Cirsium arvense	0	Deschampsia caespitosa	1
Elymus repens	0	Equisetum arvense	1
Juncus balticus	4	Juncus effusus	2
Lotus corniculatus	1	Mentha arvensis	1
Phleum pratense	1	Poa palustris	2
Poa pratensis	0	Populus angustifolia	1
Populus balsamifera	4	Potentilla gracilis	0
Salix bebbiana	1	Salix boothii	1
Salix drummondiana	1	Salix exigua	1
Salix lasiandra	0	Salix lutea	2
Sinapis arvensis	0	Sisyrinchium idahoense	0
Symphyotrichum subspicatum	0	Taraxacum officinale	0
Trifolium hybridum	0	Trifolium pratense	0

Comments:

No open water was observed in this CT in 2024. Significant herbivory was observed on the cottonwoods which is stunting the vertical growth. Nevertheless, there are large stands of cottonwoods and saplings throughout the vegetation community.

Community # 15 **Community Type:** Juncus spp. / Salix spp. **Acres** 3.24

Species	Cover class	Species	Cover class
Agrostis stolonifera	0	Alnus incana	1
Bare Ground	1	Carex nebrascensis	2
Carex pachystachya	0	Carex pellita	0
Carex utriculata	1	Carum carvi	0
Cicuta douglasii	1	Cirsium arvense	0
Juncus balticus	4	Juncus effusus	1
Juncus tenuis	1	Lotus corniculatus	0
Mentha arvensis	1	Phalaris arundinacea	0
Poa palustris	0	Populus balsamifera	2
Potentilla anserina	1	Salix bebbiana	1
Salix boothii	0	Salix drummondiana	1
Salix exigua	1	Salix lasiandra	1
Salix lutea	3	Scirpus microcarpus	1
Sisyrinchium idahoense	0	Stachys pilosa	1
Taraxacum officinale	0		

Comments:

Although herbivory is stunting vertical growth of woody species, this CT increased 1.79 acres in 2024.

Community # 18 Community Type: Lotus corniculatus / Phleum pratense **Acres** 3.35

Species	Cover class	Species	Cover class
Achillea millefolium	0	Agrostis stolonifera	1
Alnus incana	1	Alopecurus arundinaceus	2
Bare Ground	1	Bromus carinatus	0
Bromus inermis	0	Bromus tectorum	0
Camelina microcarpa	1	Carex pachystachya	1
Carex pellita	1	Carum carvi	2
Elymus repens	3	Elymus trachycaulus	0
Equisetum arvense	1	Juncus balticus	2
Leymus cinereus	1	Lotus corniculatus	3
Medicago lupulina	1	Melilotus officinalis	0
Open Water	0	Phalaris arundinacea	0
Phleum pratense	3	Poa palustris	0
Poa pratensis	2	Populus balsamifera	1
Rumex salicifolius	0	Salix exigua	1
Schedonorus pratensis	1	Solidago lepida	0
Stachys pilosa	0	Taraxacum officinale	1
Thlaspi arvense	1	Tragopogon dubius	0
Trifolium hybridum	2	Trifolium pratense	1

Comments:

Upland CT first identified in 2018, mainly across the northern portion of site. In 2021 it was thought much of this CT in the northeastern portion of the project area was transitioning to wetland, however during the 2023 and 2024 monitoring events, wetlands in this area did not increase.

Community # 20 Community Type: Lotus corniculatus / Populus balsamifera **Acres** 0.29

Species	Cover class	Species	Cover class
Agrostis stolonifera	1	Elymus repens	2
Equisetum arvense	1	Lotus corniculatus	4
Phleum pratense	3	Populus balsamifera	3
Salix exigua	1		

Comments:

A CT mapped in 2019 in the northeastern corner of the project area replacing a small area within CT 18. There are many young cottonwoods in this CT and it is anticipated this CT will expand slowly in the future. However, there was no noticeable change in this CT from 2023.

Community # 21 **Community Type:** Carex spp. / Juncus spp. **Acres** 2.95

Species	Cover class	Species	Cover class
Agrostis stolonifera	2	Alopecurus arundinaceus	1
Bare Ground	3	Calamagrostis canadensis	1
Carex aquatilis	1	Carex atherodes	2
Carex bebbii	1	Carex microptera	1
Carex nebrascensis	1	Carex pachystachya	3
Carex pellita	3	Carex utriculata	1
Carum carvi	0	Cirsium arvense	0
Dactylis glomerata	0	Deschampsia caespitosa	1
Eleocharis palustris	0	Elymus repens	1
Epilobium ciliatum	1	Equisetum arvense	1
Glyceria grandis	1	Juncus balticus	4
Juncus effusus	1	Juncus ensifolius	0
Juncus longistylis	1	Juncus tenuis	1
Lotus corniculatus	1	Lysimachia ciliata	0
Mentha arvensis	1	Open Water	1
Phalaris arundinacea	0	Phleum pratense	1
Poa palustris	0	Poa pratensis	1
Populus balsamifera	1	Ranunculus macounii	0
Salix bebbiana	1	Salix exigua	1
Salix lasiandra	0	Salix lutea	1
Scirpus microcarpus	1	Stachys pilosa	1
Taraxacum officinale	0	Typha latifolia	1

Comments:

No changes were seen in the vegetation species composition of the community.

Community # 24 **Community Type:** Phleum pratense / **Acres** 0.86

Species	Cover class	Species	Cover class
Agrostis stolonifera	1	Alnus incana	1
Alopecurus arundinaceus	2	Bare Ground	1
Bromus carinatus	0	Bromus inermis	1
Camelina microcarpa	1	Carex pachystachya	1
Carex pellita	1	Carum carvi	2
Cirsium arvense	1	Elymus repens	3
Equisetum arvense	1	Juncus balticus	2
Leymus cinereus	1	Lotus corniculatus	3
Medicago lupulina	1	Melilotus officinalis	0
Phleum pratense	4	Poa palustris	0
Poa pratensis	2	Populus balsamifera	1
Rumex salicifolius	0	Salix exigua	1
Schedonorus pratensis	1	Solidago lepida	0
Stachys pilosa	0	Taraxacum officinale	1
Thlaspi arvense	1	Trifolium hybridum	2
Trifolium pratense	1		

Comments:

Transitional wetland CT primarily along the northern end of Transect 1 created in 2023. Cover of this community decreased in 2024 due to growth by CT18 Lotus corniculatus/Phleum pratense.

Total Vegetation Community Acreage **32.65**

VEGETATION TRANSECTS

Site: Easton Date: 6/19/2024

Transect Number: 1 **Compass Direction from Start:** 5

Interval Data:

Ending Station 65 Community Type: Carex spp. / Juncus spp.

Species	Cover class	Species	Cover class
Agrostis stolonifera	1	Brassica kaber	0
Carex nebrascensis	1	Carex pachystachya	1
Carex pellita	1	Carex utriculata	1
Cirsium arvense	0	Elymus repens	1
Epilobium ciliatum	0	Equisetum arvense	1
Juncus balticus	4	Juncus longistylis	1
Juncus tenuis	1	Mentha arvensis	1
Poa pratensis	1	Stachys pilosa	1

Ending Station 93 Community Type: Aquatic macrophytes /

Species	Cover class	Species	Cover class
Algae, green	3	Carex nebrascensis	0
Carex pellita	1	Carex utriculata	2
Eleocharis palustris	1	Glyceria grandis	1
Hippuris vulgaris	0	Juncus balticus	2
Juncus effusus	1	Juncus ensifolius	1
Mentha arvensis	1	Open Water	2
Ranunculus aquatilis	1	Ranunculus gmelinii	1
Salix lutea	1	Typha latifolia	2

Ending Station 137 Community Type: Carex spp. / Juncus spp.

Species	Cover class	Species	Cover class
Agrostis stolonifera	0	Carex aquatilis	2
Carex nebrascensis	1	Carex utriculata	2
Epilobium ciliatum	1	Juncus balticus	4
Juncus effusus	1	Juncus ensifolius	0
Mentha arvensis	0	Open Water	1
Phleum pratense	0	Poa palustris	0
Poa pratensis	0	Salix bebbiana	1
Salix lutea	1		

Ending Station 182 Community Type: Bromus inermis / Phleum pratense

Species	Cover class	Species	Cover class
Agrostis stolonifera	1	Bare Ground	1
Brassica kaber	0	Bromus inermis	5
Carex nebrascensis	1	Chenopodium album	0
Cirsium arvense	1	Dactylis glomerata	1
Elymus repens	2	Leymus cinereus	0
Lotus corniculatus	1	Phleum pratense	2
Poa palustris	0	Poa pratensis	3
Sinapis arvensis	0	Taraxacum officinale	0
Thlaspi arvense	0		

Ending Station 288 Community Type: Carex spp. / Juncus spp.

Species	Cover class	Species	Cover class
Agrostis stolonifera	1	Alopecurus arundinaceus	1
Carex aquatilis	2	Carex utriculata	2
Carum carvi	0	Epilobium ciliatum	0
Equisetum arvense	1	Juncus balticus	4
Juncus effusus	2	Lotus corniculatus	1
Open Water	1	Poa pratensis	1
Populus balsamifera	1	Salix bebbiana	1
Salix lutea	1	Scirpus microcarpus	1
Taraxacum officinale	0	Typha latifolia	2

Ending Station 468 Community Type: Bromus inermis / Phleum pratense

Species	Cover class	Species	Cover class
Achillea millefolium	0	Agrostis stolonifera	2
Alopecurus arundinaceus	1	Brassica kaber	0
Bromus inermis	4	Carex nebrascensis	2
Carum carvi	2	Cirsium arvense	1
Elymus repens	1	Equisetum arvense	3
Juncus balticus	1	Leymus cinereus	1
Lotus corniculatus	1	Melilotus officinalis	0
Phleum pratense	3	Poa pratensis	2
Populus balsamifera	1	Taraxacum officinale	1
Trifolium hybridum	1	Trifolium pratense	1

Ending Station 509 Community Type: Juncus spp. /

Species	Cover class	Species	Cover class
Alopecurus arundinaceus	1	Alopecurus pratensis	1
Bare Ground	1	Carex nebrascensis	1
Carex pachystachya	1	Cirsium arvense	0
Juncus balticus	4	Juncus effusus	2
Juncus tenuis	0	Phalaris arundinacea	0
Phleum pratense	1	Poa palustris	1
Poa pratensis	1	Schedonorus pratensis	1

Ending Station 552 Community Type: Bromus inermis / Phleum pratense

Species	Cover class	Species	Cover class
Agrostis stolonifera	1	Alopecurus arundinaceus	3
Brassica kaber	1	Carex pachystachya	1
Carum carvi	1	Cynoglossum officinale	1
Elymus repens	1	Equisetum arvense	1
Lotus corniculatus	2	Phleum pratense	2
Poa palustris	1	Poa pratensis	3
Populus balsamifera	1	Rumex salicifolius	1
Stachys pilosa	1	Thlaspi arvense	2
Trifolium hybridum	1		

Ending Station 662 Community Type: Juncus spp. / Populus balsamifera

Species	Cover class	Species	Cover class
Agrostis stolonifera	1	Alopecurus arundinaceus	2
Bare Ground	1	Carex pachystachya	1
Carex pellita	1	Carum carvi	1
Elymus repens	1	Equisetum arvense	1
Juncus balticus	3	Juncus effusus	1
Lotus corniculatus	3	Phalaris arundinacea	0
Phleum pratense	1	Poa palustris	1
Poa pratensis	1	Populus balsamifera	2
Potentilla gracilis	0	Salix lutea	1
Taraxacum officinale	0		

Ending Station 728 Community Type: Juncus spp. / Salix spp.

Species	Cover class	Species	Cover class
Alnus incana	2	Carex pachystachya	1
Carex pellita	1	Carum carvi	1
Cirsium arvense	0	Juncus balticus	4
Lotus corniculatus	2	Phalaris arundinacea	1
Populus balsamifera	4	Potentilla gracilis	0
Salix bebbiana	2	Salix boothii	2
Salix exigua	2	Stachys pilosa	0
Taraxacum officinale	0		

Ending Station 1005 Community Type: Lotus corniculatus / Phleum pratense

Species	Cover class	Species	Cover class
Achillea millefolium	0	Alnus incana	1
Bare Ground	2	Brassica kaber	0
Bromus inermis	2	Bromus tectorum	0
Camelina microcarpa	0	Carum carvi	2
Elymus repens	0	Elymus trachycaulus	3
Equisetum arvense	1	Juncus balticus	3
Leymus cinereus	1	Lotus corniculatus	3
Medicago lupulina	1	Phalaris arundinacea	1
Phleum pratense	3	Poa pratensis	2
Populus balsamifera	1	Rumex salicifolius	1
Taraxacum officinale	1	Tragopogon dubius	0
Trifolium hybridum	1	Trifolium pratense	1

Ending Station 1032 Community Type: Bromus inermis / Phleum pratense

Species	Cover class	Species	Cover class
Bare Ground	1	Bromus inermis	4
Carum carvi	2	Cirsium arvense	0
Cornus alba	0	Elymus repens	1
Equisetum arvense	1	Juncus balticus	0
Leymus cinereus	3	Lotus corniculatus	1
Medicago lupulina	1	Phleum pratense	2
Poa pratensis	2	Taraxacum officinale	1
Trifolium pratense	2		

Ending Station 1147 Community Type: Lotus corniculatus / Phleum pratense

Species	Cover class	Species	Cover class
Bare Ground	1	Brassica kaber	0
Bromus inermis	2	Carum carvi	2
Cirsium arvense	1	Elymus repens	4
Equisetum arvense	2	Leymus cinereus	1
Lotus corniculatus	2	Phleum pratense	3
Poa pratensis	2	Taraxacum officinale	1

Ending Station 1172 Community Type: Bromus inermis / Phleum pratense

Species	Cover class	Species	Cover class
Bare Ground	1	Brassica kaber	0
Bromus inermis	2	Carum carvi	2
Cirsium arvense	1	Elymus repens	4
Equisetum arvense	1	Leymus cinereus	1
Lotus corniculatus	1	Phleum pratense	3
Poa pratensis	2	Taraxacum officinale	1

Ending Station 1307 Community Type: Lotus corniculatus / Phleum pratense

Species	Cover class	Species	Cover class
Bare Ground	1	Bromus inermis	1
Carum carvi	2	Cirsium arvense	1
Elymus repens	4	Equisetum arvense	2
Leymus cinereus	1	Lotus corniculatus	2
Phalaris arundinacea	0	Phleum pratense	3
Poa palustris	0	Poa pratensis	2
Taraxacum officinale	1		

Ending Station 1333 Community Type: Bromus inermis / Phleum pratense

Species	Cover class	Species	Cover class
Agrostis stolonifera	1	Bromus inermis	3
Carum carvi	0	Elymus repens	2
Leymus cinereus	1	Lotus corniculatus	1
Phleum pratense	3	Poa pratensis	1
Taraxacum officinale	1		

Ending Station 1376 Community Type: Bromus inermis / Populus tremuloides

Species	Cover class	Species	Cover class
Agrostis stolonifera	1	Bromus inermis	4
Carum carvi	2	Dactylis glomerata	2
Elymus repens	1	Equisetum arvense	1
Leymus cinereus	1	Lotus corniculatus	1
Phleum pratense	3	Poa pratensis	2
Populus balsamifera	1	Populus tremuloides	4
Rosa woodsii	0	Taraxacum officinale	2

Transect Notes:

In 2024, no ponded water was observed within this transect. Similar to previous years, the cells in the northern portion of the transect exhibit marginal wetland development. In 2021 it was thought wetlands in this area may expand but since then no wetland expansion has been observed.

Transect Number: 2 **Compass Direction from Start:** 185

Interval Data:

Ending Station 140 Community Type: Carex spp. / Juncus spp.

Species	Cover class	Species	Cover class
Alopecurus arundinaceus	1	Bare Ground	1
Brassica kaber	0	Bromus inermis	1
Carex atherodes	1	Carex bebbii	1
Carex nebrascensis	2	Carex pellita	2
Carex utriculata	3	Cirsium arvense	1
Eleocharis palustris	1	Elymus repens	3
Equisetum arvense	1	Glyceria grandis	0
Juncus balticus	4	Juncus longistylis	1
Juncus tenuis	1	Leymus cinereus	0
Lotus corniculatus	1	Lysimachia ciliata	0
Phalaris arundinacea	1	Phleum pratense	2
Poa palustris	1	Poa pratensis	1
Poa pratensis	1	Salix bebbiana	1
Salix exigua	0	Salix lasiandra	1
Salix lutea	1	Scirpus microcarpus	2
Taraxacum officinale	1	Typha latifolia	0

Ending Station 262 Community Type: Bromus inermis / Phleum pratense

Species	Cover class	Species	Cover class
Agrostis stolonifera	1	Bare Ground	1
Bromus inermis	4	Carum carvi	1
Cirsium arvense	1	Elymus repens	3
Elymus trachycaulus	1	Equisetum arvense	2
Juncus balticus	1	Leymus cinereus	1
Lotus corniculatus	0	Lysimachia ciliata	0
Medicago sativa	0	Phleum pratense	3
Poa pratensis	3	Populus balsamifera	1
Sisyrinchium idahoense	0	Stachys pilosa	1
Taraxacum officinale	2	Thlaspi arvense	0
Trifolium pratense	0		

Ending Station 358 Community Type: Carex spp. / Juncus spp.

Species	Cover class	Species	Cover class
Agrostis stolonifera	0	Bare Ground	1
Carex microptera	1	Carex pellita	1
Carex utriculata	1	Cirsium arvense	1
Equisetum arvense	1	Juncus balticus	3
Juncus tenuis	1	Lotus corniculatus	2
Lysimachia ciliata	1	Phleum pratense	1
Poa palustris	2	Poa pratensis	1
Populus balsamifera	3	Ranunculus macounii	0
Salix bebbiana	2	Salix lutea	1
Scirpus microcarpus	1	Stachys pilosa	1
Taraxacum officinale	1		

Ending Station 629 Community Type: Lotus corniculatus / Phleum pratense

Species	Cover class	Species	Cover class
Alyssum alyssoides	0	Bare Ground	2
Bromus carinatus	0	Bromus inermis	3
Camelina microcarpa	0	Carex pellita	0
Carum carvi	2	Elymus repens	3
Equisetum arvense	1	Juncus balticus	1
Leymus cinereus	1	Lotus corniculatus	3
Lysimachia ciliata	0	Medicago lupulina	1
Melilotus officinalis	1	Phalaris arundinacea	0
Phleum pratense	3	Populus balsamifera	1
Schedonorus pratensis	1	Solidago lepida	1
Taraxacum officinale	1	Thlaspi arvense	1
Trifolium hybridum	1	Trifolium pratense	1

Ending Station 758 Community Type: Juncus spp. /

Species	Cover class	Species	Cover class
Agrostis stolonifera	1	Bare Ground	0
Brassica kaber	0	Carex bebbii	1
Carex pachystachya	1	Carum carvi	0
Juncus balticus	4	Juncus effusus	1
Juncus tenuis	1	Lotus corniculatus	2
Lysimachia ciliata	1	Phalaris arundinacea	0
Phleum pratense	1	Poa palustris	1
Poa pratensis	2	Populus balsamifera	2
Salix bebbiana	1	Salix lutea	1
Solidago gigantea	1		

Ending Station 820 Community Type: Bromus inermis / Phleum pratense

Species	Cover class	Species	Cover class
Bare Ground	1	Bromus inermis	4
Carum carvi	1	Cirsium arvense	0
Elymus repens	1	Juncus balticus	1
Lotus corniculatus	1	Phleum pratense	2
Poa pratensis	3	Taraxacum officinale	1
Trifolium pratense	2		

Ending Station 888 Community Type: Juncus spp. /

Species	Cover class	Species	Cover class
Carex aquatilis	1	Carex utriculata	1
Equisetum arvense	1	Juncus balticus	4
Juncus effusus	2	Lotus corniculatus	2
Mentha arvensis	1	Poa palustris	2
Poa pratensis	1	Salix bebbiana	1
Scirpus microcarpus	1	Stachys pilosa	0

Ending Station 915 Community Type: Aquatic macrophytes /

Species	Cover class	Species	Cover class
Carex pellita	1	Carex utriculata	2
Eleocharis palustris	1	Juncus balticus	0
Juncus ensifolius	0	Open Water	3
Salix bebbiana	0	Schoenoplectus pungens	2
Scirpus microcarpus	0		

Ending Station 1055 Community Type: Juncus spp. / Salix spp.

Species	Cover class	Species	Cover class
Agrostis stolonifera	1	Alnus incana	1
Bare Ground	1	Carex nebrascensis	1
Carex utriculata	2	Cirsium arvense	0
Juncus balticus	4	Juncus effusus	1
Juncus tenuis	1	Mentha arvensis	1
Poa palustris	1	Populus balsamifera	2
Potentilla anserina	0	Salix bebbiana	4
Salix drummondiana	2	Salix exigua	1
Salix lutea	3	Scirpus microcarpus	0
Solidago gigantea	1	Stachys pilosa	1

Ending Station 1268 Community Type: Juncus spp. / Populus balsamifera

Species	Cover class	Species	Cover class
Agrostis stolonifera	2	Alnus incana	1
Carex utriculata	1	Juncus balticus	3
Juncus effusus	1	Lotus corniculatus	2
Mentha arvensis	1	Poa palustris	3
Populus balsamifera	4	Salix bebbiana	4
Salix drummondiana	2	Salix lasiandra	3
Symphyotrichum subspicatu	0		

Ending Station 1333 Community Type: Bromus inermis / Phleum pratense

Species	Cover class	Species	Cover class
Alyssum alyssoides	2	Bare Ground	2
Bromus inermis	4	Elymus repens	1
Leymus cinereus	0	Lotus corniculatus	1
Phleum pratense	3	Poa pratensis	2
Populus balsamifera	1	Schedonorus pratensis	1
Taraxacum officinale	1	Tragopogon dubius	0
Trifolium pratense	1		

Transect Notes:

No open water was observed along this transect in 2024. Palustrine scrub-shrub communities are increasing in cover. Salix spp. along this transect exhibited heavy browsing.

Transect Number: 3 **Compass Direction from Start:** 95

Interval Data:

Ending Station 127 Community Type: Bromus inermis / Phleum pratense

Species	Cover class	Species	Cover class
Alyssum alyssoides	0	Bromus arvensis	0
Bromus inermis	3	Camelina microcarpa	0
Carum carvi	2	Elymus repens	1
Equisetum arvense	0	Juncus balticus	0
Leymus cinereus	1	Lotus corniculatus	3
Phleum pratense	2	Poa pratensis	2
Populus balsamifera	1	Taraxacum officinale	1
Trifolium hybridum	1	Trifolium pratense	2

Ending Station 163 Community Type: Juncus spp. / Populus balsamifera

Species	Cover class	Species	Cover class
Agrostis stolonifera	0	Carum carvi	1
Equisetum arvense	1	Juncus balticus	4
Lotus corniculatus	2	Phleum pratense	1
Populus balsamifera	3	Salix bebbiana	2
Salix lutea	1	Taraxacum officinale	1
Trifolium hybridum	1		

Ending Station 215 Community Type: Bromus inermis / Phleum pratense

Species	Cover class	Species	Cover class
Bromus inermis	4	Carum carvi	1
Dactylis glomerata	0	Elymus repens	2
Equisetum arvense	1	Juncus balticus	1
Leymus cinereus	1	Lotus corniculatus	1
Phleum pratense	2	Poa pratensis	2
Taraxacum officinale	1	Thlaspi arvense	0

Ending Station 227 Community Type: Juncus sp. / Populus balsamifera

Species	Cover class	Species	Cover class
Bare Ground	1	Brassica kaber	0
Carex utriculata	2	Carum carvi	2
Cirsium arvense	2	Equisetum arvense	2
Juncus balticus	1	Lotus corniculatus	1
Phleum pratense	1	Poa palustris	1
Poa pratensis	1	Populus balsamifera	5
Salix lutea	1	Taraxacum officinale	1

Ending Station 316 Community Type: Bromus inermis / Phleum pratense

Species	Cover class	Species	Cover class
Brassica kaber	0	Bromus inermis	4
Carum carvi	1	Dactylis glomerata	0
Elymus repens	3	Equisetum arvense	1
Juncus balticus	1	Lotus corniculatus	1
Phleum pratense	2	Poa pratensis	2
Taraxacum officinale	1	Thlaspi arvense	1
Trifolium pratense	1		

Ending Station 542 Community Type: Juncus spp. /

Species	Cover class	Species	Cover class
Brassica kaber	0	Carex nebrascensis	0
Carex pachystachya	1	Carex utriculata	3
Carum carvi	1	Cirsium arvense	1
Equisetum arvense	1	Juncus balticus	5
Juncus longistylis	1	Leymus cinereus	0
Lotus corniculatus	1	Poa pratensis	1
Populus balsamifera	1	Salix bebbiana	1
Salix lutea	1	Solidago gigantea	1

Ending Station 670 Community Type: Juncus spp. / Salix spp.

Species	Cover class	Species	Cover class
Carex nebrascensis	1	Carex pellita	1
Carex utriculata	1	Cirsium arvense	0
Equisetum arvense	1	Juncus balticus	4
Juncus ensifolius	1	Lotus corniculatus	1
Lysimachia ciliata	1	Populus balsamifera	1
Potentilla anserina	0	Salix bebbiana	3
Salix lutea	2	Solidago gigantea	0

Ending Station 732 Community Type: Bromus inermis / Phleum pratense

Species	Cover class	Species	Cover class
Agrostis stolonifera	1	Bromus inermis	4
Carum carvi	1	Dactylis glomerata	0
Elymus repens	2	Equisetum arvense	1
Lotus corniculatus	1	Phleum pratense	2
Poa pratensis	3	Taraxacum officinale	1
Trifolium pratense	1		

Transect Notes:

Juncus spp./Salix spp. community type has expanded into T-3. As seen in the other two transects, Bromus inermis cover has increased and Lotus corniculatus cover has decreased in 2024.

PLANTED WOODY VEGETATION SURVIVAL

Easton

Planting Type	#Planted	#Alive	Notes
Narrow-leaf willow	250	51	
Red-osier dogwood	250	4	
Thinleaf alder	500	99	
Willow cuttings	200	85	

Comments

Woody shrubs were counted along and adjacent to the floodplain channel. After 15 years, deciphering planted versus volunteer willows was difficult and therefore best professional judgement was used. Many of the larger thinleaf alder were 8 to 10 ft tall, robust, and thriving where planted. The number of red-osier dogwoods observed continued to decrease, and appear stunted with new growth occurring at the base potentially as a result of herbivory and/or drought. A high percent of woody vegetation cover is provided by Populus balsamifera volunteers that have appeared across the site in the last few years, especially in Juncus spp. communities. A substantial amount of herbivory was noted on the smaller shrubs throughout the site.

Easton

WILDLIFE

Birds

Were man-made nesting structures installed? Yes

If yes, type of structure: Bird boxes

How many? 17

Are the nesting structures being used? Yes

Do the nesting structures need repairs? Yes

Nesting Structure Comments:

Of the 17 installed bird boxes, many were occupied, likely by house wrens or contained twigs and nesting debris. One box (located between PP4a and PP5) was missing from the fencepost. The bird box along T-1, as well as the box north of the end of T-3, were on the ground and need to be resecured. The two boxes at the southwest corner of the project area are still in need of repair. The bird box in the northwest corner has been repaired since 2023.

Species	#Observed	Behavior	Habitat
American Crow	2	L	
American Robin	2	L	
Bald Eagle	2	FO, N	
Eastern Kingbird	1	L	
House Wren	6	FO	
Killdeer	1	F	
Least Flycatcher	1	L	
Mourning Dove	2	L	
Pelican	6	FO	
Red-Tailed Hawk	2	FO	
Red-Winged Blackbird	25	FO, F, L	
Sandhill Crane	2	F	
Savannah Sparrow	2	FO	
Tree Swallow	10	FO	
Wilson's Snipe	5	F, L	
Yellow-Headed Blackbird	4	L	
Yellow Warbler	3	L	

Bird Comments

Eagle nest outside of the southwestern portion of project was occupied during the 2024 monitoring visit. The pair of Bald Eagles were observed soaring over the site.

BEHAVIOR CODES

BP = One of a breeding pair **BD** = Breeding display **F** = Foraging **FO** = Flyover **L** = Loafing **N** = Nesting

HABITAT CODES

AB = Aquatic bed **SS** = Scrub/Shrub **FO** = Forested **UP** = Upland buffer **I** = Island

WM = Wet meadow **MA** = Marsh **US** = Unconsolidated shore **MF** = Mud Flat **OW** = Open Water

Mammals and Herptiles

Species	# Observed	Tracks	Scat	Burrows	Comments
White-Tailed Deer	4	Yes	Yes	No	Observed grazing
Yellow-Bellied Marmot	1	No	Yes	No	Seen

Wildlife Comments:

Site utilized by diversity of bird and wildlife species.

Easton

PHOTOGRAPHS

Take photographs of the following permanent reference points listed in the check list below. Record the direction of the photograph using a compass. When at the site for the first time, establish a permanent reference point by setting a ½ inch rebar or fencepost extending 2-3 feet above ground. Survey the location with a resource grade GPS and mark the location on the aerial photograph.

Photograph Checklist:

☐ One photograph for each of the four cardinal directions surrounding the wetland.

☑ At least one photograph showing upland use surrounding the wetland. If more than one upland exists then take additional photographs.

☑ At least one photograph showing the buffer surrounding the wetland.

☑ One photograph from each end of the vegetation transect, showing the transect.

Photo #	Latitude	Longitude	Bearing	Description
DP01u	46.058465	-110.637811		
DP01w	46.058506	-110.637891		
DP02u	46.058709	-110.638683		
DP02w	46.058691	-110.63874		
DP03u	46.055473	-110.63919		
DP03w	46.055538	-110.639143		
DP04u	46.057601	-110.639156		
DP04w	46.057569	-110.639089		
DP05u	46.056916	-110.639977		
DP05w	46.056927	-110.640154		
DP06u	46.057769	-110.639517		
DP06w	46.057788	-110.639609		
DP07u	46.059065	-110.639784		
DP07w	46.059111	-110.639768		
DP08u	46.059833	-110.639142		
DP08w	46.059861	-110.639159		
DP09u	46.060374	-110.640049		
DP09w	46.060394	-110.639987		
DP10u	46.061023	-110.638513		
DP10w	46.060901	-110.638515		
PP1	46.059727	-110.637505		East boundary
PP2	46.061028	-110.637207		Northeast corner
PP3	46.061188	-100.639848		Northeast corner
PP4	46.050705	-110.640434		Shields bank
PP4	46.060993	-110.640121		Shields bank
PP5	46.059883	-110.640404		West boundary
PP6	46.056175	-110.64048		Southwest corner

PP7	46.055286	-110.639137	Southeast corner
T-1 End	46.060627	-110.637779	View of CT 10 and 13
T-1 Start	46.057281	-110.638306	View of CT 21
T-2 End	46.057594	-110.640343	View of CT 13
T-2 Start	46.060139	-110.639229	View of CT 21
T-3 End	46.056114	-110.637924	View of CT 13
T-3 Start	46.056984	-110.640656	View of CT 13

Comments:

Easton

ADDITIONAL ITEMS CHECKLIST

Hydrology

☐ Map emergent vegetation/open water boundary on aerial photos.
☐ Observe extent of surface water. Look for evidence of past surface water elevations (e.g. drift lines, vegetation staining, erosion, etc).

Photos

☐ One photo from the wetland toward each of the four cardinal directions
☐ One photo showing upland use surrounding the wetland.
☐ One photo showing the buffer around the wetland
☐ One photo from each end of each vegetation transect, toward the transect

Vegetation

☑ Map vegetation community boundaries

☑ Complete Vegetation Transects

Soils

☑ Assess soils

Wetland Delineations

☑ Delineate wetlands according to applicable USACE protocol (1987 form or Supplement)
☑ Delineate wetland – upland boundary onto aerial photograph.

Wetland Delineation Comments

Total wetland acreage decreased 0.51 acres since 2023.

Functional Assessments

☑ Complete and attach full MDT Montana Wetland Assessment Method field forms.

Functional Assessment Comments:

Category II wetland.

Maintenance

Were man-made nesting structure installed at this site? Yes

If yes, do they need to be repaired? Yes

If yes, describe the problems below and indicate if any actions were taken to remedy the problems

Were man-made structures built or installed to impound water or control water flow

into or out of the wetland? Yes

If yes, are the structures in need of repair? No

If yes, describe the problems below.

Bank erosion was noted along the Shields River in the northwest portion of the project area. A few bird boxes (see wildlife section) need repair.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Easton Ranch City/County: Park County Sampling Date: 2024-06-19ÁÁ

Applicant/Owner: MDT State: Montana Sampling Point: DP01uÁÁÁ

Investigator(s): R Cutler, E Reynaud Section, Township, Range: S32 T4N R9EÁÁÁ

Landform (hillslope, terrace, etc.): BermÁÁÁ Local relief (concave, convex, none): Convex Slope (%): 1ÁÁÁ

Subregion (LRR): E 44B Lat: 46.0584649 Long: -110.6378111 Datum: NAD 83ÁÁ

Soil Map Unit Name: 155A - Meadowcreek, rarely flooded-Nesda complex, 0 to 2 percent slopes NWI classification: Not mappedÁÁÁ

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Upland data point taken near eastern border of site.ÁÁÁ

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft rÁÁÁ)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 ft rÁÁÁ)			
1. Alopecurus pratensisÁÁÁ	40ÁÁÁ	✔	FACÁÁ
2. Taraxacum officinaleÁÁÁ	15ÁÁÁ	✔	FACUÁ
3. Poa pratensisÁÁÁ	5ÁÁÁ		FACÁÁ
4. Juncus balticusÁÁ	3ÁÁÁ		FACWÁ
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	63ÁÁÁ = Total Cover		
Woody Vine Stratum (Plot size: 30 ft rÁÁÁ)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 37ÁÁÁ

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1ÁÁÁ (A)

Total Number of Dominant Species Across All Strata: 2ÁÁÁ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00ÁÁÁ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0ÁÁÁ	x 1 =	0
FACW species	3ÁÁÁ	x 2 =	6
FAC species	45ÁÁÁ	x 3 =	135
FACU species	15ÁÁÁ	x 4 =	60ÁÁÁ
UPL species	0ÁÁÁ	x 5 =	0ÁÁÁ
Column Totals:	63Á (A)		201ÁÁÁ (B)

Prevalence Index = B/A = 3.19ÁÁÁ

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

No hydrophytic vegetation observed.ÁÁÁ

SOIL

Sampling Point: DP01uÁÁÁ

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0- 10Á	10YR 2/2ÁÁÁ	100ÁÁ					Clay Loam	
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

No hydric soil indicators observed. Cobbles restricted excavation further than 10".ÁÁÁ

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No evidence of wetland hydrology observed.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Easton Ranch City/County: Park County Sampling Date: 2024-06-19ÁÁ

Applicant/Owner: MDT State: Montana Sampling Point: DP01wÁÁÁ

Investigator(s): R Cutler, E Reynaud Section, Township, Range: S32 T4N R9EÁÁÁ

Landform (hillslope, terrace, etc.): SwaleÁÁÁ Local relief (concave, convex, none): Concave Slope (%): 5ÁÁÁ

Subregion (LRR): E 44B Lat: 46.0585056 Long: -110.6378910 Datum: NAD 83ÁÁ

Soil Map Unit Name: 155A - Meadowcreek, rarely flooded-Nesda complex, 0 to 2 percent slopes NWI classification: Not mappedÁÁÁ

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Sample point located within wetland cell, vegetation community 11.ÁÁÁ

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft rÁÁÁ)			
1. Salix luteaÁÁÁ	5ÁÁÁ	✔	OBLÁÁ
2.			
3.			
4.			
5.			
	5ÁÁÁ = Total Cover		
Herb Stratum (Plot size: 5 ft rÁÁÁ)			
1. Juncus balticusÁÁÁ	35ÁÁÁ	✔	FACWÁ
2. Carex utriculataÁÁÁ	25ÁÁÁ	✔	OBLÁÁ
3. Alopecurus arundinaceusÁÁÁ	20ÁÁÁ	✔	FACÁÁ
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	80ÁÁÁ = Total Cover		
Woody Vine Stratum (Plot size: 30 ft rÁÁÁ)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 20ÁÁÁ

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4ÁÁÁ (A)

Total Number of Dominant Species Across All Strata: 4ÁÁÁ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00ÁÁÁ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30ÁÁÁ	x 1 =	30
FACW species	35ÁÁÁ	x 2 =	70
FAC species	20ÁÁÁ	x 3 =	60
FACU species	0ÁÁÁ	x 4 =	0ÁÁÁ
UPL species	0ÁÁÁ	x 5 =	0ÁÁÁ
Column Totals:	85Á (A)		160ÁÁÁ (B)

Prevalence Index = B/A = 1.88ÁÁÁ

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

✔ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Evidence of wetland hydrophytic vegetation includes a positive dominance test and a prevalence index less than 3.ÁÁÁ

SOIL

Sampling Point: DP01wÁÁÁ

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 17Á	10YR 3/1ÁÁÁ	98ÁÁ	7.5R 4/6ÁÁÁ	2ÁÁÁ	CÁÁÁ	PLÁÁ	Clay Loam	
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✔ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** _____

Remarks:

The redox dark surface indicator is met with distinct redoximorphic concentrations.ÁÁÁ

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✔ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Evidence of wetland hydrology includes geomorphic position and positive FAC-Neutral test.Á

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Easton Ranch City/County: Park County Sampling Date: 2024-06-19ÁÁ

Applicant/Owner: MDT State: Montana Sampling Point: DP02uÁÁÁ

Investigator(s): R Cutler, E Reynaud Section, Township, Range: S32 T4N R9EÁÁÁ

Landform (hillslope, terrace, etc.): BermÁÁÁ Local relief (concave, convex, none): Convex Slope (%): 5ÁÁÁ

Subregion (LRR): E 44B Lat: 46.0587091 Long: -110.6386835 Datum: NAD 83ÁÁ

Soil Map Unit Name: 155A - Meadowcreek, rarely flooded-Nesda complex, 0 to 2 percent slopes NWI classification: Not mappedÁÁÁ

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Upland point taken 16 feet upgradient of wetland point in central area of site.ÁÁÁ

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft rÁÁÁ)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft rÁÁÁ)			
1. Bromus inermisÁÁÁ	60ÁÁÁ	✔	UPLÁÁ
2. Poa pratensisÁÁÁ	15ÁÁÁ		FACÁÁ
3. Alopecurus arundinaceusÁÁÁ	10ÁÁÁ		FACÁÁ
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	85ÁÁÁ = Total Cover		
Woody Vine Stratum (Plot size: 30 ft rÁÁÁ)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 15ÁÁÁ

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0ÁÁÁ (A)

Total Number of Dominant Species Across All Strata: 1ÁÁÁ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.00ÁÁÁ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0ÁÁÁ	x 1 =	0
FACW species	0ÁÁÁ	x 2 =	0
FAC species	25ÁÁÁ	x 3 =	75
FACU species	0ÁÁÁ	x 4 =	0ÁÁÁ
UPL species	60ÁÁÁ	x 5 =	300ÁÁÁ
Column Totals:	85Á (A)		375ÁÁÁ (B)

Prevalence Index = B/A = 4.41ÁÁÁ

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

Hydrophytic vegetation is not dominant at sample site.

SOIL

Sampling Point: DP02uÁÁÁ

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0- 16Á	10YR 3/2ÁÁÁ	100ÁÁ					Clay Loam	
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

No hydric soil indicators observed.ÁÁÁ

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No evidence of wetland hydrology observed.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Easton Ranch City/County: Park County Sampling Date: 2024-06-19ÁÁ

Applicant/Owner: MDT State: Montana Sampling Point: DP02wÁÁÁ

Investigator(s): R Cutler, E Reynaud Section, Township, Range: S32 T4N R9EÁÁÁ

Landform (hillslope, terrace, etc.): SwaleÁÁÁ Local relief (concave, convex, none): Concave Slope (%): 2ÁÁÁ

Subregion (LRR): E 44B Lat: 46.0587091 Long: -110.6386835 Datum: NAD 83ÁÁ

Soil Map Unit Name: 155A - Meadowcreek, rarely flooded-Nesda complex, 0 to 2 percent slopes NWI classification: Not mappedÁÁÁ

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Data point located in wide ditch/waterway. No water present at the time of monitoring.ÁÁÁ

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft rÁÁÁ)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft rÁÁÁ)			
1. Juncus balticusÁÁÁ	70ÁÁÁ	✔	FACWÁ
2. Carex nebrascensisÁÁÁ	15ÁÁÁ		OBLÁÁ
3. Poa pratensisÁÁÁ	1ÁÁÁ		FACÁÁ
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	86ÁÁÁ = Total Cover		
Woody Vine Stratum (Plot size: 30 ft rÁÁÁ)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 14ÁÁÁ

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1ÁÁÁ (A)

Total Number of Dominant Species Across All Strata: 1ÁÁÁ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00ÁÁÁ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15ÁÁÁ	x 1 =	15
FACW species	70ÁÁÁ	x 2 =	140
FAC species	1ÁÁÁ	x 3 =	3
FACU species	0ÁÁÁ	x 4 =	0ÁÁÁ
UPL species	0ÁÁÁ	x 5 =	0ÁÁÁ
Column Totals:	86Á (A)		158ÁÁÁ (B)

Prevalence Index = B/A = 1.83ÁÁÁ

Hydrophytic Vegetation Indicators:

✔ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

✔ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Evidence of hydrophytic vegetation includes a positive rapid test, a positive dominance test, and a prevalence index less than or equal to 3.0.ÁÁÁ

SOIL

Sampling Point: DP02wÁÁÁ

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 16	10YR 4/1ÁÁÁ	90ÁÁ	10YR 3/6ÁÁÁ	10ÁÁ	C	MÁÁÁ	Clay Loam	
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** _____

Remarks:

Prominent redoximorphic concentrations common in depleted matrix.ÁÁÁ

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✔ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

Water Table Present? Yes ___ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✔ No ___ Depth (inches): 5ÁÁÁ

Wetland Hydrology Present? Yes ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Evidence of wetland hydrology includes soil saturation, geomorphic position, and a positive FAC-Neutral test.ÁÁÁ

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Easton Ranch City/County: Park County Sampling Date: 2024-06-19ÁÁ

Applicant/Owner: MDT State: Montana Sampling Point: DP03uÁÁÁ

Investigator(s): J Trilling Section, Township, Range: S32 T4N R9EÁÁÁ

Landform (hillslope, terrace, etc.): TerraceÁÁÁ Local relief (concave, convex, none): Undulating Slope (%): 2

Subregion (LRR): E 44B Lat: 46.0554735 Long: -110.6391898 Datum: NAD 83ÁÁ

Soil Map Unit Name: 600B - Nesda loam, 0 to 4 percent slopes, occasionally flooded NWI classification: PEM1CÁÁÁ

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Upland point taken near southern border of site.ÁÁÁ

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft rÁÁÁ)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 ft rÁÁÁ)			
1. Elymus repensÁÁÁ	46ÁÁÁ	✔	FACÁÁ
2. Bromus inermisÁÁÁ	35ÁÁÁ	✔	UPLÁÁ
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	81ÁÁÁ = Total Cover		
Woody Vine Stratum (Plot size: 30 ft rÁÁÁ)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 19ÁÁÁ

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1ÁÁÁ (A)

Total Number of Dominant Species Across All Strata: 2ÁÁÁ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00ÁÁÁ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0ÁÁÁ	x 1 =	0
FACW species	0ÁÁÁ	x 2 =	0
FAC species	46ÁÁÁ	x 3 =	138
FACU species	0ÁÁÁ	x 4 =	0ÁÁÁ
UPL species	35	x 5 =	175ÁÁÁ
Column Totals:	81Á (A)		313ÁÁÁ (B)

Prevalence Index = B/A = 3.86ÁÁÁ

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

Vegetation did not meet criteria to be considered hydrophytic.ÁÁÁ

SOIL

Sampling Point: DP03uÁÁÁ

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0- 10Á	10YR 3/1ÁÁÁ	100ÁÁ					Clay Loam	
0- 17Á	10YR 3/1ÁÁÁ	98ÁÁ	10YR 3/3ÁÁÁ	2ÁÁÁ	CÁÁÁ	M	Clay Loam	
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✔ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** _____

Remarks:

Although this data point has hydric soils, it lacks wetland hydrology and hydrophytic vegetation. For this reason the redox features are thought to be relict.ÁÁÁ

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No evidence of wetland hydrology observed.ÁÁÁ

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Easton Ranch City/County: Park County Sampling Date: 2024-06-19ÁÁ

Applicant/Owner: MDT State: Montana Sampling Point: DP03wÁÁÁ

Investigator(s): J Trilling Section, Township, Range: S32 T4N R9EÁÁÁ

Landform (hillslope, terrace, etc.): DepressionÁÁÁ Local relief (concave, convex, none): Concave Slope (%): 3ÁÁÁ

Subregion (LRR): E 44B Lat: 46.0555382 Long: -110.6391429 Datum: NAD 83ÁÁ

Soil Map Unit Name: 600B - Nesda loam, 0 to 4 percent slopes, occasionally flooded NWI classification: PEM1CÁÁÁ

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Wetland data point taken near southern border of site.ÁÁÁ

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft rÁÁÁ)			
1. Salix bebbianaÁÁÁ	5	✔	FACW
2. Salix exiguaÁÁÁ	3ÁÁÁ	✔	FACW
3.			
4.			
5.			
	8ÁÁÁ = Total Cover		
Herb Stratum (Plot size: 5 ft rÁÁÁ)			
1. Carex utriculataÁÁÁ	20ÁÁÁ	✔	OBL
2. Alopecurus arundinaceusÁÁÁ	10ÁÁÁ	✔	FAC
3. Juncus balticusÁÁÁ	10	✔	FACW
4. Equisetum arvenseÁÁ	2ÁÁÁ		FAC
5. Typha latifoliaÁÁ	1ÁÁÁ		OBL
6.			
7.			
8.			
9.			
10.			
11.			
	43ÁÁÁ = Total Cover		
Woody Vine Stratum (Plot size: 30 ft rÁÁÁ)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 57ÁÁÁ

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5ÁÁÁ (A)

Total Number of Dominant Species Across All Strata: 5ÁÁÁ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	21ÁÁÁ	x 1 =	21
FACW species	18ÁÁÁ	x 2 =	36
FAC species	12ÁÁÁ	x 3 =	36
FACU species	0ÁÁÁ	x 4 =	0ÁÁÁ
UPL species	0ÁÁÁ	x 5 =	0ÁÁÁ
Column Totals:	51Á (A)		93ÁÁÁ (B)

Prevalence Index = B/A = 1.82ÁÁÁ

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

✔ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Bare ground is comprised of dead vegetation from previous year. Evidence of hydrophytic vegetation indicated by a positive dominance test and a prevalence index less than or equal to 3.0.ÁÁÁ

SOIL

Sampling Point: DP03wÁÁÁ

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0- 8Á	10YR 3/1ÁÁÁ	98ÁÁ	10YR 4/4ÁÁÁ	2ÁÁÁ	CÁÁÁ	M	Clay Loam	
8- 16	10YR 3/1ÁÁÁ	96ÁÁ	10YR 4/4ÁÁÁ	4ÁÁÁ	CÁÁÁ	M	Clay Loam	
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✔ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ No ___

Remarks:

Distinct redoximorphic concentrations common within redox dark surface.ÁÁÁ

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✔ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

Water Table Present? Yes ✔ No ___ Depth (inches): 11ÁÁÁ

Saturation Present? (includes capillary fringe) Yes ✔ No ___ Depth (inches): 0ÁÁÁ

Wetland Hydrology Present? Yes ✔ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Evidence of wetland hydrology includes soil saturation, high water table, a positive FAC-Neutral test, and geomorphic position.ÁÁÁ

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Easton Ranch City/County: Park County Sampling Date: 2024-06-19ÁÁ

Applicant/Owner: MDT State: Montana Sampling Point: DP04uÁÁÁ

Investigator(s): R Cutler, E Reynaud Section, Township, Range: S32 T4N R9EÁÁÁ

Landform (hillslope, terrace, etc.): BermÁÁÁ Local relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR): E 44B Lat: 46.0576011 Long: -110.6391562 Datum: NAD 83ÁÁ

Soil Map Unit Name: 155A - Meadowcreek, rarely flooded-Nesda complex, 0 to 2 percent slopes NWI classification: Not mappedÁÁÁ

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Upland point taken 20 feet away from wetland point.ÁÁÁ

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft rÁÁÁ)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 ft rÁÁÁ)			
1. Alopecurus arundinaceusÁÁÁ	70	✔	FACÁÁ
2. Poa pratensisÁÁÁ	10ÁÁÁ		FACÁÁ
3. Juncus balticusÁÁÁ	5ÁÁÁ		FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	85ÁÁÁ = Total Cover		
Woody Vine Stratum (Plot size: 30 ft rÁÁÁ)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 15ÁÁÁ

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1ÁÁÁ (A)

Total Number of Dominant Species Across All Strata: 1ÁÁÁ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0ÁÁÁ	x 1 =	0
FACW species	5ÁÁÁ	x 2 =	10
FAC species	80ÁÁÁ	x 3 =	240
FACU species	0ÁÁÁ	x 4 =	0ÁÁÁ
UPL species	0ÁÁÁ	x 5 =	0ÁÁÁ
Column Totals:	85 (A)		250ÁÁÁ (B)

Prevalence Index = B/A = 2.94ÁÁÁ

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Domination of FAC vegetation results in a positive dominance test. Upland determination based on absence of hydric soils and wetland hydrology.ÁÁÁ

SOIL

Sampling Point: DP04uÁÁÁ

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 15Á	10YR 3/2ÁÁÁ	100ÁÁ					Clay Loam	
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

No hydric soil indicators observed. Cobbles restricted excavation further than 15".ÁÁÁ

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No evidence of wetland hydrology observed.ÁÁÁ

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Easton Ranch City/County: Park County Sampling Date: 2024-06-19Á

Applicant/Owner: MDT State: Montana Sampling Point: DP04wÁÁÁ

Investigator(s): R Cutler, E Reynaud Section, Township, Range: S32 T4N R9EÁÁÁ

Landform (hillslope, terrace, etc.): SwaleÁÁÁ Local relief (concave, convex, none): Concave Slope (%): 1ÁÁÁ

Subregion (LRR): E 44B Lat: 46.0575688 Long: -110.6390892 Datum: NAD 83ÁÁ

Soil Map Unit Name: 155A - Meadowcreek, rarely flooded-Nesda complex, 0 to 2 percent slopes, NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Data point surrounded by browsed Salix spp.ÁÁÁ

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft rÁÁÁ)			
1. Salix bebbianaÁÁÁ	30ÁÁÁ	✔	FACWÁ
2. Populus balsamiferaÁÁÁ	10ÁÁÁ	✔	FACÁÁ
3.			
4.			
5.			
	40ÁÁÁ = Total Cover		
Herb Stratum (Plot size: 5 ft rÁÁÁ)			
1. Juncus balticusÁÁÁ	60	✔	FACWÁ
2. Carex pellitaÁÁÁ	25ÁÁÁ	✔	OBLÁÁ
3. Alopecurus pratensisÁÁÁ	12ÁÁÁ		FACÁÁ
4. Cirsium arvenseÁÁ	3ÁÁÁ		FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100ÁÁÁ = Total Cover		
Woody Vine Stratum (Plot size: 30 ft rÁÁÁ)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0ÁÁÁ

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4ÁÁÁ (A)

Total Number of Dominant Species Across All Strata: 4ÁÁÁ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00ÁÁÁ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25ÁÁÁ	x 1 =	25
FACW species	90ÁÁÁ	x 2 =	180
FAC species	25	x 3 =	75
FACU species	0ÁÁÁ	x 4 =	0ÁÁÁ
UPL species	0ÁÁÁ	x 5 =	0ÁÁÁ
Column Totals:	140Á (A)		280ÁÁÁ (B)

Prevalence Index = B/A = 2.00ÁÁÁ

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

✔ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Evidence of hydrophytic vegetation includes a positive dominance test and a prevalence index less than or equal to 3.0.ÁÁÁ

SOIL

Sampling Point: DP04wÁÁÁ

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 10	10YR 3/2ÁÁÁ	100					Sandy Clay Loam	
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ✔ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ No ___

Remarks:

Sulfidic odor present in soil. Cobbles restricted excavation further than 10".ÁÁÁ

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ✔ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✔ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

Water Table Present? Yes ✔ No ___ Depth (inches): 2ÁÁÁ

Saturation Present? (includes capillary fringe) Yes ✔ No ___ Depth (inches): 0

Wetland Hydrology Present? Yes ✔ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Evidence of wetland hydrology includes a high water table, soil saturation, sulfidic odor, geomorphic position, and a positive FAC-Neutral test.ÁÁÁ

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Easton Ranch City/County: Park County Sampling Date: 2024-06-19ÁÁ

Applicant/Owner: MDT State: Montana Sampling Point: DP05uÁÁÁ

Investigator(s): J Trilling Section, Township, Range: S32 T4N R9EÁÁÁ

Landform (hillslope, terrace, etc.): TerraceÁÁÁ Local relief (concave, convex, none): Linear Slope (%): 5

Subregion (LRR): E 44B Lat: 46.0569158 Long: -110.6399766 Datum: NAD 83ÁÁ

Soil Map Unit Name: 155A - Meadowcreek, rarely flooded-Nesda complex, 0 to 2 percent slopes NWI classification: Not mappedÁÁÁ

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Upland data point taken near southwest site boundary.ÁÁÁ

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft rÁÁÁ)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft rÁÁÁ)			
1. Elymus repensÁÁÁ	40ÁÁÁ	✔	FACÁÁ
2. Bromus inermisÁÁÁ	20ÁÁÁ	✔	UPLÁÁ
3. Poa pratensisÁÁÁ	10		FACÁÁ
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	70ÁÁÁ = Total Cover		
Woody Vine Stratum (Plot size: 30 ft rÁÁÁ)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 30ÁÁÁ

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1ÁÁÁ (A)

Total Number of Dominant Species Across All Strata: 2ÁÁÁ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00ÁÁÁ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0ÁÁÁ	x 1 =	0
FACW species	0ÁÁÁ	x 2 =	0
FAC species	50ÁÁÁ	x 3 =	150
FACU species	0ÁÁÁ	x 4 =	0ÁÁÁ
UPL species	20	x 5 =	100ÁÁÁ
Column Totals:	70 (A)		250 (B)

Prevalence Index = B/A = 3.57ÁÁÁ

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

Vegetation does not meet criteria to be considered hydrophytic.ÁÁÁ

SOIL

Sampling Point: DP05u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 18	10YR 3/2	100					Clay Loam	
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

No hydric soil indicators observed.ÁÁÁ

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No evidence of wetland hydrology observed.ÁÁÁ

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Easton Ranch City/County: Park County Sampling Date: 2024-06-19ÁÁ

Applicant/Owner: MDT State: Montana Sampling Point: DP05wÁÁÁ

Investigator(s): J Trilling Section, Township, Range: S32 T4N R9EÁÁÁ

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1ÁÁÁ

Subregion (LRR): E 44B Lat: 46.0569274 Long: -110.6401538 Datum: NAD 83ÁÁ

Soil Map Unit Name: 155A - Meadowcreek, rarely flooded-Nesda complex, 0 to 2 percent slopes NWI classification: Not mappedÁÁÁ

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Data point taken within a wetland cell near the southwest border of site.ÁÁÁ

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft rÁÁÁ)			
1. Populus balsamiferaÁÁÁ	30	✔	FACÁÁ
2. Salix bebbianaÁÁÁ	10	✔	FACWÁ
3. Salix exiguaÁÁÁ	2		FACWÁ
4. Salix luteaÁÁÁ	2ÁÁ		OBLÁÁ
5.			
	44ÁÁÁ = Total Cover		
Herb Stratum (Plot size: 5 ft rÁÁÁ)			
1. Juncus balticusÁÁÁ	25ÁÁÁ	✔	FACWÁ
2. Lotus corniculatusÁÁÁ	20	✔	FAC
3. Carex pellitaÁÁÁ	10		OBLÁÁ
4. Poa pratensisÁÁ	10ÁÁÁ		FAC
5. Elymus repensÁÁ	10		FAC
6. Taraxacum officinaleÁÁÁ	7ÁÁÁ		FACUÁ
7. Carex nebrascensisÁÁÁ	5ÁÁ		OBLÁÁ
8.			
9.			
10.			
11.			
	87ÁÁÁ = Total Cover		
Woody Vine Stratum (Plot size: 30 ft rÁÁÁ)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 13ÁÁÁ

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4ÁÁÁ (A)

Total Number of Dominant Species Across All Strata: 4ÁÁÁ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00ÁÁÁ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	17ÁÁÁ	x 1 =	17
FACW species	37ÁÁÁ	x 2 =	74
FAC species	70	x 3 =	210
FACU species	7ÁÁÁ	x 4 =	28ÁÁÁ
UPL species	0ÁÁÁ	x 5 =	0ÁÁÁ
Column Totals:	131Á (A)		329ÁÁÁ (B)

Prevalence Index = B/A = 2.51ÁÁÁ

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

✔ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Presence of hydrophytic vegetation indicated by positive dominance test and a prevalence index less than or equal to 3.0.ÁÁÁ

SOIL

Sampling Point: DP05wÁÁÁ

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0- 4Á	10YR 4/1ÁÁÁ	100ÁÁ					Clay Loam	
4- 10Á	10YR 4/2ÁÁÁ	98	10YR 4/4ÁÁÁ	2	C	MÁÁÁ	Sandy Loam	
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** _____

Remarks:

Distinct redoximorphic concentrations common within the depleted matrix. Cobbles restricted excavation further than 10".ÁÁÁ

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✔ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

Water Table Present? Yes ___ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✔ No ___ Depth (inches): 0ÁÁÁ

Wetland Hydrology Present? Yes ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Evidence of wetland hydrology includes soil saturation, geomorphic position, and a positive FAC-Neutral test.ÁÁÁ

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Easton Ranch City/County: Park County Sampling Date: 2024-06-19ÁÁ

Applicant/Owner: MDT State: Montana Sampling Point: DP06uÁÁÁ

Investigator(s): R Cutler, E Reynaud Section, Township, Range: S32 T4N R9EÁÁÁ

Landform (hillslope, terrace, etc.): FloodplainÁÁÁ Local relief (concave, convex, none): Linear Slope (%): 1ÁÁÁ

Subregion (LRR): E 44B Lat: 46.0577690 Long: -110.6395166 Datum: NAD 83ÁÁ

Soil Map Unit Name: 155A - Meadowcreek, rarely flooded-Nesda complex, 0 to 2 percent slopes NWI classification: Not mappedÁÁÁ

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Upland point located between two wetlands that are lower in elevation.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft rÁÁÁ)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft rÁÁÁ)			
1. Bromus inermisÁÁÁ	60ÁÁÁ	✔	UPLÁÁ
2. Elymus repensÁÁÁ	20	✔	FACÁÁ
3. Poa pratensisÁÁÁ	15ÁÁÁ		FACÁÁ
4. Equisetum arvenseÁÁ	3ÁÁÁ		FACÁÁ
5. Carex nebrascensisÁÁ	2ÁÁÁ		OBL
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft rÁÁÁ)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1ÁÁÁ (A)

Total Number of Dominant Species Across All Strata: 2ÁÁÁ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00ÁÁÁ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	2ÁÁÁ	x 1 =	2
FACW species	0ÁÁÁ	x 2 =	0
FAC species	38ÁÁÁ	x 3 =	114
FACU species	0ÁÁÁ	x 4 =	0ÁÁÁ
UPL species	60ÁÁÁ	x 5 =	300ÁÁÁ
Column Totals:	100Á (A)		416ÁÁÁ (B)

Prevalence Index = B/A = 4.16ÁÁÁ

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

Data point dominated by upland vegetation.ÁÁÁ

SOIL

Sampling Point: DP06uÁÁÁ

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 17	10YR 3/2ÁÁÁ	100					Silty Clay Loam	
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No evidence of wetland hydrology observed.ÁÁÁ

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Easton Ranch City/County: Park County Sampling Date: 2024-06-19ÁÁ

Applicant/Owner: MDT State: Montana Sampling Point: DP06wÁÁÁ

Investigator(s): R Cutler, E Reynaud Section, Township, Range: S32 T4N R9EÁÁÁ

Landform (hillslope, terrace, etc.): Valley FloorÁÁÁ Local relief (concave, convex, none): Concave Slope (%): 1ÁÁÁ

Subregion (LRR): E 44B Lat: 46.0577878 Long: -110.6396094 Datum: NAD 83ÁÁ

Soil Map Unit Name: 155A - Meadowcreek, rarely flooded-Nesda complex, 0 to 2 percent slopes NWI classification: Not mappedÁÁÁ

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Data point taken in southeast portion of site.ÁÁÁ

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft rÁÁÁ)			
1. Salix bebbianaÁÁÁ	8ÁÁÁ	✔	FACWÁ
2. Populus balsamiferaÁÁÁ	7ÁÁÁ	✔	FACÁÁ
3.			
4.			
5.			
	15ÁÁÁ = Total Cover		
Herb Stratum (Plot size: 5 ft rÁÁÁ)			
1. Juncus balticusÁÁÁ	70	✔	FACWÁ
2. Poa pratensisÁÁÁ	10ÁÁÁ		FACÁÁ
3. Carex utriculataÁÁÁ	7		OBLÁÁ
4. Alopecurus arundinaceusÁÁ	1ÁÁÁ		FACÁÁ
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	88ÁÁÁ = Total Cover		
Woody Vine Stratum (Plot size: 30 ft rÁÁÁ)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 12ÁÁÁ

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3ÁÁÁ (A)

Total Number of Dominant Species Across All Strata: 3ÁÁÁ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00ÁÁÁ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	7ÁÁÁ	x 1 =	7
FACW species	78ÁÁÁ	x 2 =	156
FAC species	18ÁÁÁ	x 3 =	54
FACU species	0ÁÁÁ	x 4 =	0ÁÁÁ
UPL species	0ÁÁÁ	x 5 =	0ÁÁÁ
Column Totals:	103Á (A)		217ÁÁÁ (B)

Prevalence Index = B/A = 2.10ÁÁÁ

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

✔ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Evidence of hydrophytic vegetation includes a positive dominance test and a prevalence index less than or equal to 3.0.ÁÁÁ

SOIL

Sampling Point: DP06wÁÁÁ

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 5Á	10YR 4/1ÁÁÁ	98ÁÁ	10YR 4/4ÁÁÁ	2ÁÁÁ	CÁÁÁ	MÁÁÁ	Clay Loam	
5 - 15	10YR 4/1ÁÁÁ	97ÁÁ	10YR 4/4ÁÁÁ	3ÁÁÁ	CÁÁÁ	MÁÁÁ	Clay Loam	
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ No ___

Remarks:

Distinct redoximorphic concentrations within the depleted matrix.ÁÁÁ

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✔ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

Water Table Present? Yes ___ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes ✔ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Evidence of wetland hydrology includes geomorphic position and positive FAC-Neutral test.Á

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Easton Ranch City/County: Park County Sampling Date: 2024-06-19ÁÁ

Applicant/Owner: MDT State: Montana Sampling Point: DP07uÁÁÁ

Investigator(s): R Cutler, E Reynaud Section, Township, Range: S32 T4N R9EÁÁÁ

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Linear Slope (%): 1ÁÁÁ

Subregion (LRR): E 44B Lat: 46.059065 Long: -110.639842 Datum: NAD 83ÁÁ

Soil Map Unit Name: 155A - Meadowcreek, rarely flooded-Nesda complex, 0 to 2 percent slopes NWI classification: Not mappedÁÁÁ

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Upland point taken near western boundary.ÁÁÁ

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft rÁÁÁ)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft rÁÁÁ)			
1. Bromus inermisÁÁÁ	60ÁÁÁ	✔	UPLÁÁ
2. Poa pratensisÁÁÁ	20	✔	FACÁÁ
3. Equisetum arvenseÁÁÁ	5ÁÁÁ		FACÁÁ
4. Taraxacum officinaleÁÁ	5ÁÁÁ		FACUÁ
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	90ÁÁÁ = Total Cover		
Woody Vine Stratum (Plot size: 30 ft rÁÁÁ)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 10ÁÁÁ

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1ÁÁÁ (A)

Total Number of Dominant Species Across All Strata: 2ÁÁÁ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00ÁÁÁ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0ÁÁÁ	x 1 =	0
FACW species	0ÁÁÁ	x 2 =	0
FAC species	25ÁÁÁ	x 3 =	75
FACU species	5	x 4 =	20ÁÁÁ
UPL species	60ÁÁÁ	x 5 =	300ÁÁÁ
Column Totals:	90 (A)		395ÁÁÁ (B)

Prevalence Index = B/A = 4.38ÁÁÁ

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

Vegetation does not meet criteria required to be considered hydrophytic.ÁÁÁ

SOIL

Sampling Point: DP07uÁÁÁ

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 12Á	10YR 3/2ÁÁÁ	100					Silty Clay Loam	
12 - 16Á	10YR 3/2ÁÁÁ	98ÁÁ	10YR 3/4ÁÁÁ	2	C	M	Silty Clay Loam	
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

No evidence of hydric soils observed.ÁÁÁ

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No evidence of wetland hydrology observed.ÁÁÁ

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Easton Ranch City/County: Park County Sampling Date: 2024-06-19ÁÁ

Applicant/Owner: MDT State: Montana Sampling Point: DP07wÁÁÁ

Investigator(s): R Cutler, E Reynaud Section, Township, Range: S32 T4N R9EÁÁÁ

Landform (hillslope, terrace, etc.): Valley FloorÁÁÁ Local relief (concave, convex, none): Concave Slope (%): 0ÁÁÁ

Subregion (LRR): E 44B Lat: 46.0591110 Long: -110.6397679 Datum: NAD 83ÁÁ

Soil Map Unit Name: 155A - Meadowcreek, rarely flooded-Nesda complex, 0 to 2 percent slopes NWI classification: Not mappedÁÁÁ

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Data point taken in southern portion of site.ÁÁÁ

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft rÁÁÁ)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft rÁÁÁ)			
1. Juncus balticusÁÁÁ	70ÁÁÁ	✔	FACWÁ
2. Poa pratensisÁÁÁ	10		FACÁÁ
3. Taraxacum officinaleÁÁÁ	10ÁÁÁ		FACU
4. Lotus corniculatusÁÁ	7ÁÁÁ		FACÁÁ
5. Equisetum arvenseÁÁ	1		FACÁÁ
6.			
7.			
8.			
9.			
10.			
11.			
	98ÁÁÁ = Total Cover		
Woody Vine Stratum (Plot size: 30 ft rÁÁÁ)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 2ÁÁÁ

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1ÁÁÁ (A)

Total Number of Dominant Species Across All Strata: 1ÁÁÁ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00ÁÁÁ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0ÁÁÁ	x 1 =	0
FACW species	70ÁÁÁ	x 2 =	140
FAC species	18	x 3 =	54
FACU species	10ÁÁÁ	x 4 =	40ÁÁÁ
UPL species	0ÁÁÁ	x 5 =	0ÁÁÁ
Column Totals:	98Á (A)		234ÁÁÁ (B)

Prevalence Index = B/A = 2.38ÁÁÁ

Hydrophytic Vegetation Indicators:

✔ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

✔ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Evidence of hydrophytic vegetation includes a positive rapid test, a positive dominance test, and a prevalence index less than or equal to 3.0.ÁÁÁ

SOIL

Sampling Point: DP07wÁÁÁ

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0- 10Á	10YR 3/1ÁÁÁ	98ÁÁ	10YR 5/8ÁÁÁ	2ÁÁÁ	CÁÁÁ	MÁÁÁ	Clay Loam	
10- 16	10YR 3/1ÁÁÁ	100Á					LoamÁÁÁ	
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✔ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** _____

Remarks:

Redoximorphic concentrations common within dark surface.ÁÁÁ

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✔ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

Water Table Present? Yes ___ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✔ No ___ Depth (inches): 0

Wetland Hydrology Present? Yes ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Evidence of wetland hydrology includes soil saturation, geomorphic position, and a positive FAC-Neutral test.ÁÁÁ

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Easton Ranch City/County: Park County Sampling Date: 2024-06-19ÁÁ

Applicant/Owner: MDT State: Montana Sampling Point: DP08uÁÁÁ

Investigator(s): R Cutler, E Reynaud Section, Township, Range: S32 T4N R9EÁÁÁ

Landform (hillslope, terrace, etc.): BermÁÁÁ Local relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR): E 44B Lat: 46.0598329 Long: -110.6391419 Datum: NAD 83ÁÁ

Soil Map Unit Name: 155A - Meadowcreek, rarely flooded-Nesda complex, 0 to 2 percent slopes NWI classification: Not mappedÁÁÁ

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Upland point taken 11 feet away from wetland point.ÁÁÁ

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft rÁÁÁ)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft rÁÁÁ)			
1. Bromus inermisÁÁÁ	55ÁÁÁ	✔	UPLÁÁ
2. Lotus corniculatusÁÁÁ	15ÁÁÁ	✔	FACÁÁ
3. Potentilla rectaÁÁÁ	3ÁÁÁ		UPLÁÁ
4. Taraxacum officinaleÁÁ	2		FACUÁ
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	75ÁÁÁ = Total Cover		
Woody Vine Stratum (Plot size: 30 ft rÁÁÁ)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 25ÁÁÁ

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1ÁÁÁ (A)

Total Number of Dominant Species Across All Strata: 2ÁÁÁ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00ÁÁÁ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0ÁÁÁ	x 1 =	0
FACW species	0ÁÁÁ	x 2 =	0
FAC species	15ÁÁÁ	x 3 =	45
FACU species	2ÁÁÁ	x 4 =	8ÁÁÁ
UPL species	58ÁÁÁ	x 5 =	290ÁÁÁ
Column Totals:	75Á (A)		343ÁÁÁ (B)

Prevalence Index = B/A = 4.57ÁÁÁ

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

Vegetation does not meet criteria needed to be considered hydrophytic.ÁÁÁ

SOIL

Sampling Point: DP08uÁÁÁ

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 15	10YR 3/3ÁÁÁ	95ÁÁ	10YR 4/6ÁÁÁ	5ÁÁÁ	C	M	Clay Loam	
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

No evidence of hydric soils observed.ÁÁÁ

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No evidence of wetland hydrology present.ÁÁÁ

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Easton Ranch City/County: Park County Sampling Date: 2024-06-19ÁÁ

Applicant/Owner: MDT State: Montana Sampling Point: DP08wÁÁÁ

Investigator(s): R Cutler, E Reynaud Section, Township, Range: S32 T4N R9EÁÁÁ

Landform (hillslope, terrace, etc.): DitchÁÁÁ Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR): E 44B Lat: 46.0598614 Long: -110.6391585 Datum: NAD 83ÁÁ

Soil Map Unit Name: 155A - Meadowcreek, rarely flooded-Nesda complex, 0 to 2 percent slopes NWI classification: Not mappedÁÁÁ

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Data point located in population of Populus spp.ÁÁÁ

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft rÁÁÁ)			
1. Populus balsamiferaÁÁÁ	50ÁÁÁ	✔	FACÁÁ
2.			
3.			
4.			
5.			
	50ÁÁÁ = Total Cover		
Herb Stratum (Plot size: 5 ft rÁÁÁ)			
1. Juncus balticusÁÁÁ	40ÁÁÁ	✔	FACWÁ
2. Lotus corniculatusÁÁÁ	35	✔	FAC
3. Elymus repensÁÁÁ	5ÁÁÁ		FACÁÁ
4. Taraxacum officinaleÁÁ	1		FACUÁ
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	81 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft rÁÁÁ)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 19

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00ÁÁÁ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0ÁÁÁ	x 1 =	0
FACW species	40ÁÁÁ	x 2 =	80
FAC species	90ÁÁÁ	x 3 =	270
FACU species	1	x 4 =	4ÁÁÁ
UPL species	0ÁÁÁ	x 5 =	0ÁÁÁ
Column Totals:	131Á (A)		354ÁÁÁ (B)

Prevalence Index = B/A = 2.70ÁÁÁ

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

✔ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Evidence of hydrophytic vegetation includes a positive dominance test and a prevalence index less than or equal to 3.0.ÁÁÁ

SOIL

Sampling Point: DP08wÁÁÁ

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 4Á	10YR 3/1ÁÁÁ	100					Silty Clay Loam	
4 - 10	10YR 4/2ÁÁÁ	98	10YR 5/8ÁÁÁ	2ÁÁÁ	CÁÁÁ	PL / M	Sandy Clay Loam	
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ No ___

Remarks:

Prominent redoximorphic concentrations common within depleted matrix. Cobbles restricted excavation further than 10".ÁÁÁ

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ✔ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✔ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

Water Table Present? Yes ___ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes ✔ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Evidence of wetland hydrology includes oxidized rhizospheres along living roots, and geomorphic position.ÁÁÁ

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Easton Ranch City/County: Park County Sampling Date: 2024-06-19ÁÁ

Applicant/Owner: MDT State: Montana Sampling Point: DP09uÁÁÁ

Investigator(s): R Cutler, E Reynaud Section, Township, Range: S32 T4N R9EÁÁÁ

Landform (hillslope, terrace, etc.): FloodplainÁÁÁ Local relief (concave, convex, none): Linear Slope (%): 1ÁÁÁ

Subregion (LRR): E 44B Lat: 46.0603736 Long: -110.6400487 Datum: NAD 83ÁÁ

Soil Map Unit Name: 155A - Meadowcreek, rarely flooded-Nesda complex, 0 to 2 percent slopes NWI classification: Not mappedÁÁÁ

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Upland point taken near western border of site.ÁÁÁ

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft rÁÁÁ)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 ft rÁÁÁ)			
1. Bromus inermisÁÁÁ	65ÁÁÁ	✔	UPLÁÁ
2. Elymus repensÁÁÁ	15ÁÁÁ		FACÁÁ
3. Poa pratensisÁÁÁ	15ÁÁÁ		FACÁÁ
4. Thlaspi arvenseÁÁ	3ÁÁÁ		UPL
5. Carex nebrascensisÁÁ	2ÁÁÁ		OBL
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft rÁÁÁ)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0ÁÁÁ (A)

Total Number of Dominant Species Across All Strata: 1ÁÁÁ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.00ÁÁÁ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	2ÁÁÁ	x 1 =	2
FACW species	0ÁÁÁ	x 2 =	0
FAC species	30ÁÁÁ	x 3 =	90
FACU species	0ÁÁÁ	x 4 =	0ÁÁÁ
UPL species	68ÁÁÁ	x 5 =	340ÁÁÁ
Column Totals:	100Á (A)		432ÁÁÁ (B)

Prevalence Index = B/A = 4.32ÁÁÁ

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

Vegetation does not meet criteria needed to be considered hydrophytic.ÁÁÁ

SOIL

Sampling Point: DP09u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 16+	10YR 3/2ÁÁÁ	100					Silty Clay Loam	
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

No hydric soil indicators observed.ÁÁÁ

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No evidence of wetland hydrology observed.ÁÁÁ

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Easton Ranch City/County: Park County Sampling Date: 2024-06-19ÁÁ

Applicant/Owner: MDT State: Montana Sampling Point: DP09wÁÁÁ

Investigator(s): R Cutler, E Reynaud Section, Township, Range: S32 T4N R9EÁÁÁ

Landform (hillslope, terrace, etc.): DepressionÁÁÁ Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR): E 44B Lat: 46.0603945 Long: -110.6399866 Datum: NAD 83ÁÁ

Soil Map Unit Name: 155A - Meadowcreek, rarely flooded-Nesda complex, 0 to 2 percent slopes NWI classification: Not mappedÁÁÁ

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Data point taken near southern border adjacent to Shields River.ÁÁÁ

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft rÁÁÁ)			
1. Salix bebbianaÁÁÁ	5	✔	FACW
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: 5 ft rÁÁÁ)			
1. Carex utriculataÁÁÁ	50ÁÁÁ	✔	OBL
2. Phalaris arundinaceaÁÁÁ	30ÁÁÁ	✔	FACWÁ
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft rÁÁÁ)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 20

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	50ÁÁÁ	x 1 =	50
FACW species	35	x 2 =	70
FAC species	0ÁÁÁ	x 3 =	0
FACU species	0ÁÁÁ	x 4 =	0ÁÁÁ
UPL species	0ÁÁÁ	x 5 =	0ÁÁÁ
Column Totals:	85 (A)		120ÁÁÁ (B)

Prevalence Index = B/A = 1.41ÁÁÁ

Hydrophytic Vegetation Indicators:

✔ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

✔ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Evidence of hydrophytic vegetation includes a positive dominance test, a positive rapid test, and a prevalence index less than or equal to 3.ÁÁÁ

SOIL

Sampling Point: DP09w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 5	10YR 3/2	100					Clay Loam	
5 - 15	10YR 3/1	98	10YR 4/4	2	C	M	Sandy Clay Loam	
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✔ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ No ___

Remarks:

Distinct redoximorphic concentrations common within redox dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✔ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

Water Table Present? Yes ___ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✔ No ___ Depth (inches): 10

Wetland Hydrology Present? Yes ✔ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Evidence of wetland hydrology includes soil saturation, geomorphic position, and a positive FAC-Neutral test.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Easton Ranch City/County: Park County Sampling Date: 2024-06-19ÁÁ

Applicant/Owner: MDT State: Montana Sampling Point: DP10uÁÁÁ

Investigator(s): J Trilling Section, Township, Range: S32 T4N R9EÁÁÁ

Landform (hillslope, terrace, etc.): Valley FloorÁÁÁ Local relief (concave, convex, none): Linear Slope (%): 2

Subregion (LRR): E 44B Lat: 46.0610225 Long: -110.6385132 Datum: NAD 83ÁÁ

Soil Map Unit Name: 155A - Meadowcreek, rarely flooded-Nesda complex, 0 to 2 percent slopes NWI classification: Not mappedÁÁÁ

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Upland data point taken near northern border of site.ÁÁÁ

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft rÁÁÁ)			
1. Populus tremuloidesÁÁÁ	5	✔	FACU
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: 5 ft rÁÁÁ)			
1. Bromus inermisÁÁÁ	50	✔	UPLÁÁ
2. Elymus repensÁÁÁ	30	✔	FACÁÁ
3. Poa pratensisÁÁÁ	15ÁÁÁ		FACÁÁ
4. Taraxacum officinaleÁÁ	2		FACUÁ
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	97ÁÁÁ = Total Cover		
Woody Vine Stratum (Plot size: 30 ft rÁÁÁ)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 3ÁÁÁ

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1ÁÁÁ (A)

Total Number of Dominant Species Across All Strata: 3ÁÁÁ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.33ÁÁÁ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0ÁÁÁ	x 1 =	0
FACW species	0ÁÁÁ	x 2 =	0
FAC species	45ÁÁÁ	x 3 =	135
FACU species	7	x 4 =	28
UPL species	50	x 5 =	250ÁÁÁ
Column Totals:	102Á (A)		413ÁÁÁ (B)

Prevalence Index = B/A = 4.04ÁÁÁ

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

Data point dominated by upland vegetation.ÁÁÁ

SOIL

Sampling Point: DP10u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 12	10YR 3/1ÁÁÁ	100ÁÁ					Clay Loam	
12 - 18	10YR 3/1ÁÁÁ	98ÁÁ	10YR 4/4ÁÁÁ	2ÁÁÁ	CÁÁÁ	M	Clay Loam	
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

No hydric soil indicators observed.ÁÁÁ

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No evidence of wetland hydrology observed.ÁÁÁ

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Easton Ranch City/County: Park County Sampling Date: 2024-06-19ÁÁ

Applicant/Owner: MDT State: Montana Sampling Point: DP10wÁÁÁ

Investigator(s): J Trilling Section, Township, Range: S32 T4N R9EÁÁÁ

Landform (hillslope, terrace, etc.): DepressionÁÁÁ Local relief (concave, convex, none): Concave Slope (%): 2ÁÁÁ

Subregion (LRR): E 44B Lat: 46.0609010 Long: -110.6385151 Datum: NAD 83ÁÁ

Soil Map Unit Name: 155A - Meadowcreek, rarely flooded-Nesda complex, 0 to 2 percent slopes NWI classification: Not mappedÁÁÁ

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Wetland point taken near northern border of site.ÁÁÁ

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft rÁÁÁ)			
1. Salix bebbianaÁÁÁ	5ÁÁÁ	✔	FACWÁ
2.			
3.			
4.			
5.			
	5ÁÁÁ = Total Cover		
Herb Stratum (Plot size: 5 ft rÁÁÁ)			
1. Juncus balticusÁÁÁ	60	✔	FACWÁ
2. Elymus repensÁÁÁ	15ÁÁÁ		FAC
3. Carex pellitaÁÁÁ	5ÁÁÁ		OBLÁÁ
4. Lotus corniculatusÁÁ	2ÁÁÁ		FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	82ÁÁÁ = Total Cover		
Woody Vine Stratum (Plot size: 30 ft rÁÁÁ)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 18ÁÁÁ

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2ÁÁÁ (A)

Total Number of Dominant Species Across All Strata: 2ÁÁÁ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00ÁÁÁ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5ÁÁÁ	x 1 =	5
FACW species	65ÁÁÁ	x 2 =	130
FAC species	17ÁÁÁ	x 3 =	51
FACU species	0ÁÁÁ	x 4 =	0ÁÁÁ
UPL species	0ÁÁÁ	x 5 =	0ÁÁÁ
Column Totals:	87Á (A)		186ÁÁÁ (B)

Prevalence Index = B/A = 2.13ÁÁÁ

Hydrophytic Vegetation Indicators:

✔ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

✔ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Evidence of hydrophytic vegetation includes a positive rapid test, a positive dominance test, and a prevalence index less than or equal to 3.0.ÁÁÁ

SOIL

Sampling Point: DP10wÁÁÁ

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0- 9Á	10YR 4/1ÁÁÁ	95ÁÁ	10YR 4/6ÁÁÁ	5ÁÁÁ	C	MÁÁÁ	Clay Loam	
9- 14Á	10YR 4/1ÁÁÁ	90ÁÁ	7.5YR 4/4ÁÁÁ	10ÁÁ	C	MÁÁÁ	Clay Loam	
14- 18	10YR 4/1ÁÁÁ	90ÁÁ	7.5YR 4/4ÁÁÁ	10ÁÁ	C	MÁÁÁ	Sandy Clay Loam	
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** _____

Remarks:

Prominent redoximorphic concentrations common within depleted matrix.ÁÁÁ

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Vis ble on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✔ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

Water Table Present? Yes ___ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✔ No ___ Depth (inches): 10

Wetland Hydrology Present? Yes ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Evidence of wetland hydrology includes soil saturation, geomorphic position, and a positive FAC-Neutral test.ÁÁÁ

MDT Montana Wetland Assessment Form (revised March 2008)

1. Project Name: Easton Ranch **2. MDT Project #:** STPP STWD (813) **Control #:** 9680000

3. Evaluation Date: 06/19/2024 **4. Evaluator(s):** E Reynaud **5. Wetlands/Site #(s):** Creation

6. Wetland Location(s): i. Legal: T4N,R9E,32 **Latitude/Longitude:** 46.0584, -110.638189 :

ii. Approx. Stationing or Mileposts: NA

iii. Watershed: 13

Watershed Name, County: Upper Yellowstone, Park

7. a. Evaluating Agency: Confluence Consulting

b. Purpose of Evaluation:

1. ___ Wetlands potentially affected by MDT project
2. ___ Mitigation wetlands; pre-construction
3. X Mitigation wetlands; post-construction
4. ___ Other:

8. Wetland size: 12.330 acres (measured)

9. Assessment area (AA): 12.330 acres (measured)

10. Classification of Wetland and Aquatic Habitats in AA

HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% of AA
D	AB	E	SI	1.00
R	EM	E	SI	69.00
R	SS	E	SI	30.00

Abbreviations: *(see manual for definitions)*

HGM Classes: Riverine (**R**), Depressional (**D**), Slope (**S**), Mineral Soil Flats (**MSF**), Organic Soil Flats (**OSF**), Lacustrine Fringe (**LF**);

Cowardin Classes: Rock Bottom (**RB**), Unconsolidated bottom (**UB**), Aquatic Bed (**AB**), Unconsolidated Shore (**US**), Moss-lichen Wetland (**ML**), Emergent Wetland (**EM**), Scrub-Shrub Wetland (**SS**), Forested Wetland (**FO**)

Modifiers: Excavated (**E**), Impounded (**I**), Diked (**D**), Partly Drained (**PD**), Farmed (**F**), Artificial (**A**)

Water Regimes: Permanent / Perennial (**PP**), Seasonal / Intermittent (**SI**), Temporary / Ephemeral (**TE**)

11. Estimated relative abundance: (of similarly classified sites within the same Major Montana Watershed Basin, see definitions)

COMMON

12. General condition of AA:

i. Disturbance: (use matrix below to determine [circle] appropriate response – see instructions for Montana-listed noxious weed and aquatic nuisance vegetation species (**ANVS**) list)

Conditions within AA	*Predominant conditions adjacent to (within 500 feet of) AA*		
	Managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or buildings; and noxious weed or ANVS cover is >=15%.	Land not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to minor clearing; contains few roads or buildings; noxious weed or ANVS cover is <= 30%.	Land cultivated or heavily grazed or logged; subject to substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is > 30%.
AA occurs and is managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or occupied buildings; and noxious weed or ANVS cover is <= 15%.	low disturbance	**low disturbance**	moderate disturbance
AA not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to relatively minor clearing, fill placement, or hydrological alteration; contains few roads or buildings; noxious weed or ANVS cover is <=	moderate disturbance	moderate disturbance	high disturbance
AA cultivated or heavily grazed or logged; subject to relatively substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is > 30%.	high disturbance	high disturbance	high disturbance

Comments: (types of disturbance, intensity, season, etc.): Limited agriculture (hay) and a few ranch structures to the east. Undeveloped riparian corridor and herbaceous uplands to north, south, and west. A new house was built west of the Shield River on an upland terrace. Three species of noxious weeds were present within the AA. The AA is managed in a natural state, as are most of the lands within 500 feet of the AA

ii. Prominent noxious, aquatic nuisance, & other exotic vegetation species: Cirsium arvense, Cynoglossum officinale, and Potentilla recta

iii. Provide brief descriptive summary of AA and surrounding land use/habitat: The AA consists of five constructed wetland cells. The lowest contours of the wetland cells are seasonally inundated and have developed wetland characteristics. The majority of higher elevations within the site lack wetland characteristics and support upland plant communities. The cells are bordered by limited agriculture (hay and food plots) and an undeveloped riparian corridor.

13. Structural Diversity: (based on number of "Cowardin" ***vegetated*** classes present [do not include unvegetated classes], see #10 above)

Existing # of "Cowardin" Vegetated Classes in AA	**Initial Rating**	**Is current management preventing (passive) existence of additional vegetated classes?**		**Modified Rating**
>= 3 (or 2 if 1 is forested) classes	**H**	NA	NA	NA
2 (or 1 if forested) classes	M	NA	NA	NA
1 class, but not a monoculture	M	<-- NO	YES -->	L
1 class, monoculture (1 species comprises >= 90% of total cover)	L	NA	NA	NA

Comments: The AA consists of palustrine emergent wetlands (PEM), scrub-shrub (young PSS), and an aquatic bed at the east central portion of the AA.

SECTION PERTAINING to FUNCTIONS & VALUES ASSESSMENT

14A. Habitat for Federally Listed or Proposed Threatened or Endangered Plants or Animals:

i. AA is Documented (D) or Suspected (S) to contain (circle one based on definitions contained in instructions):

Primary or critical habitat (list species)	**Secondary habitat (list species)**	**Incidental habitat (list species)**
		Monarch Butterfly(S) Canada Lynx (LT), North American North American Wolverine(S)

ii. Rating (use the conclusions from i above and the matrix below to arrive at [circle] the functional points and rating)

Highest Habitat Level	*doc/primary*	*sus/primary*	*doc/secondary*	*sus/secondary*	*doc/incidental*	*sus/incidental*	*None*
Functional Points and Rating	1H	.9H	.8M	.7M	.3L	**.1L**	0L

Sources for documented use (e.g. observations, records, etc): USFWS IPAC 2024

14B. Habitat for plant or animals rated S1, S2, or S3 by the Montana Natural Heritage Program: (not including species listed in14A above)

i. AA is Documented (D) or Suspected (S) to contain (circle one based on definitions contained in instructions):

Primary or critical habitat (list species)	**Secondary habitat (list species)**	**Incidental habitat (list species)**
Bobolink (D) - S2S3		Golden Eagle(D) - S2S3

ii. Rating (use the conclusions from i above and the matrix below to arrive at [circle] the functional points and rating)

Highest Habitat Level	*doc/primary*	*sus/primary*	*doc/secondary*	*sus/secondary*	*doc/incidental*	*sus/incidental*	*None*
***S1 Species:** Functional Points and Rating*	1H	.8H	.7M	.6M	.2L	.1L	0L
***S2 and S3 Species:** Functional Points and Rating*	**.9H**	.7M	.6M	.5M	.2L	.1L	0L

Sources for documented use (e.g. observations, records, etc): MTNHP, 2024 and 2019-2024 field observations. Bobolink nesting on site documented by MDT staff. Golden eagle observed in 2023, bald eagle observed in 2024.

14C. General Wildlife Habitat Rating:

i. Evidence of overall wildlife use in the AA (circle substantial, moderate, or low based on supporting evidence):

Substantial (based on any of the following [check]):
- ___ observations of abundant wildlife #s or high species diversity (during any period)
- ___ abundant wildlife sign such as scat, tracks, nest structures, game trails, etc.
- ___ presence of extremely limiting habitat features not available in the surrounding area
- ___ interviews with local biologists with knowledge of the AA

Minimal (based on any of the following [check]):
- ___ few or no wildlife observations during peak use periods
- ___ little to no wildlife sign
- ___ sparse adjacent upland food sources
- ___ interviews with local biologists with knowledge of the AA

Moderate (based on any of the following [check]):
- X observations of scattered wildlife groups or individuals or relatively few species during peak periods
- X common occurrence of wildlife sign such as scat, tracks, nest structures, game trails, etc.
- X adequate adjacent upland food sources
- ___ interviews with local biologists with knowledge of the AA

ii. Wildlife habitat features (Working from top to bottom, circle appropriate AA attributes in matrix to arrive at rating. Structural diversity is from #13. For class cover to be considered evenly distributed, the most and least prevalent vegetated classes must be within 20% of each other interms of their percent composition of the AA (see #10). Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; T/E = temporary/ephemeral; and A = absent [see instructions for further definitions of these terms])

Structural diversity (see #13)	High								Moderate								Low			
Class cover distribution (all vegetated classes)	Even				Uneven				Even				Uneven				Even			
Duration of surface water in >=10% of AA	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A
Low disturbance at AA (see #12i)	E	E	E	H	E	**E**	H	H	E	H	H	M	E	H	M	M	E	H	M	M
Moderate disturbance at AA (see #12i)	H	H	H	H	H	H	H	M	H	H	M	M	H	M	M	L	H	M	L	L
High disturbance at AA (see #12i)	M	M	M	L	M	M	L	L	M	M	L	L	M	L	L	L	L	L	L	L

iii. Rating (use the conclusions from i and ii above and the matrix below to arrive at [circle] the functional points and rating)

Evidence of wildlife use (i)	*Wildlife habitat features rating (ii)*			
	Exceptional	High	Moderate	Moderate
Substantial	1E	.9H	.8H	.7M
Moderate	**.9H**	.7M	.5M	.3L
Minimal	.6M	.4M	.2L	.1L

Comments: There is a bald eagle (Haliaeetus leucocephalus) nest directly southwest of the site on the west side of the Shields River. During the 2024 monitoring, the nest was in use. The project site is within the primary habitat zone for bald eagles. In 2024 observed white-tailed deer and many bird species.

14D. General Fish Habitat Rating: (Assess this function if the AA is used by fish or the existing situation is "correctable" such that the AA could be used by fish [i.e., fish use is precluded by perched culvert or other barrier, etc.]. If the AA is not used by fish, fish use is not restorable due to habitat constraints, or is not desired from a management perspective [such as fish entrapped in a canal], then mark **X NA** and proceed to 14E.)

Type of Fishery: Cold Water **(CW)** ___ Warm Water **(WW)** ___ **Use the CW or WW guidelines in the user manual to complete the matrix**

i. Habitat Quality and Known / Suspected Fish Species in AA (use matrix to arrive at [circle] the functional points and rating)

Duration of surface water in AA	Permanent / Perennial						Seasonal / Intermittent						Temporary / Ephemeral					
Aquatic hiding / resting / escape cover	Optimal		Adequate		Poor		Optimal		Adequate		Poor		Optimal		Adequate		Poor	
Thermal cover optimal / suboptimal	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S
FWP Tier I fish species	1E	.9H	.8H	.7M	.6M	.5M	.9H	.8H	.7M	.6M	.5M	.4M	.7M	.6M	.5M	.4M	.3L	.2L
FWP Tier II or Native Game fish species	.9H	.8H	.7M	.6M	.5M	.5M	.8H	.7M	.6M	.5M	.4M	.4M	.6M	.5M	.4M	.3L	.2L	.2L
FWP Tier III or Introduced Game fish	.8H	.7M	.6M	.5M	.5M	.4M	.7M	.6M	.5M	.4M	.4M	.3L	.5M	.4M	.3L	.2L	.2L	.1L
FWP Non-Game Tier IV or No fish species	.5M	.5M	.5M	.4M	.4M	.3L	.4M	.4M	.4M	.3L	.3L	.2L	.2L	.2L	.2L	.1L	.1L	.1L

Sources used for identifying fish sp. potentially found in AA:

ii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1)

a) Is fish use of the AA significantly reduced by a culvert, dike, or other man-made structure or activity or is the waterbody included on the current final MDEQ list of waterbodies in need of TMDL development with listed "Probable Impaired Uses" including cold or warm water fishery or aquatic life support, or do aquatic nuisance plant or animal species (see Appendix E) occur in fish habitat? ___ If yes, reduce score in i above by 0.1.

*b) Does the AA contain a documented spawning area or other critical habitat feature (i.e., sanctuary pool, upwelling area, etc.- specify in comments) for native fish or introduced game fish? ___ If yes, add 0.1 to the adjusted score in **i** or **iia.***

iii. Final Score and Rating: NA **Comments:** Wetland cells are isolated from Shields River with no fish habitat present.

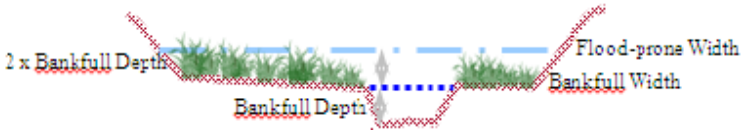
14E. Flood Attenuation: (Applies only to wetlands subject to flooding via in-channel or overbank flow. If wetlands in AA are not flooded from in-channel or overbank flow, mark ___ **NA** and proceed to 14F.)

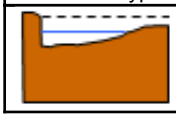
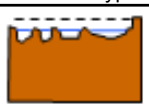
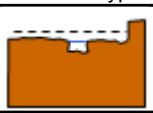
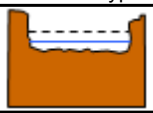
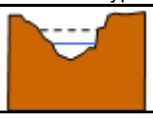
i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

Estimated or Calculated Entrenchment (Rosgen 1994, 1996)	Slightly entrenched - C, D, E stream types			Moderately entrenched – B stream type			Entrenched-A, F, G stream types		
% of flooded wetland classified as forested and/or scrub/shrub	75%	25-75%	<25%	75%	25-75%	<25%	75%	25-75%	<25%
AA contains **no outlet or restricted outlet**	1H	.9H	.6M	.8H	.7M	.5M	.4M	.3L	.2L
AA contains **unrestricted outlet**	.9H		.5M	.7M	.6M	.4M	.3L	.2L	.1L

Entrenchment ratio (ER) estimation – see User's Manual for additional guidance. Entrenchment ratio = (flood-prone width)/(bankfull width) Flood-prone width = estimated horizontal projection of where 2 x maximum bankfull depth elevation intersects the floodplain on each side of the stream.

133 /	28 =	**4.75**
Flood-prone width	*Bankfull width*	*Entrenchment ratio (ER)*



Slightly Entrenched ER = >2.2			**Moderately Entrenched ER = 1.41 – 2.2**	**Entrenched ER = 1.0 – 1.4**		
C stream type	D stream type	E stream type	B stream type	A stream type	F stream type	G stream type
						

ii. Are ≥10 acres of wetland in the AA subject to flooding **AND** are man-made features which may be significantly damaged by floods located within 0.5 mile downstream of the AA (circle)? **X** **Comments:** AA receives overbank flow from Shields River during high flow events and houses located within 5 miles downstream.

14F. Short and Long Term Surface Water Storage: (Applies to wetlands that flood or pond from overbank or in-channel flow, precipitation, upland surface flow, or groundwater flow. If no wetlands in the AA are subject to flooding or ponding, ___**NA** and proceed to 14G.)

i. Rating (Working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating. Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; and T/E = temporary/ephemeral [see instructions for further definitions of these terms].)

Estimated maximum acre feet of water contained in wetlands within the AA that are subject to periodic flooding or ponding	>5 acre feet			1.1 to 5 acre feet			<=1 acre foot		
Duration of surface water at wetlands within the AA	P/P	S/I	T/E	P/P	S/I	T/E	P/P	S/I	T/E
Wetlands in AA flood or pond **>= 5 out of 10 years**	1H	.9H	.8H	.8H	.6M	.5M	.4M	.3L	.2L
Wetlands in AA flood or pond **< 5 out of 10 years**	.9H	**.8H**	.7M	.7M	.5M	.4M	.3L	.2L	.1L

Comments: (12.33 acre wetland) * (1 ft. max depth at high water) = 12.33 acre feet

14G. Sediment/Nutrient/Toxicant Retention and Removal: (Applies to wetlands with potential to receive sediments, nutrients, or toxicants through influx of surface or ground water or direct input. If no wetlands in the AA are subject to such input, ___**NA** and proceed to 14H.)

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating [H=high, M=moderate, or L=low])

Sediment, nutrient, and toxicant input levels within AA	AA receives or surrounding land use with potential to deliver levels of sediments, nutrients, or compounds at levels such that other functions are not substantially impaired. Minor sedimentation, sources of nutrients or toxicants, or signs of eutrophication present.				Waterbody on MDEQ list of waterbodies in need of TMDL development for "probable causes" related to sediment, nutrients, or toxicants or AA receives or surrounding land use with potential to deliver high levels of sediments, nutrients, or compounds such that other functions are substantially impaired. Major sedimentation, sources of nutrients or toxicants, or signs of eutrophication present.			
% cover of wetland vegetation in AA	>= 70%		< 70%		>= 70%		< 70%	
Evidence of flooding / ponding in AA	Yes	No	Yes	No	Yes	No	Yes	No
AA contains **no or restricted outlet**	1H	.8H	.7M	.5M	.5M	.4M	.3L	.2L
AA contains **unrestricted outlet**	**.9H**	.7M	.6M	.4M	.4M	.3L	.2L	.1L

Comments: There was evidence of ponding and flooding in 2024. Some of the low-lying areas were saturated during the 2024 monitoring event.

14H Sediment/Shoreline Stabilization: (Applies only if AA occurs on or within the banks or a river, stream, or other natural or man-made drainage, or on the shoreline of a standing water body which is subject to wave action. If 14H does not apply, ___**NA** and proceed to 14I.)

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

*% Cover of **wetland** streambank or shoreline by species with stability ratings of >=6 (see **Appendix F**).*	*Duration of surface water adjacent to rooted vegetation*		
	Permanent / Perennial	Seasonal / Intermittent	Temporary / Ephemeral
>= 65%	1H	**.9H**	.7M
35-64%	.7M	.6M	.5M
35%	.3L	.2L	.1L

Comments: One small open water area in the east central portion of the project area was observed in 2024. Deep-rooted species observed in 2024 include willows, bulrush, spikerush, sedges, and rushes.

14I. Production Export/Food Chain Support:

i. Level of Biological Activity (synthesis of wildlife and fish habitat ratings [circle])

General Fish Habitat Rating (14D.iii.)	**General Wildlife Habitat Rating (14C.iii.)**		
	E/H	M	L
E/H	H	H	M
M	H	M	M
L	M	M	L
N/A	**H**	M	L

ii. Rating (Working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating. Factor A = acreage of vegetated wetland component in the AA; Factor B = level of biological activity rating from above (14I.i.); Factor C = whether or not the AA contains a surface or subsurface outlet; the final three rows pertain to duration of surface water in the AA, where P/P, S/I, and T/E are as previously defined, and A = "absent" [see instructions for further definitions of these terms].)

A	Vegetated component >5 acres						Vegetated component 1-5 acres						Vegetated component < 1 acre					
B	High		Moderate		Low		High		Moderate		Low		High		Moderate		Low	
C	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
P/P	1H	.7M	.8H	.5M	.6M	.4M	.9H	.6M	.7M	.4M	.5M	.3L	.8H	.6M	.6M	.4M	.3L	.2L
S/I	**.9H**	.6M	.7M	.4M	.5M	.3L	.8H	.5M	.6M	.3L	.4M	.2L	.7M	.5M	.5M	.3L	.3L	.2L
T/E/A	.8H	.5M	.6M	.3L	.4M	.2L	.7M	.4M	.5M	.2L	.3L	.1L	.6M	.4M	.4M	.2L	.2L	.1L

iii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1.) **Vegetated Upland Buffer (VUB):** Area with >= 30% plant cover, = 15% noxious weed or ANVS cover, and that is not subjected to periodic mechanical mowing or clearing (unless for weed control).

a) Is there an average >= 50 foot-wide vegetated upland buffer around >= 75% of the AA circumference? ___**X** *If yes, add 0.1 to the score in ii above.*

iv. Final Score and Rating: 1.00H **Comments:** Vegetated area greater than 5 acres with a moderate level of biological activity and seasonal hydrology.

14J. Groundwater Discharge/Recharge: (check the appropriate indicators in i & ii below)

i. Discharge Indicators

	The AA is a slope wetland
	Springs or seeps are known or observed
	Vegetation growing during dormant season/drought
	Wetland occurs at the toe of a natural slope
	AA permanently flooded during drought periods
	Wetland contains an outlet, but no inlet
X	Shallow water table and the site is saturated to the surface
	Other:

ii. Recharge Indicators

X	Permeable substrate present without underlying impeding layer
	Wetland contains inlet but no outlet
	Stream is a known 'losing' stream; discharge volume decreases
	Other:

iii. Rating (use the information from i and ii above and the table below to arrive at [circle] the functional points and rating)

	Duration of saturation at AA Wetlands *FROM GROUNDWATER DISCHARGE OR WITH WATER THAT IS RECHARGING THE GROUNDWATER SYSTEM*			
Criteria	P/P	S/I	T	None
Groundwater Discharge or Recharge	1H	**.7M**	.4M	.1L
Insufficient Data/Information	N/A			

Comments: Soils saturated or moist across most of the constructed wetlands in 2024.

14K. Uniqueness:

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

Replacement potential	AA contains fen, bog, warm springs or mature (>80 yr-old) forested wetland **or** plant association listed as "S1" by the MTNHP			AA does not contain previously cited rare types **and** structural diversity (#13) is high **or** contains plant association listed as "S2" by the MTNHP			AA does not contain previously cited rare types or associations **and** structural diversity (#13) is low-moderate		
Estimated relative abundance (#11)	rare	common	abundant	rare	common	abundant	rare	common	abundant
Low disturbance at AA (#12i)	1H	.9H	.8H	.8H	**.6M**	.5M	.5M	.4M	.3L
Moderate disturbance at AA (#12i)	.9H	.8H	.7M	.7M	.5M	.4M	.4M	.3L	.2L
High disturbance at AA (#12i)	.8H	.7M	.6M	.6M	.4M	.3L	.3L	.2L	.1L

Comments: Trees and shrubs are establishing well across the AA. However, saplings are experiencing significant herbivory which is stunting growth. Site disturbance is low.

14L. Recreation/Education Potential: (affords "bonus" points if AA provides recreation or education opportunity)

i. Is the AA a known or potential rec./ed. site: (circle) ___ (if 'Yes' continue with the evaluation; if 'No' then mark **X** **NA** and proceed to the overall summary and rating page)

ii. Check categories that apply to the AA: ___Educational/scientific study; ___Consumptive rec.; ___Non-consumptive rec.; ___Other :

iii. Rating:

Known or Potential Recreation or Education Area	Known	Potential
Public ownership or public easement with general public access (no permission required)	.2H	.15H
Private ownership with general public access (no permission required)	.15H	.1M
Private or public ownership without general public access, or requiring permission for public access	.1M	.05L

Comments: Landowner does not allow public access or educational use of the site.

General Site Notes
The site is developing into a productive wetland system. However, scrub-shrub communities have been stunted by heavy herbivory.

FUNCTION & VALUE SUMMARY & OVERALL RATING FOR WETLAND/SITE #(S): Creation

Function & Value Variables	Rating	Actual Functional Points	Possible Functional Points	Functional Units: (Actual Points x Wetland Acreage)	Indicate the four most prominent functions with an asterisk (*)
A. Listed/Proposed T&E Species Habitat	L	0.10	1	1.23	
B. MT Natural Heritage Program Species Habitat	H	0.90	1	11.10	*
C. General Wildlife Habitat	H	0.90	1	11.10	*
D. General Fish Habitat	NA				
E. Flood Attenuation	H	0.80	1	9.86	
F. Short and Long Term Surface Water Storage	H	0.80	1	9.86	
G. Sediment/Nutrient/Toxicant Removal	H	0.90	1	11.10	*
H. Sediment/Shoreline Stabilization	H	0.90	1	11.10	
I. Production Export/Food Chain Support	H	1.00	1	12.33	*
J. Groundwater Discharge/Recharge	M	0.70	1	8.63	
K. Uniqueness	M	0.60	1	7.40	
L. Recreation/Education Potential (bonus points)	NA				
Totals:		7.60	10.00	93.71	
Percent of Possible Score			76%		

Category I Wetland: (must satisfy one of the following criteria; otherwise go to Category II)

____ Score of 1 functional point for Listed/Proposed Threatened or Endangered Species; **or**
____ Score of 1 functional point for Uniqueness; **or**
____ Score of 1 functional point for Flood Attenuation and answer to Question 14E.ii is "yes"; **or**
____ Percent of possible score > 80% (round to nearest whole #).

Category II Wetland: (Criteria for Category I not satisfied and meets any one of the following criteria; otherwise go to Category IV)

____ Score of 1 functional point for MT Natural Heritage Program Species Habitat; **or**
__X__ Score of .9 or 1 functional point for General Wildlife Habitat; **or**
____ Score of .9 or 1 functional point for General Fish Habitat; **or**
____ "High" to "Exceptional" ratings for **both** General Wildlife Habitat **and** General Fish/Aquatic Habitat; **or**
____ Score of .9 functional point for Uniqueness; **or**
__X__ Percent of possible score > 65% (round to nearest whole #).

Category III Wetland: (Criteria for Categories I, II, or IV not satisfied)

Category IV Wetland: (Criteria for Categories I or II are not satisfied and all of the following criteria are met; otherwise go to Category III)

____ "Low" rating for Uniqueness; **and**
____ Vegetated wetland component 1 acre (do not include upland vegetated buffer); **and**
____ Percent of possible score 35% (round to nearest whole #).

OVERALL ANALYSIS AREA RATING: II

Summary Comments: AA contains a diversity of habitats and wildlife.

MDT Montana Wetland Assessment Form (revised March 2008)

1. Project Name: Easton Ranch

2. MDT Project #: STPP STWD (813) **Control #:** 9680000

3. Evaluation Date: 06/19/2024 **4. Evaluator(s):** E Reynaud

5. Wetlands/Site #(s): Preservation

6. Wetland Location(s): i. Legal: T4N,R9E,32 **Latitude/Longitude:** 46.059037, -110.63809 :

ii. Approx. Stationing or Mileposts: NA

iii. Watershed: 13

Watershed Name, County: Upper Yellowstone, Park

7. a. Evaluating Agency: Confluence Consulting

b. Purpose of Evaluation:

1. __ Wetlands potentially affected by MDT project
2. __ Mitigation wetlands; pre-construction
3. X Mitigation wetlands; post-construction
4. __ Other:

8. Wetland size: 1.100 acres (measured)

9. Assessment area (AA): 1.100 acres (measured)

10. Classification of Wetland and Aquatic Habitats in AA

HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% of AA
R	EM	NA	SI	70.00
R	SS	NA	SI	30.00

Abbreviations: *(see manual for definitions)*

HGM Classes: Riverine (**R**), Depressional (**D**), Slope (**S**), Mineral Soil Flats (**MSF**), Organic Soil Flats (**OSF**), Lacustrine Fringe (**LF**);

Cowardin Classes: Rock Bottom (**RB**), Unconsolidated bottom (**UB**), Aquatic Bed (**AB**), Unconsolidated Shore (**US**), Moss-lichen Wetland (**ML**), Emergent Wetland (**EM**), Scrub-Shrub Wetland (**SS**), Forested Wetland (**FO**)

Modifiers: Excavated (**E**), Impounded (**I**), Diked (**D**), Partly Drained (**PD**), Farmed (**F**), Artificial (**A**)

Water Regimes: Permanent / Perennial (**PP**), Seasonal / Intermittent (**SI**), Temporary / Ephemeral (**TE**)

11. Estimated relative abundance: (of similarly classified sites within the same Major Montana Watershed Basin, see definitions)

COMMON

12. General condition of AA:

i. Disturbance: (use matrix below to determine [circle] appropriate response – see instructions for Montana-listed noxious weed and aquatic nuisance vegetation species (**ANVS**) list)

Conditions within AA	*Predominant conditions adjacent to (within 500 feet of) AA*		
	Managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or buildings; and noxious weed or ANVS cover is >=15%.	Land not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to minor clearing; contains few roads or buildings; noxious weed or ANVS cover is <= 30%.	Land cultivated or heavily grazed or logged; subject to substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is > 30%.
AA occurs and is managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or occupied buildings; and noxious weed or ANVS cover is <= 15%.	low disturbance	**low disturbance**	moderate disturbance
AA not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to relatively minor clearing, fill placement, or hydrological alteration; contains few roads or buildings; noxious weed or ANVS cover is <=	moderate disturbance	moderate disturbance	high disturbance
AA cultivated or heavily grazed or logged; subject to relatively substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is > 30%.	high disturbance	high disturbance	high disturbance

Comments: (types of disturbance, intensity, season, etc.): AA consists of existing riverine PFO/PSS/PEM wetlands located adjacent to the created depressional wetlands and flood channel. AA and adjacent areas are managed in a natural state, disturbance is low.

ii. Prominent noxious, aquatic nuisance, & other exotic vegetation species: Cirsium arvense, Cynoglossum officinale

iii. Provide brief descriptive summary of AA and surrounding land use/habitat: AA contains small areas of existing PFO/PSS/PEM wetlands located at the northwest (Shields River) and southcentral ends of the mitigation area. The existing PFO/PEM habitat located at the southern end of the AA receives direct hydrologic inputs from the created flood channel. Both wetland features are bordered by created wetlands and the Shields River riparian corridor.

13. Structural Diversity: (based on number of "Cowardin" ***vegetated*** classes present [do not include unvegetated classes], see #10 above)

Existing # of "Cowardin" Vegetated Classes in AA	**Initial Rating**	**Is current management preventing (passive) existence of additional vegetated classes?**		**Modified Rating**
>= 3 (or 2 if 1 is forested) classes	H	NA	NA	NA
2 (or 1 if forested) classes	**M**	NA	NA	NA
1 class, but not a monoculture	M	<-- NO	YES -->	L
1 class, monoculture (1 species comprises >= 90% of total cover)	L	NA	NA	NA

Comments: PEM and PSS vegetated communities are present on site.

SECTION PERTAINING to FUNCTIONS & VALUES ASSESSMENT

14A. Habitat for Federally Listed or Proposed Threatened or Endangered Plants or Animals:

i. AA is Documented (D) or Suspected (S) to contain (circle one based on definitions contained in instructions):

Primary or critical habitat (list species)	**Secondary habitat (list species)**	**Incidental habitat (list species)**
		Monarch Butterfly(S) Canada Lynx (LT), North American North American Wolverine(S)

ii. Rating (use the conclusions from i above and the matrix below to arrive at [circle] the functional points and rating)

Highest Habitat Level	*doc/primary*	*sus/primary*	*doc/secondary*	*sus/secondary*	*doc/incidental*	*sus/incidental*	*None*
Functional Points and Rating	1H	.9H	.8M	.7M	.3L	**.1L**	0L

Sources for documented use (e.g. observations, records, etc): USFWS IPAC 2024

14B. Habitat for plant or animals rated S1, S2, or S3 by the Montana Natural Heritage Program: (not including species listed in14A above)

i. AA is Documented (D) or Suspected (S) to contain (circle one based on definitions contained in instructions):

Primary or critical habitat (list species)	**Secondary habitat (list species)**	**Incidental habitat (list species)**
Bobolink (D) - S2S3		Golden Eagle(D) - S2S3

ii. Rating (use the conclusions from i above and the matrix below to arrive at [circle] the functional points and rating)

Highest Habitat Level	*doc/primary*	*sus/primary*	*doc/secondary*	*sus/secondary*	*doc/incidental*	*sus/incidental*	*None*
***S1 Species:** Functional Points and Rating*	1H	.8H	.7M	.6M	.2L	.1L	0L
***S2 and S3 Species:** Functional Points and Rating*	**.9H**	.7M	.6M	.5M	.2L	.1L	0L

Sources for documented use (e.g. observations, records, etc): MTNHP, 2024 and 2019-2024 field observations. Bobolink nesting on site documented by MDT staff. Golden eagle observed in 2023. Two bald eagles were observed onsite in 2024.

14C. General Wildlife Habitat Rating:

i. Evidence of overall wildlife use in the AA (circle substantial, moderate, or low based on supporting evidence):

Substantial (based on any of the following [check]):
- ___ observations of abundant wildlife #s or high species diversity (during any period)
- ___ abundant wildlife sign such as scat, tracks, nest structures, game trails, etc.
- ___ presence of extremely limiting habitat features not available in the surrounding area
- ___ interviews with local biologists with knowledge of the AA

Minimal (based on any of the following [check]):
- ___ few or no wildlife observations during peak use periods
- ___ little to no wildlife sign
- ___ sparse adjacent upland food sources
- ___ interviews with local biologists with knowledge of the AA

Moderate (based on any of the following [check]):
- X observations of scattered wildlife groups or individuals or relatively few species during peak periods
- X common occurrence of wildlife sign such as scat, tracks, nest structures, game trails, etc.
- X adequate adjacent upland food sources
- ___ interviews with local biologists with knowledge of the AA

ii. Wildlife habitat features (Working from top to bottom, circle appropriate AA attributes in matrix to arrive at rating. Structural diversity is from #13. For class cover to be considered evenly distributed, the most and least prevalent vegetated classes must be within 20% of each other interms of their percent composition of the AA (see #10). Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; T/E = temporary/ephemeral; and A = absent [see instructions for further definitions of these terms])

Structural diversity (see #13)	High								Moderate								Low			
Class cover distribution (all vegetated classes)	Even				Uneven				Even				Uneven				Even			
Duration of surface water in >=10% of AA	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A
Low disturbance at AA (see #12i)	E	E	E	H	E	E	H	H	E	H	H	M	E	**H**	M	M	E	H	M	M
Moderate disturbance at AA (see #12i)	H	H	H	H	H	H	H	M	H	H	M	M	H	M	M	L	H	M	L	L
High disturbance at AA (see #12i)	M	M	M	L	M	M	L	L	M	M	L	L	M	L	L	L	L	L	L	L

iii. Rating (use the conclusions from i and ii above and the matrix below to arrive at [circle] the functional points and rating)

Evidence of wildlife use (i)	*Wildlife habitat features rating (ii)*			
	Exceptional	High	Moderate	Moderate
Substantial	1E	.9H	.8H	.7M
Moderate	.9H	**.7M**	.5M	.3L
Minimal	.6M	.4M	.2L	.1L

Comments: Moderate use of site by moose, deer, and many bird species. There is a bald eagle (Haliaeetus leucocephalus) nest directly southwest of the site on the west side of the Shields River. Nest was in use by bald eagle pair during 2024 monitoring.

14D. General Fish Habitat Rating: (Assess this function if the AA is used by fish or the existing situation is "correctable" such that the AA could be used by fish [i.e., fish use is precluded by perched culvert or other barrier, etc.]. If the AA is not used by fish, fish use is not restorable due to habitat constraints, or is not desired from a management perspective [such as fish entrapped in a canal], then mark **X NA** and proceed to 14E.)

Type of Fishery: Cold Water **(CW)** ___ Warm Water **(WW)** ___ **Use the CW or WW guidelines in the user manual to complete the matrix**

i. Habitat Quality and Known / Suspected Fish Species in AA (use matrix to arrive at [circle] the functional points and rating)

Duration of surface water in AA	Permanent / Perennial						Seasonal / Intermittent						Temporary / Ephemeral					
Aquatic hiding / resting / escape cover	Optimal		Adequate		Poor		Optimal		Adequate		Poor		Optimal		Adequate		Poor	
Thermal cover optimal / suboptimal	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S
FWP Tier I fish species	1E	.9H	.8H	.7M	.6M	.5M	.9H	.8H	.7M	.6M	.5M	.4M	.7M	.6M	.5M	.4M	.3L	.2L
FWP Tier II or Native Game fish species	.9H	.8H	.7M	.6M	.5M	.5M	.8H	.7M	.6M	.5M	.4M	.4M	.6M	.5M	.4M	.3L	.2L	.2L
FWP Tier III or Introduced Game fish	.8H	.7M	.6M	.5M	.5M	.4M	.7M	.6M	.5M	.4M	.4M	.3L	.5M	.4M	.3L	.2L	.2L	.1L
FWP Non-Game Tier IV or No fish species	.5M	.5M	.5M	.4M	.4M	.3L	.4M	.4M	.4M	.3L	.3L	.2L	.2L	.2L	.2L	.1L	.1L	.1L

Sources used for identifying fish sp. potentially found in AA:

ii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1)

a) Is fish use of the AA significantly reduced by a culvert, dike, or other man-made structure or activity or is the waterbody included on the current final MDEQ list of waterbodies in need of TMDL development with listed "Probable Impaired Uses" including cold or warm water fishery or aquatic life support, or do aquatic nuisance plant or animal species (see Appendix E) occur in fish habitat? ___ If yes, reduce score in i above by 0.1.

*b) Does the AA contain a documented spawning area or other critical habitat feature (i.e., sanctuary pool, upwelling area, etc.- specify in comments) for native fish or introduced game fish? ___ If yes, add 0.1 to the adjusted score in **i** or **iia.***

iii. Final Score and Rating: NA **Comments:** No fish habitat within AA

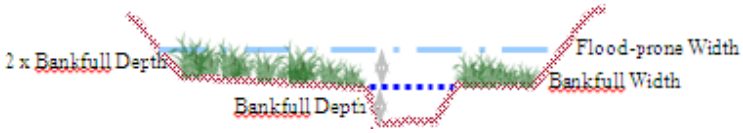
14E. Flood Attenuation: (Applies only to wetlands subject to flooding via in-channel or overbank flow. If wetlands in AA are not flooded from in-channel or overbank flow, mark ___ **NA** and proceed to 14F.)

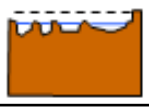
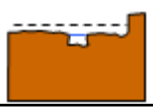
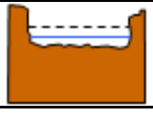
i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

Estimated or Calculated Entrenchment (Rosgen 1994, 1996)	Slightly entrenched - C, D, E stream types			Moderately entrenched – B stream type			Entrenched-A, F, G stream types		
% of flooded wetland classified as forested and/or scrub/shrub	75%	25-75%	<25%	75%	25-75%	<25%	75%	25-75%	<25%
AA contains **no outlet or restricted outlet**	1H		.6M	.8H	.7M	.5M	.4M	.3L	.2L
AA contains **unrestricted outlet**	.9H	.8H	.5M	.7M	.6M	.4M	.3L	.2L	.1L

Entrenchment ratio (ER) estimation – see User's Manual for additional guidance. Entrenchment ratio = (flood-prone width)/(bankfull width) Flood-prone width = estimated horizontal projection of where 2 x maximum bankfull depth elevation intersects the floodplain on each side of the stream.

133 /	28 =	**4.75**
Flood-prone width	*Bankfull width*	*Entrenchment ratio (ER)*



Slightly Entrenched ER = >2.2			**Moderately Entrenched ER = 1.41 – 2.2**	**Entrenched ER = 1.0 – 1.4**		
C stream type	D stream type	E stream type	B stream type	A stream type	F stream type	G stream type
						

ii. Are ≥10 acres of wetland in the AA subject to flooding **AND** are man-made features which may be significantly damaged by floods located within 0.5 mile downstream of the AA (circle)? **X** **Comments:** Approximately 30% of the preservation AA contains PFO and/or PSS wetland with surface water outlet to the south into the relict channel that empties into the nearby Shields River. The Shields River is slightly entrenched at this location. Houses located within 0.5 miles

14F. Short and Long Term Surface Water Storage: (Applies to wetlands that flood or pond from overbank or in-channel flow, precipitation, upland surface flow, or groundwater flow. If no wetlands in the AA are subject to flooding or ponding, ___**NA** and proceed to 14G.)

i. Rating (Working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating. Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; and T/E = temporary/ephemeral [see instructions for further definitions of these terms].)

Estimated maximum acre feet of water contained in wetlands within the AA that are subject to periodic flooding or ponding	>5 acre feet			1.1 to 5 acre feet			<=1 acre foot		
Duration of surface water at wetlands within the AA	P/P	S/I	T/E	P/P	S/I	T/E	P/P	S/I	T/E
Wetlands in AA flood or pond **>= 5 out of 10 years**	1H	.9H	.8H	.8H	**.6M**	.5M	.4M	.3L	.2L
Wetlands in AA flood or pond **< 5 out of 10 years**	.9H	.8H	.7M	.7M	.5M	.4M	.3L	.2L	.1L

Comments: (1.10 acre of preserved wetland) x (approximate average of 1.0 ft. of inundation during high water) = 1.10 acre feet

14G. Sediment/Nutrient/Toxicant Retention and Removal: (Applies to wetlands with potential to receive sediments, nutrients, or toxicants through influx of surface or ground water or direct input. If no wetlands in the AA are subject to such input, ___**NA** and proceed to 14H.)

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating [H=high, M=moderate, or L=low])

Sediment, nutrient, and toxicant input levels within AA	AA receives or surrounding land use with potential to deliver levels of sediments, nutrients, or compounds at levels such that other functions are not substantially impaired. Minor sedimentation, sources of nutrients or toxicants, or signs of eutrophication present.				Waterbody on MDEQ list of waterbodies in need of TMDL development for "probable causes" related to sediment, nutrients, or toxicants or AA receives or surrounding land use with potential to deliver high levels of sediments, nutrients, or compounds such that other functions are substantially impaired. Major sedimentation, sources of nutrients or toxicants, or signs of eutrophication present.			
% cover of wetland vegetation in AA	>= 70%		< 70%		>= 70%		< 70%	
Evidence of flooding / ponding in AA	Yes	No	Yes	No	Yes	No	Yes	No
AA contains **no or restricted outlet**	**1H**	.8H	.7M	.5M	.5M	.4M	.3L	.2L
AA contains **unrestricted outlet**	.9H	.7M	.6M	.4M	.4M	.3L	.2L	.1L

Comments: Hydrophytic vegetation cover exceeds 70%. AA contains restricted outlet.

14H Sediment/Shoreline Stabilization: (Applies only if AA occurs on or within the banks or a river, stream, or other natural or man-made drainage, or on the shoreline of a standing water body which is subject to wave action. If 14H does not apply, **X** **NA** and proceed to 14I.)

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

*% Cover of **wetland** streambank or shoreline by species with stability ratings of >=6 (see **Appendix F**).*	*Duration of surface water adjacent to rooted vegetation*		
	Permanent / Perennial	Seasonal / Intermittent	Temporary / Ephemeral
>= 65%	1H	.9H	.7M
35-64%	.7M	.6M	.5M
35%	.3L	.2L	.1L

Comments: No shoreline in the project area.

14I. Production Export/Food Chain Support:

i. Level of Biological Activity (synthesis of wildlife and fish habitat ratings [circle])

General Fish Habitat Rating (14D.iii.)	**General Wildlife Habitat Rating (14C.iii.)**		
	E/H	M	L
E/H	H	H	M
M	H	M	M
L	M	M	L
N/A	H	**M**	L

ii. Rating (Working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating. Factor A = acreage of vegetated wetland component in the AA; Factor B = level of biological activity rating from above (14I.i.); Factor C = whether or not the AA contains a surface or subsurface outlet; the final three rows pertain to duration of surface water in the AA, where P/P, S/I, and T/E are as previously defined, and A = "absent" [see instructions for further definitions of these terms].)

A	Vegetated component >5 acres						Vegetated component 1-5 acres						Vegetated component < 1 acre					
B	High		Moderate		Low		High		Moderate		Low		High		Moderate		Low	
C	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
P/P	1H	.7M	.8H	.5M	.6M	.4M	.9H	.6M	.7M	.4M	.5M	.3L	.8H	.6M	.6M	.4M	.3L	.2L
S/I	.9H	.6M	.7M	.4M	.5M	.3L	.8H	.5M	**.6M**	.3L	.4M	.2L	.7M	.5M	.5M	.3L	.3L	.2L
T/E/A	.8H	.5M	.6M	.3L	.4M	.2L	.7M	.4M	.5M	.2L	.3L	.1L	.6M	.4M	.4M	.2L	.2L	.1L

iii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1.) **Vegetated Upland Buffer (VUB):** Area with >= 30% plant cover, = 15% noxious weed or ANVS cover, and that is not subjected to periodic mechanical mowing or clearing (unless for weed control).

a) Is there an average >= 50 foot-wide vegetated upland buffer around >= 75% of the AA circumference? **X** *If yes, add 0.1 to the score in ii above.*

iv. Final Score and Rating: 0.70M **Comments:** A restricted surface water outlet is present to the south.

14J. Groundwater Discharge/Recharge: (check the appropriate indicators in i & ii below)

i. Discharge Indicators

___	The AA is a slope wetland
___	Springs or seeps are known or observed
___	Vegetation growing during dormant season/drought
___	Wetland occurs at the toe of a natural slope
___	AA permanently flooded during drought periods
___	Wetland contains an outlet, but no inlet
X	Shallow water table and the site is saturated to the surface
___	Other:

ii. Recharge Indicators

X	Permeable substrate present without underlying impeding layer
___	Wetland contains inlet but no outlet
___	Stream is a known 'losing' stream; discharge volume decreases
___	Other:

iii. Rating (use the information from i and ii above and the table below to arrive at [circle] the functional points and rating)

	Duration of saturation at AA Wetlands *FROM GROUNDWATER DISCHARGE OR WITH WATER THAT IS RECHARGING THE GROUNDWATER SYSTEM*			
Criteria	P/P	S/I	T	None
Groundwater Discharge or Recharge	1H	**.7M**	.4M	.1L
Insufficient Data/Information	N/A			

Comments: Shallow groundwater table documented in the lower elevations of depressional wetlands and the excavated channel.

14K. Uniqueness:

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

Replacement potential	AA contains fen, bog, warm springs or mature (>80 yr-old) forested wetland **or** plant association listed as "S1" by the MTNHP			AA does not contain previously cited rare types **and** structural diversity (#13) is high **or** contains plant association listed as "S2" by the MTNHP			AA does not contain previously cited rare types or associations **and** structural diversity (#13) is low-moderate		
Estimated relative abundance (#11)	rare	common	abundant	rare	common	abundant	rare	common	abundant
Low disturbance at AA (#12i)	1H	.9H	.8H	.8H	.6M	.5M	.5M	**.4M**	.3L
Moderate disturbance at AA (#12i)	.9H	.8H	.7M	.7M	.5M	.4M	.4M	.3L	.2L
High disturbance at AA (#12i)	.8H	.7M	.6M	.6M	.4M	.3L	.3L	.2L	.1L

Comments: Site disturbance is low and structural diversity is moderate.

14L. Recreation/Education Potential: (affords "bonus" points if AA provides recreation or education opportunity)

i. Is the AA a known or potential rec./ed. site: (circle) ___ (if 'Yes' continue with the evaluation; if 'No' then mark **X NA** and proceed to the overall summary and rating page)

ii. Check categories that apply to the AA: ___Educational/scientific study; ___Consumptive rec.; ___Non-consumptive rec.; ___Other :

iii. Rating:

Known or Potential Recreation or Education Area	Known	Potential
Public ownership or public easement with general public access (no permission required)	.2H	.15H
Private ownership with general public access (no permission required)	.15H	.1M
Private or public ownership without general public access, or requiring permission for public access	.1M	.05L

Comments: Landowner does not allow public access or educational use of the site.

General Site Notes
AA contains a diversity of habitats and wildlife.

FUNCTION & VALUE SUMMARY & OVERALL RATING FOR WETLAND/SITE #(S): Preservation

Function & Value Variables	Rating	Actual Functional Points	Possible Functional Points	Functional Units: (Actual Points x Wetland Acreage)	Indicate the four most prominent functions with an asterisk (*)
A. Listed/Proposed T&E Species Habitat	L	0.10	1	0.11	
B. MT Natural Heritage Program Species Habitat	H	0.90	1	0.99	*
C. General Wildlife Habitat	M	0.70	1	0.77	*
D. General Fish Habitat	NA				
E. Flood Attenuation	H	0.90	1	0.99	*
F. Short and Long Term Surface Water Storage	M	0.60	1	0.66	
G. Sediment/Nutrient/Toxicant Removal	H	1.00	1	1.10	*
H. Sediment/Shoreline Stabilization	NA				
I. Production Export/Food Chain Support	M	0.70	1	0.77	
J. Groundwater Discharge/Recharge	M	0.70	1	0.77	
K. Uniqueness	M	0.40	1	0.44	
L. Recreation/Education Potential (bonus points)	NA				
Totals:		6.00	9.00	6.60	
Percent of Possible Score			67%		

Category I Wetland: (must satisfy one of the following criteria; otherwise go to Category II)

____ Score of 1 functional point for Listed/Proposed Threatened or Endangered Species; **or**
____ Score of 1 functional point for Uniqueness; **or**
____ Score of 1 functional point for Flood Attenuation and answer to Question 14E.ii is "yes"; **or**
____ Percent of possible score > 80% (round to nearest whole #).

Category II Wetland: (Criteria for Category I not satisfied and meets any one of the following criteria; otherwise go to Category IV)

____ Score of 1 functional point for MT Natural Heritage Program Species Habitat; **or**
____ Score of .9 or 1 functional point for General Wildlife Habitat; **or**
____ Score of .9 or 1 functional point for General Fish Habitat; **or**
____ "High" to "Exceptional" ratings for **both** General Wildlife Habitat **and** General Fish/Aquatic Habitat; **or**
____ Score of .9 functional point for Uniqueness; **or**
__X__ Percent of possible score > 65% (round to nearest whole #).

Category III Wetland: (Criteria for Categories I, II, or IV not satisfied)

Category IV Wetland: (Criteria for Categories I or II are not satisfied and all of the following criteria are met; otherwise go to Category III)

____ "Low" rating for Uniqueness; **and**
____ Vegetated wetland component 1 acre (do not include upland vegetated buffer); **and**
____ Percent of possible score 35% (round to nearest whole #).

OVERALL ANALYSIS AREA RATING: II

Summary Comments: This AA contains high structural diversity and supports a dynamic wetland community.

MDT Montana Wetland Assessment Form (revised March 2008)

1. Project Name: Easton Ranch

2. MDT Project #: STPP STWD (813) **Control #:** 9680000

3. Evaluation Date: 06/19/2024 **4. Evaluator(s):** E Reynaud

5. Wetlands/Site #(s): Restoration

6. Wetland Location(s): i. Legal: T4N,R9E,32

Latitude/Longitude: 46.059745, -110.638674 : Center of AA

ii. Approx. Stationing or Mileposts: NA

iii. Watershed: 13

Watershed Name, County: Upper Yellowstone, Park

7. a. Evaluating Agency: Confluence Consulting

b. Purpose of Evaluation:

1. __ Wetlands potentially affected by MDT project
2. __ Mitigation wetlands; pre-construction
3. X Mitigation wetlands; post-construction
4. __ Other:

8. Wetland size: 1.640 acres (measured)

9. Assessment area (AA): 1.640 acres (measured)

10. Classification of Wetland and Aquatic Habitats in AA

HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% of AA
R	EM	E	SI	93.00
R	SS	E	SI	7.00

Abbreviations: *(see manual for definitions)*

HGM Classes: Riverine (**R**), Depressional (**D**), Slope (**S**), Mineral Soil Flats (**MSF**), Organic Soil Flats (**OSF**), Lacustrine Fringe (**LF**);

Cowardin Classes: Rock Bottom (**RB**), Unconsolidated bottom (**UB**), Aquatic Bed (**AB**), Unconsolidated Shore (**US**), Moss-lichen Wetland (**ML**), Emergent Wetland (**EM**), Scrub-Shrub Wetland (**SS**), Forested Wetland (**FO**)

Modifiers: Excavated (**E**), Impounded (**I**), Diked (**D**), Partly Drained (**PD**), Farmed (**F**), Artificial (**A**)

Water Regimes: Permanent / Perennial (**PP**), Seasonal / Intermittent (**SI**), Temporary / Ephemeral (**TE**)

11. Estimated relative abundance: (of similarly classified sites within the same Major Montana Watershed Basin, see definitions)

COMMON

12. General condition of AA:

i. Disturbance: (use matrix below to determine [circle] appropriate response – see instructions for Montana-listed noxious weed and aquatic nuisance vegetation species (**ANVS**) list)

Conditions within AA	*Predominant conditions adjacent to (within 500 feet of) AA*		
	Managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or buildings; and noxious weed or ANVS cover is >=15%.	Land not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to minor clearing; contains few roads or buildings; noxious weed or ANVS cover is <= 30%.	Land cultivated or heavily grazed or logged; subject to substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is > 30%.
AA occurs and is managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or occupied buildings; and noxious weed or ANVS cover is <= 15%.	low disturbance	**low disturbance**	moderate disturbance
AA not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to relatively minor clearing, fill placement, or hydrological alteration; contains few roads or buildings; noxious weed or ANVS cover is <=	moderate disturbance	moderate disturbance	high disturbance
AA cultivated or heavily grazed or logged; subject to relatively substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is > 30%.	high disturbance	high disturbance	high disturbance

Comments: (types of disturbance, intensity, season, etc.): Limited agriculture (hay) and ranch structures to the east. Undeveloped riparian corridor and herbaceous uplands to north, south, and west. Two species of noxious weeds present within the AA. The AA is managed in a natural state, as are most of the lands within 500 feet of the AA.

ii. Prominent noxious, aquatic nuisance, & other exotic vegetation species: Cirsium arvense, Cynoglossum officinale

iii. Provide brief descriptive summary of AA and surrounding land use/habitat: The AA consists of one constructed secondary stream channel which bisects the mitigation area. The channel is active during high-flow events, is seasonally inundated by shallow groundwater early in the growing season, and has developed wetland characteristics.

13. Structural Diversity: (based on number of "Cowardin" ***vegetated*** classes present [do not include unvegetated classes], see #10 above)

Existing # of "Cowardin" Vegetated Classes in AA	**Initial Rating**	**Is current management preventing (passive) existence of additional vegetated classes?**		**Modified Rating**
>= 3 (or 2 if 1 is forested) classes	H	NA	NA	NA
2 (or 1 if forested) classes	**M**	NA	NA	NA
1 class, but not a monoculture	M	<-- NO	YES -->	L
1 class, monoculture (1 species comprises >= 90% of total cover)	L	NA	NA	NA

Comments: Planted shrubs along channel are surviving and establishing well. Cottonwood and willow seedlings/root suckers were noted along the channel. Significant herbivory was observed on saplings.

SECTION PERTAINING to FUNCTIONS & VALUES ASSESSMENT

14A. Habitat for Federally Listed or Proposed Threatened or Endangered Plants or Animals:

i. AA is Documented (D) or Suspected (S) to contain (circle one based on definitions contained in instructions):

Primary or critical habitat (list species)	**Secondary habitat (list species)**	**Incidental habitat (list species)**
		Monarch Butterfly(S) Canada Lynx (LT), North American North American Wolverine(S)

ii. Rating (use the conclusions from i above and the matrix below to arrive at [circle] the functional points and rating)

Highest Habitat Level	*doc/primary*	*sus/primary*	*doc/secondary*	*sus/secondary*	*doc/incidental*	*sus/incidental*	*None*
Functional Points and Rating	1H	.9H	.8M	.7M	.3L	**.1L**	0L

Sources for documented use (e.g. observations, records, etc): USFWS IPAC 2024

14B. Habitat for plant or animals rated S1, S2, or S3 by the Montana Natural Heritage Program: (not including species listed in14A above)

i. AA is Documented (D) or Suspected (S) to contain (circle one based on definitions contained in instructions):

Primary or critical habitat (list species)	**Secondary habitat (list species)**	**Incidental habitat (list species)**
Bobolink (D) - S2S3		Golden Eagle(D) - S2S3

ii. Rating (use the conclusions from i above and the matrix below to arrive at [circle] the functional points and rating)

Highest Habitat Level	*doc/primary*	*sus/primary*	*doc/secondary*	*sus/secondary*	*doc/incidental*	*sus/incidental*	*None*
***S1 Species:** Functional Points and Rating*	1H	.8H	.7M	.6M	.2L	.1L	0L
***S2 and S3 Species:** Functional Points and Rating*	**.9H**	.7M	.6M	.5M	.2L	.1L	0L

Sources for documented use (e.g. observations, records, etc): MTNHP, 2024 and 2019-2024 field observations. Bobolink nesting on site documented by MDT staff. Golden eagle observed in 2023. Bald eagle observed onsite in 2024.

14C. General Wildlife Habitat Rating:

i. Evidence of overall wildlife use in the AA (circle substantial, moderate, or low based on supporting evidence):

Substantial (based on any of the following [check]):
- ___ observations of abundant wildlife #s or high species diversity (during any period)
- ___ abundant wildlife sign such as scat, tracks, nest structures, game trails, etc.
- ___ presence of extremely limiting habitat features not available in the surrounding area
- ___ interviews with local biologists with knowledge of the AA

Minimal (based on any of the following [check]):
- ___ few or no wildlife observations during peak use periods
- ___ little to no wildlife sign
- ___ sparse adjacent upland food sources
- ___ interviews with local biologists with knowledge of the AA

Moderate (based on any of the following [check]):
- X observations of scattered wildlife groups or individuals or relatively few species during peak periods
- X common occurrence of wildlife sign such as scat, tracks, nest structures, game trails, etc.
- X adequate adjacent upland food sources
- ___ interviews with local biologists with knowledge of the AA

ii. Wildlife habitat features (Working from top to bottom, circle appropriate AA attributes in matrix to arrive at rating. Structural diversity is from #13. For class cover to be considered evenly distributed, the most and least prevalent vegetated classes must be within 20% of each other interms of their percent composition of the AA (see #10). Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; T/E = temporary/ephemeral; and A = absent [see instructions for further definitions of these terms])

Structural diversity (see #13)	High								Moderate								Low			
Class cover distribution (all vegetated classes)	Even				Uneven				Even				Uneven				Even			
Duration of surface water in >=10% of AA	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A
Low disturbance at AA (see #12i)	E	E	E	H	E	E	H	H	E	**H**	H	M	E	H	M	M	E	H	M	M
Moderate disturbance at AA (see #12i)	H	H	H	H	H	H	H	M	H	H	M	M	H	M	M	L	H	M	L	L
High disturbance at AA (see #12i)	M	M	M	L	M	M	L	L	M	M	L	L	M	L	L	L	L	L	L	L

iii. Rating (use the conclusions from i and ii above and the matrix below to arrive at [circle] the functional points and rating)

Evidence of wildlife use (i)	*Wildlife habitat features rating (ii)*			
	Exceptional	High	Moderate	Moderate
Substantial	1E	.9H	.8H	.7M
Moderate	.9H	**.7M**	.5M	.3L
Minimal	.6M	.4M	.2L	.1L

Comments: AA has frequent deer and moose sightings. Food plots located adjacent/east of the project boundary provide supplemental food for wildlife. There is a bald eagle nest directly southwest of the site and was in use during the 2024 monitoring. Two bald eagles were observed soaring above the site in 2024.

14D. General Fish Habitat Rating: (Assess this function if the AA is used by fish or the existing situation is "correctable" such that the AA could be used by fish [i.e., fish use is precluded by perched culvert or other barrier, etc.]. If the AA is not used by fish, fish use is not restorable due to habitat constraints, or is not desired from a management perspective [such as fish entrapped in a canal], then mark **X NA** and proceed to 14E.)

Type of Fishery: Cold Water **(CW)** ___ Warm Water **(WW)** ___ **Use the CW or WW guidelines in the user manual to complete the matrix**

i. Habitat Quality and Known / Suspected Fish Species in AA (use matrix to arrive at [circle] the functional points and rating)

Duration of surface water in AA	Permanent / Perennial						Seasonal / Intermittent						Temporary / Ephemeral					
Aquatic hiding / resting / escape cover	Optimal		Adequate		Poor		Optimal		Adequate		Poor		Optimal		Adequate		Poor	
Thermal cover optimal / suboptimal	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S
FWP Tier I fish species	1E	.9H	.8H	.7M	.6M	.5M	.9H	.8H	.7M	.6M	.5M	.4M	.7M	.6M	.5M	.4M	.3L	.2L
FWP Tier II or Native Game fish species	.9H	.8H	.7M	.6M	.5M	.5M	.8H	.7M	.6M	.5M	.4M	.4M	.6M	.5M	.4M	.3L	.2L	.2L
FWP Tier III or Introduced Game fish	.8H	.7M	.6M	.5M	.5M	.4M	.7M	.6M	.5M	.4M	.4M	.3L	.5M	.4M	.3L	.2L	.2L	.1L
FWP Non-Game Tier IV or No fish species	.5M	.5M	.5M	.4M	.4M	.3L	.4M	.4M	.4M	.3L	.3L	.2L	.2L	.2L	.2L	.1L	.1L	.1L

Sources used for identifying fish sp. potentially found in AA:

ii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1)

a) Is fish use of the AA significantly reduced by a culvert, dike, or other man-made structure or activity or is the waterbody included on the current final MDEQ list of waterbodies in need of TMDL development with listed "Probable Impaired Uses" including cold or warm water fishery or aquatic life support, or do aquatic nuisance plant or animal species (see Appendix E) occur in fish habitat? ___ If yes, reduce score in i above by 0.1.

*b) Does the AA contain a documented spawning area or other critical habitat feature (i.e., sanctuary pool, upwelling area, etc.- specify in comments) for native fish or introduced game fish? ___ If yes, add 0.1 to the adjusted score in **i** or **iia.***

iii. Final Score and Rating: NA **Comments:** Although activated during high-flow events within the Shields River, no permanent fish habitat is present within AA.

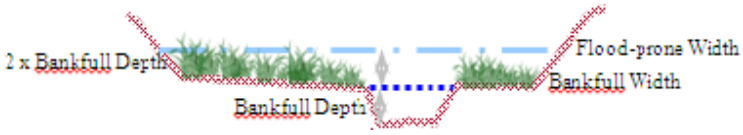
14E. Flood Attenuation: (Applies only to wetlands subject to flooding via in-channel or overbank flow. If wetlands in AA are not flooded from in-channel or overbank flow, mark ___ **NA** and proceed to 14F.)

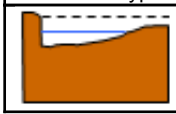
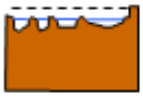
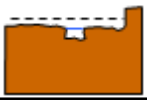
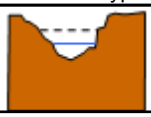
i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

Estimated or Calculated Entrenchment (Rosgen 1994, 1996)	Slightly entrenched - C, D, E stream types			Moderately entrenched – B stream type			Entrenched-A, F, G stream types		
% of flooded wetland classified as forested and/or scrub/shrub	75%	25-75%	<25%	75%	25-75%	<25%	75%	25-75%	<25%
AA contains **no outlet or restricted outlet**	1H	.9H		.8H	.7M	.5M	.4M	.3L	.2L
AA contains **unrestricted outlet**	.9H	.8H	.5M	.7M	.6M	.4M	.3L	.2L	.1L

Entrenchment ratio (ER) estimation – see User's Manual for additional guidance. Entrenchment ratio = (flood-prone width)/(bankfull width) Flood-prone width = estimated horizontal projection of where 2 x maximum bankfull depth elevation intersects the floodplain on each side of the stream.

133 /	28 =	**4.75**
Flood-prone width	*Bankfull width*	*Entrenchment ratio (ER)*



Slightly Entrenched ER = >2.2			**Moderately Entrenched ER = 1.41 – 2.2**	**Entrenched ER = 1.0 – 1.4**		
C stream type	D stream type	E stream type	B stream type	A stream type	F stream type	G stream type
						

ii. Are ≥10 acres of wetland in the AA subject to flooding **AND** are man-made features which may be significantly damaged by floods located within 0.5 mile downstream of the AA (circle)? **X** **Comments:** Outlet is restricted. AA is subject to overflow from Shields River and empties into old meanders of the Shields River at the south end of AA. 9% of AA is classified as scrub/shrub. Houses located within 0.5 miles downstream.

14F. Short and Long Term Surface Water Storage: (Applies to wetlands that flood or pond from overbank or in-channel flow, precipitation, upland surface flow, or groundwater flow. If no wetlands in the AA are subject to flooding or ponding, ___**NA** and proceed to 14G.)

i. Rating (Working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating. Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; and T/E = temporary/ephemeral [see instructions for further definitions of these terms].)

Estimated maximum acre feet of water contained in wetlands within the AA that are subject to periodic flooding or ponding	>5 acre feet			1.1 to 5 acre feet			<=1 acre foot		
Duration of surface water at wetlands within the AA	P/P	S/I	T/E	P/P	S/I	T/E	P/P	S/I	T/E
Wetlands in AA flood or pond **>= 5 out of 10 years**	1H	.9H	.8H	.8H	**.6M**	.5M	.4M	.3L	.2L
Wetlands in AA flood or pond **< 5 out of 10 years**	.9H	.8H	.7M	.7M	.5M	.4M	.3L	.2L	.1L

Comments: (1.64 acre of restoration) x (average 1 ft. ponding/flow at high water) = 1.64 acre feet

14G. Sediment/Nutrient/Toxicant Retention and Removal: (Applies to wetlands with potential to receive sediments, nutrients, or toxicants through influx of surface or ground water or direct input. If no wetlands in the AA are subject to such input, ___**NA** and proceed to 14H.)

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating [H=high, M=moderate, or L=low])

Sediment, nutrient, and toxicant input levels within AA	AA receives or surrounding land use with potential to deliver levels of sediments, nutrients, or compounds at levels such that other functions are not substantially impaired. Minor sedimentation, sources of nutrients or toxicants, or signs of eutrophication present.				Waterbody on MDEQ list of waterbodies in need of TMDL development for "probable causes" related to sediment, nutrients, or toxicants or AA receives or surrounding land use with potential to deliver high levels of sediments, nutrients, or compounds such that other functions are substantially impaired. Major sedimentation, sources of nutrients or toxicants, or signs of eutrophication present.			
% cover of wetland vegetation in AA	>= 70%		< 70%		>= 70%		< 70%	
Evidence of flooding / ponding in AA	Yes	No	Yes	No	Yes	No	Yes	No
AA contains **no or restricted outlet**	**1H**	.8H	.7M	.5M	.5M	.4M	.3L	.2L
AA contains **unrestricted outlet**	.9H	.7M	.6M	.4M	.4M	.3L	.2L	.1L

Comments: Cover in AA is greater than 70% and outlet is topographically restricted.

14H Sediment/Shoreline Stabilization: (Applies only if AA occurs on or within the banks or a river, stream, or other natural or man-made drainage, or on the shoreline of a standing water body which is subject to wave action. If 14H does not apply, ___**NA** and proceed to 14I.)

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

*% Cover of **wetland** streambank or shoreline by species with stability ratings of >=6 (see **Appendix F**).*	*Duration of surface water adjacent to rooted vegetation*		
	Permanent / Perennial	Seasonal / Intermittent	Temporary / Ephemeral
>= 65%	1H	**.9H**	.7M
35-64%	.7M	.6M	.5M
35%	.3L	.2L	.1L

Comments: Cover in AA is greater than 70% and outlet is topographically restricted.

14I. Production Export/Food Chain Support:

i. Level of Biological Activity (synthesis of wildlife and fish habitat ratings [circle])

General Fish Habitat Rating (14D.iii.)	**General Wildlife Habitat Rating (14C.iii.)**		
	E/H	M	L
E/H	H	H	M
M	H	M	M
L	M	M	L
N/A	H	**M**	L

ii. Rating (Working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating. Factor A = acreage of vegetated wetland component in the AA; Factor B = level of biological activity rating from above (14I.i.); Factor C = whether or not the AA contains a surface or subsurface outlet; the final three rows pertain to duration of surface water in the AA, where P/P, S/I, and T/E are as previously defined, and A = "absent" [see instructions for further definitions of these terms].)

A	Vegetated component >5 acres						Vegetated component 1-5 acres						Vegetated component < 1 acre					
B	High		Moderate		Low		High		Moderate		Low		High		Moderate		Low	
C	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
P/P	1H	.7M	.8H	.5M	.6M	.4M	.9H	.6M	.7M	.4M	.5M	.3L	.8H	.6M	.6M	.4M	.3L	.2L
S/I	.9H	.6M	.7M	.4M	.5M	.3L	.8H	.5M	**.6M**	.3L	.4M	.2L	.7M	.5M	.5M	.3L	.3L	.2L
T/E/A	.8H	.5M	.6M	.3L	.4M	.2L	.7M	.4M	.5M	.2L	.3L	.1L	.6M	.4M	.4M	.2L	.2L	.1L

iii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1.) **Vegetated Upland Buffer (VUB):** Area with >= 30% plant cover, = 15% noxious weed or ANVS cover, and that is not subjected to periodic mechanical mowing or clearing (unless for weed control).

a) Is there an average >= 50 foot-wide vegetated upland buffer around >= 75% of the AA circumference? ___**X** *If yes, add 0.1 to the score in ii above.*

iv. Final Score and Rating: 0.70M **Comments:** Channel is seasonally inundated and has a restricted outlet at the southern end of the mitigation site.

14J. Groundwater Discharge/Recharge: (check the appropriate indicators in i & ii below)

i. Discharge Indicators

___	The AA is a slope wetland
___	Springs or seeps are known or observed
___	Vegetation growing during dormant season/drought
___	Wetland occurs at the toe of a natural slope
___	AA permanently flooded during drought periods
___	Wetland contains an outlet, but no inlet
X	Shallow water table and the site is saturated to the surface
___	Other:

ii. Recharge Indicators

X	Permeable substrate present without underlying impeding layer
___	Wetland contains inlet but no outlet
___	Stream is a known 'losing' stream; discharge volume decreases
___	Other:

iii. Rating (use the information from i and ii above and the table below to arrive at [circle] the functional points and rating)

	Duration of saturation at AA Wetlands *FROM GROUNDWATER DISCHARGE OR WITH WATER THAT IS RECHARGING THE GROUNDWATER SYSTEM*			
Criteria	P/P	S/I	T	None
Groundwater Discharge or Recharge	1H	**.7M**	.4M	.1L
Insufficient Data/Information	N/A			

Comments: Channel is intermittently inundated by shallow groundwater and high flows from the Shields River.

14K. Uniqueness:

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

Replacement potential	AA contains fen, bog, warm springs or mature (>80 yr-old) forested wetland **or** plant association listed as "S1" by the MTNHP			AA does not contain previously cited rare types **and** structural diversity (#13) is high **or** contains plant association listed as "S2" by the MTNHP			AA does not contain previously cited rare types or associations **and** structural diversity (#13) is low-moderate		
Estimated relative abundance (#11)	rare	common	abundant	rare	common	abundant	rare	common	abundant
Low disturbance at AA (#12i)	1H	.9H	.8H	.8H	.6M	.5M	.5M	**.4M**	.3L
Moderate disturbance at AA (#12i)	.9H	.8H	.7M	.7M	.5M	.4M	.4M	.3L	.2L
High disturbance at AA (#12i)	.8H	.7M	.6M	.6M	.4M	.3L	.3L	.2L	.1L

Comments: PEM/PSS wetland within seasonal flood channel. Common wetland type within basin with 10-50% of area wetlands similar to this one.

14L. Recreation/Education Potential: (affords "bonus" points if AA provides recreation or education opportunity)

i. Is the AA a known or potential rec./ed. site: (circle) ___ (if 'Yes' continue with the evaluation; if 'No' then mark **X** **NA** and proceed to the overall summary and rating page)

ii. Check categories that apply to the AA: ___Educational/scientific study; ___Consumptive rec.; ___Non-consumptive rec.; ___Other :

iii. Rating:

Known or Potential Recreation or Education Area	Known	Potential
Public ownership or public easement with general public access (no permission required)	.2H	.15H
Private ownership with general public access (no permission required)	.15H	.1M
Private or public ownership without general public access, or requiring permission for public access	.1M	.05L

Comments: Landowner does not allow public access or educational use of the site.

General Site Notes
AA contains a diversity of habitats and wildlife.

FUNCTION & VALUE SUMMARY & OVERALL RATING FOR WETLAND/SITE #(S): Restoration

Function & Value Variables	Rating	Actual Functional Points	Possible Functional Points	Functional Units: (Actual Points x Wetland Acreage)	Indicate the four most prominent functions with an asterisk (*)
A. Listed/Proposed T&E Species Habitat	L	0.10	1	0.16	
B. MT Natural Heritage Program Species Habitat	H	0.90	1	1.48	*
C. General Wildlife Habitat	M	0.70	1	1.15	*
D. General Fish Habitat	NA				
E. Flood Attenuation	M	0.60	1	0.98	
F. Short and Long Term Surface Water Storage	M	0.60	1	0.98	
G. Sediment/Nutrient/Toxicant Removal	H	1.00	1	1.64	*
H. Sediment/Shoreline Stabilization	H	0.90	1	1.48	*
I. Production Export/Food Chain Support	M	0.70	1	1.15	
J. Groundwater Discharge/Recharge	M	0.70	1	1.15	
K. Uniqueness	M	0.40	1	0.66	
L. Recreation/Education Potential (bonus points)	NA				
Totals:		6.60	10.00	10.83	
Percent of Possible Score			66%		

Category I Wetland: (must satisfy one of the following criteria; otherwise go to Category II)

____ Score of 1 functional point for Listed/Proposed Threatened or Endangered Species; **or**
____ Score of 1 functional point for Uniqueness; **or**
____ Score of 1 functional point for Flood Attenuation and answer to Question 14E.ii is "yes"; **or**
____ Percent of possible score > 80% (round to nearest whole #).

Category II Wetland: (Criteria for Category I not satisfied and meets any one of the following criteria; otherwise go to Category IV)

____ Score of 1 functional point for MT Natural Heritage Program Species Habitat; **or**
____ Score of .9 or 1 functional point for General Wildlife Habitat; **or**
____ Score of .9 or 1 functional point for General Fish Habitat; **or**
____ "High" to "Exceptional" ratings for **both** General Wildlife Habitat **and** General Fish/Aquatic Habitat; **or**
____ Score of .9 functional point for Uniqueness; **or**
__X__ Percent of possible score > 65% (round to nearest whole #).

Category III Wetland: (Criteria for Categories I, II, or IV not satisfied)

Category IV Wetland: (Criteria for Categories I or II are not satisfied and all of the following criteria are met; otherwise go to Category III)

____ "Low" rating for Uniqueness; **and**
____ Vegetated wetland component 1 acre (do not include upland vegetated buffer); **and**
____ Percent of possible score 35% (round to nearest whole #).

OVERALL ANALYSIS AREA RATING: II

Summary Comments: This AA contains moderate structural diversity and supports a dynamic wetland community.

Table B-1. Easton Ranch Wetland Mitigation Site. Comprehensive Vegetation Species List 2010 – 2024

Scientific Names	Common Names	WMVC Indicator Status[1]
Achillea millefolium	Common Yarrow	FACU
Agrostis gigantea	Black Bent	FAC
Agrostis stolonifera	Spreading Bent	FAC
Algae, green	Algae, green	NA
Alisma gramineum	Narrow-Leaf Water-Plantain	OBL
Alnus incana	Speckled Alder	FACW
Alopecurus geniculatus	Marsh Meadow-Foxtail	OBL
Alopecurus arundinaceus	Creeping Meadow-Foxtail	FAC
Alopecurus pratensis	Field Meadow-Foxtail	FAC
Alyssum alyssoides	Pale Alyssum	UPL
Amaranthus retroflexus	Red-Root	FACU
Arctium sp.	Burrdock	UPL
Asclepias speciosa	Showy Milkweed	FAC
Astragalus cicer	Cicer Milkvetch	UPL
Avena fatua	Wild Oats	UPL
Bassia scoparia	Mexican-Fireweed	FAC
Beckmannia syzigachne	American Slough Grass	OBL
Berteroa incana	Hoary False Alyssum	UPL
Bidens cernua	Nodding Burr-Marigold	OBL
Brassica kaber	Wild Mustard	UPL
Brassica napus	Turnip	UPL
Bromus arvensis	Field Brome	UPL
Bromus carinatus	California Brome	UPL
Bromus ciliatus	Fringed Brome	FAC
Bromus inermis	Smooth Brome	UPL
Bromus tectorum	Cheatgrass	UPL
Calamagrostis canadensis	Bluejoint	FACW
Camelina microcarpa	Little-Pod False Flax	FACU
Carduus nutans	Nodding Plumeless-Thistle	UPL
Carex aquatilis	Leafy Tussock Sedge	OBL
Carex atherodes	Wheat Sedge	OBL
Carex aurea	Golden-Fruit Sedge	FACW
Carex bebbii	Bebb's Sedge	OBL
Carex limosa	Mud Sedge	OBL
Carex microptera	Small-winged Sedge	FACU
Carex nebrascensis	Nebraska Sedge	OBL
Carex pachystachya	Thick-Head Sedge	FAC
Carex parryana	Parry's Sedge	FACW
Carex pellita	Woolly Sedge	OBL
Carex praegracilis	Clustered Field Sedge	FACW
Carex rostrata	Swollen Beaked Sedge	OBL
Carex scoparia	Pointed Broom Sedge	FACW
Carex sp.	Sedge	NA
Carex stipata	Stalk-Grain Sedge	OBL
Carex utriculata	Northwest Territory Sedge	OBL

Scientific Names	Common Names	WMVC Indicator Status[1]
Carex vesicaria	Lesser Bladder Sedge	OBL
Carum carvi	Caraway	FACU
Cassiope mertensiana	Western Moss-Heather	FACU
Chenopodium album	Lamb's-Quarters	FACU
Chenopodium leptophyllum	Narrow-Leaf Goosefoot	FACU
Cicuta douglasii	Western Water-Hemlock	OBL
Cirsium arvense	Canadian Thistle	FAC
Cirsium douglasii	Douglas' Thistle	OBL
Cirsium vulgare	Bull Thistle	FACU
Conium maculatum	Poison-Hemlock	FAC
Convolvulus arvensis	Field Bindweed	UPL
Cornus alba	Red Osier	FACW
Cynoglossum officinale	Gypsy-Flower	FACU
Dactylis glomerata	Orchard Grass	FACU
Dasiphora fruticosa	Golden-Hardhack	FAC
Deschampsia caespitosa	Tufted Hair Grass	FACW
Descurainia sophia	Herb Sophia	UPL
Dracocephalum sp.	Dragonhead	UPL
Eleocharis palustris	Common Spike-Rush	OBL
Elodea sp.	Waterweed	NA
Elymus repens	Creeping Wild Rye	FAC
Elymus sp.	Wild Rye	NA
Elymus trachycaulus	Slender Wild Rye	FAC
Epilobium ciliatum	Fringed Willowherb	FACW
Equisetum arvense	Field Horsetail	FAC
Equisetum hyemale	Tall Scouring-Rush	FACW
Equisetum laevigatum	Smooth Scouring-Rush	FACW
Fragaria virginiana	Virginia Strawberry	FACU
Galium palustre	Common Marsh Bedstraw	OBL
Geum macrophyllum	Large-Leaf Avens	FAC
Glyceria elata	Tall Manna Grass	FACW
Glyceria grandis	American Manna Grass	OBL
Glyceria striata	Fowl Manna Grass	OBL
Glycyrrhiza lepidota	American Licorice	FAC
Helianthus annuus	Common Sunflower	FACU
Hippuris vulgaris	Common Mare's-Tail	OBL
Hordeum jubatum	Fox-Tail Barley	FAC
Juncus balticus	Baltic Rush	FACW
Juncus bufonius	Toad Rush	FACW
Juncus effusus	Lamp Rush	FACW
Juncus ensifolius	Dagger-Leaf Rush	FACW
Juncus longistylis	Long-Style Rush	FACW
Juncus nevadensis	Sierran Rush	FACW
Juncus tenuis	Lesser Poverty Rush	FAC
Juncus torreyi	Torrey's Rush	FACW
Lappula occidentalis	Flatspine Stickseed	UPL
Larix occidentalis	Western Larch	FACU

Scientific Names	Common Names	WMVC Indicator Status[1]
Lepidium campestre	Field Pepperweed	UPL
Lepidium perfoliatum	Clasping Pepperwort	FACU
Leymus cinereus	Great Basin Lyme Grass	FAC
Lotus corniculatus	Garden Bird's-Foot-Trefoil	FAC
Lupinus argenteus	Silvery Lupine	UPL
Lycopus asper	Rough Water-Horehound	OBL
Lysimachia ciliata	Fringed Yellow-Loosestrife	FACW
Medicago lupulina	Black Medick	FACU
Medicago sativa	Alfalfa	UPL
Melilotus officinalis	Yellow Sweet-Clover	FACU
Mentha arvensis	American Wild Mint	FACW
Mimulus guttatus	Seep Monkey-Flower	OBL
Myriophyllum sp.	Water-Milfoil	NA
Panicum miliaceum	Proso Millet	UPL
Pascopyrum smithii	Western-Wheat Grass	FACU
Persicaria amphibia	Water Smartweed	OBL
Persicaria lapathifolia	Dock-Leaf Smartweed	FACW
Persicaria maculosa	Spotted Lady's-Thumb	FACW
Phalaris arundinacea	Reed Canary Grass	FACW
Phleum pratense	Common Timothy	FAC
Plantago major	Great Plantain	FAC
Poa compressa	Flat-Stem Blue Grass	FACU
Poa palustris	Fowl Blue Grass	FAC
Poa pratensis	Kentucky Blue Grass	FAC
Polypogon monspeliensis	Annual Rabbit's-Foot Grass	FACW
Polypogon viridis	Beardless Rabbit's-Foot Grass	FACW
Populus angustifolia	Narrow-Leaf Cottonwood	FACW
Populus balsamifera	Balsam Poplar	FAC
Populus tremuloides	Quaking Aspen	FACU
Potamogeton gramineus	Grassy Pondweed	OBL
Potamogeton praelongus	White-Stem Pondweed	OBL
Potentilla anserina	Silverweed	OBL
Potentilla gracilis	Graceful Cinquefoil	FAC
Potentilla recta	Sulphur Cinquefoil	UPL
Prunus virginiana	Choke Cherry	FACU
Pseudoroegneria spicata	Bluebunch Wheatgrass	UPL
Ranunculus aquatilis	White Water-Crowfoot	OBL
Ranunculus gmelinii	Lesser Yellow Water Buttercup	FACW
Ranunculus macounii	Macoun's Buttercup	OBL
Rhamnus alnifolia	Alder-Leaf Buckthorn	FACW
Ribes inerme	White-Stem Gooseberry	FAC
Ribes lacustre	Bristly Black Gooseberry	FAC
Rosa woodsii	Woods' Rose	FACU
Rumex crispus	Curly Dock	FAC
Rumex salicifolius	Willow Dock	FACW
Ruppia maritima	Beaked Ditch-Grass	OBL
Salix amygdaloides	Peach-Leaf Willow	FACW

Scientific Names	Common Names	WMVC Indicator Status[1]
Salix bebbiana	Gray Willow	FACW
Salix boothii	Booth's Willow	FACW
Salix drummondiana	Drummond's Willow	FACW
Salix exigua	Narrow-Leaf Willow	FACW
Salix lasiandra	Pacific Willow	FACW
Salix lutea	Yellow Willow	OBL
Schedonorus arundinaceus	Tall False Rye Grass	FAC
Schedonorus pratensis	Meadow False Rye Grass	FACU
Schoenoplectus pungens	Three-square	OBL
Scirpus microcarpus	Red-Tinge Bulrush	OBL
Scirpus pallidus	Pale Bulrush	OBL
Scutellaria galericulata	Hooded Skullcap	OBL
Scutellaria lateriflora	Mad Dog Skullcap	FACW
Silene latifolia	White Cockle or Campion	UPL
Sinapis arvensis	Corn Mustard	UPL
Sisymbrium altissimum	Tall Hedge-Mustard	FACU
Sisymbrium loeselii	Small Hedge Mustard	UPL
Sisyrinchium idahoense	Idaho Blue-eyed-Grass	FACW
Sisyrinchium montanum	Strict Blue-eyed-Grass	FAC
Solidago canadensis	Canadian Goldenrod	FACU
Solidago gigantea	Late Goldenrod	FACW
Sonchus arvensis	Field Sow-Thistle	FACU
Stachys pilosa	Hairy Hedge-Nettle	FACW
Stellaria graminea	Grass-Leaf Starwort	FACU
Symphoricarpos albus	Common Snowberry	FACU
Symphyotrichum subspicatum	Leafy-Bract American-Aster	FACW
Taraxacum officinale	Common Dandelion	FACU
Thlaspi arvense	Field Pennycress	UPL
Tragopogon dubius	Meadow Goat's-beard	UPL
Trifolium arvense	Rabbit-foot Clover	UPL
Trifolium hybridum	Alsike Clover	FAC
Trifolium pratense	Red Clover	FACU
Trifolium repens	White Clover	FAC
Triglochin maritima	Seaside Arrow-Grass	OBL
Typha latifolia	Broad-Leaf Cat-Tail	OBL
Urtica dioica	Stinging Nettle	FAC
Verbascum thapsus	Great Mullein	FACU
Veronica scutellata	Grass-Leaf Speedwell	OBL
Vicia americana	American Purple Vetch	FAC
Xanthium strumarium	Rough Cockleburr	FAC

[1] 2020 NWPL (USACE 2020)

New species identified in 2024 are **bolded.**

APPENDIX C
PROJECT AREA PHOTOGRAPHS

MDT Wetland Mitigation Monitoring
Easton Ranch
Park County, Montana

Easton Ranch: Photo Point Photos



Photo Point: 1 Location: East Boundary
Bearing: 250 degrees Year: 2010



Photo Point: 1 Location: East Boundary
Bearing: 250 degrees Year: 2024



Photo Point: 2 Location: Northeast Corner
Bearing: 200 degrees Year: 2010



Photo Point: 2 Location: Northeast Corner
Bearing: 200 degrees Year: 2024



Photo Point: 3 Location: Northwest Corner
Bearing: 100 degrees Year: 2010



Photo Point: 3 Location: Northwest Corner
Bearing: 100 degrees Year: 2024

Easton Ranch: Photo Point Photos



Photo Point: 4A Location: Shields Bank DS
Bearing: 170 degrees Year: 2010



Photo Point: 4A Location: Shields Bank DS
Bearing: 170 degrees Year: 2024



Photo Point: 4B Location: Shields Bank US
Bearing: 20 degrees Year: 2010



Photo Point: 4B Location: Shields Bank US
Bearing: 20 degrees Year: 2024 – 2021 location*



Photo Point: 5 Location: West Boundary
Bearing: 90 degrees Year: 2010



Photo Point: 5 Location: West Boundary
Bearing: 90 degrees Year: 2024

* new (2021) photo point location due to bank loss during high flows in 2018.

Easton Ranch: Photo Point Photos



Photo Point: 6 Location: Southwest Corner
Bearing: 0 degrees Year: 2010



Photo Point: 6 Location: Southwest Corner
Bearing: 0 degrees Year: 2024



Photo Point: 7 Location: Southeast Corner
Bearing: 340 degrees Year: 2010



Photo Point: 7 Location: Southeast Corner
Bearing: 340 degrees Year: 2024

Easton Ranch: Transect Photos



Transect 1: Start Location: Veg Com 8 foreground
Bearing: 5 degrees Year: 2010



Transect 1: Start Location: Veg Com 21 foreground
Bearing: 5 degrees Year: 2024



Transect 1: End Location: Veg Com 8 foreground
Bearing: 185 degrees Year: 2010



Transect 1: End Location: Veg Com 10 foreground
Bearing: 185 degrees Year: 2024



Transect 2: Start Location: Veg Com 1 foreground
Bearing: 185 degrees Year: 2010



Transect 2: Start Location: Veg Com 21 foreground
Bearing: 185 degrees Year: 2024

Easton Ranch: Transect Photos



Transect 2: End Location: Veg Com 1 foreground
Bearing: 0 degrees Year: 2010



Transect 2: End Location: Veg Com 13 foreground
Bearing: 0 degrees Year: 2024



Transect 3: Start Location: Veg Com 1 foreground
Bearing: 95 degrees Year: 2010



Transect 3: Start Location: Veg Com 13 foreground
Bearing: 95 degrees Year: 2024



Transect 3: End Location: Veg Com 1 foreground
Bearing: 265 degrees Year: 2010



Transect 3: End Location: Veg Com 13 foreground
Bearing: 265 degrees Year: 2024

Easton Ranch: Data Point Photos



Data Point: DP01w Location: Veg Com 11
Year: 2024



Data Point: DP01u Location: Veg Com 13
Year: 2024



Data Point: DP02w Location: Veg Com 11
Year: 2024



Data Point: DP02u Location: Veg Com 13
Year: 2024



Data Point: DP03w Location: Veg Com 12
Year: 2024



Data Point: DP03u Location: Veg Com 13
Year: 2024

Easton Ranch: Data Point Photos



Data Point: DP04w Location: Veg Com 15
Year: 2024



Data Point: DP04u Location: Veg Com 13
Year: 2024



Data Point: DP05w Location: Veg Com 14
Year: 2024



Data Point: DP05u Location: Veg Com 13
Year: 2024



Data Point: DP06w Location: Veg Com 14
Year: 2024



Data Point: DP06u Location: Veg Com 13
Year: 2024

Easton Ranch: Data Point Photos



Data Point: DP07w Location: Veg Com 11
Year: 2024



Data Point: DP07u Location: Veg Com 13
Year: 2024



Data Point: DP08w Location: Veg Com 14
Year: 2024



Data Point: DP08u Location: Veg Com 18
Year: 2024



Data Point: DP09w Location: Veg Com 21
Year: 2024



Data Point: DP09u Location: Veg Com 13
Year: 2024

Easton Ranch: Data Point Photos



Data Point: DP10w Location: Veg Com 24
Year: 2024



Data Point: DP10u Location: Veg Com 10
Year: 2024



Additional Photo: bank erosion on Shields River
Year: 2024