Montana Department of Transportation Wetland Mitigation Monitoring Report

EASTON RANCH MITIGATION SITE

Project Overview

Watershed: Watershed #13 – Upper Yellowstone River Basin

Monitoring Year: 2023

Years Monitored: 14th year of monitoring

Corps Permit Number: NWO-2006-90370-MTB

Monitoring Conducted By: Confluence Consulting Inc

Dates Monitoring Was Conducted: June 20, 2023

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 mostly protected under a conservation easement between the Montana Department of Transportation (MDT) and the landowner. 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 September 2023.

Specific recommendations for any additional corrective actions: The MDT has an ongoing weed-control program and will continue weed treatments in 2024. 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, three bird boxes are not functioning and need repair.

Anticipated Wetland Credit Acres: 27.41

Wetland Credit Acres Generated to Date: 15.07

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 2023 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.
	Soil saturation present for at least 12.5 percent of the growing season.	Υ	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.
Wetland Hydrology	Groundwater is filling the depressional wetlands excavated into the upland areas of the site.	Υ	Hydrologic indicators observed within the excavated wetlands include surface water, high water table, saturation, geomorphic position, and a positive FAC-Neutral test.
	Constructed stream channel is stable.	Υ	The constructed floodplain channel is stable with minimal bank erosion identified throughout the mitigation area.
	Hydric soil conditions present or appear to be forming.	Y	All constructed wetlands exhibit hydric soil development (e.g., depleted matrix and redox dark surface).
Hydric Soil	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.	Υ	Plant cover has continued to develop across disturbed soils.
Hydrophytic Vegetation	Achieved when wetlands delineated as hydrophytic using technical guidelines.	Υ	Areas identified as wetland habitat within the mitigation site support a prevalence of hydrophytic vegetation (OBL, FACW, and FAC).
	Trees and shrubs will be installed and survival assessed.	Υ	Trees and shrubs were planted throughout the mitigation site and are assessed during each yearly monitoring visit.
Woody Plants	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 28 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 it has nearly

Performance Standards	Success Criteria	Criteria Achieved (Y/N)	Discussion
	progression toward that goal at the end of the defined monitoring period.		achieved the percent cover of woody plants goal and is showing promising signs of progression towards 30% cover.
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 15.07 net wetland credit acres has been generated for the mitigation site and includes 12.84 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).
	Emergent wetland habitat will be 70–75% of mitigation wetland.	Y	Emergent wetland habitat comprises approximately 72% of total wetland areas delineated in 2023.
Wetland Acreage	Scrub/shrub wetland habitat will be 15–20% of wetland area.	Υ	Scrub/shrub wetland habitat comprises approximately 28% of total wetland areas delineated in 2023, exceeding the success criteria of 15-20%.
Wetland Acreage Development	Open water will be < 5% of wetland area.	Y	Open water comprised less than .003% of total wetland areas delineated in 2023. 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 openwater habitat greater than 3 feet in depth.
	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.
Floodplain Channel Restoration	Bank stability will be evaluated by reference reach comparison.	Υ	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.	Υ	Vegetation transect across the floodplain has been monitored yearly and supports a prevalence of species with a root-stability index greater than 6.
	Area visually inspected and photo-documented.	Υ	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.
Bank Stabilization (Shields River)	Stability achieved when the banks are vegetated with a majority of deep-rooting riparian and wetland plant species.	N	The banks of the Shields River are generally dominated by shallow-rooted upland pasture grasses, with low cover provided by the non-native and deeper-rooted species, reed canary grass. In 2023, soil lifts and the riprap installed along the bank continue to slowly erode near the northwestern corner of the site. This area has been eroding since a 2013 high flow event damaged the reconstructed bank. Installed willow cuttings did not establish along this bank.
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 2023.
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.	Υ	Comprehensive site monitoring has been ongoing for 14 years since the completion of construction activities in 2009.

Summary Data

Wetland Delineation — The total wetland and aquatic habitat acreage delineated in 2023, including pre-existing wetland areas, was 15.63 acres, which is a decrease of 0.35 acres since 2022 (Table 2; Figures A-2 and A-3, Appendix A). 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 2023. 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 15.63 acres delineated in 2023. Overall, the wetland acreage within the Easton site showed a slight decline of approximately 0.35 acres between 2022 and 2023.

Table 2. Upland, Wetland & Aquatic Habitat Acreage Delineated in 2023 at the Easton Ranch Site

Habitat Type	2023 Acreage
Uplands	18.68
Wetlands &	
Aquatic Habitat	
Emergent	11.19
Scrub-Shrub	4.39
Open Water	0.05
Subtotal	15.63
Project Area	34.31

Vegetation – A total of 179 plant species were identified on the site from 2010 through 2023. Vegetation communities were identified by species composition and dominance. The following three upland and 10 wetland vegetation community types were identified and mapped in 2023:

- 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. In 2023, many community types were combined due to a convergence in species composition, making some community types redundant. This included merging Upland Types 1 – Phleum pratense/Poa pratensis, 16 – Elymus repens/Poa pratensis, and 17 – Phleum pratense/Elymus repens, with Upland Type 13 – Bromus inermis/Phleum pratense; merging Wetland Type 3 – Carex spp. with Wetland Type 21 – Carex spp./Juncus spp.; and creating a new wetland community Wetland Type 24 – Phleum pratense by merging Wetland Type 23 – Lotus corniculatus/Phleum pratense Wetland Type 22 – Phleum pratense/Elymus repens.

Vegetation cover was measured along three transects in 2023 (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, 21, and 23. In 2023, 58.2 percent of the transect intercepted wetland habitat, a slight decrease from 61.7 percent in 2022. Total vegetation species increased by one with the addition of one hydrophytic species. Total vegetative cover has remained relatively constant at 85–91 percent from 2017 to 2023.

Table 3. Data Summary for T-1 From 2010 and 2019 Through 2023 at the Easton Ranch Site

Monitoring Year	2010	2019	2020	2021	2022	2023
Transect Length (feet)	1,376	1,376	1,376	1,376	1,376	1,376
Vegetation Community Transitions Along Transect	11	12	13	17	17	17
Vegetation Communities Along Transect	3	10	9	12	12	9
Hydrophytic Vegetation Communities Along Transect	1	4	5	7	7	6
Total Vegetative Species	33	52	54	53	62	60
Total Hydrophytic Species	15	32	38	40	42	43
Total Upland Species	18	20	16	13	19	17
Estimated % Total Vegetative Cover	65	89	90	91	91	91
Estimated % Unvegetated	35	11	10	9	9	9
% Transect Length Comprising Hydrophytic Vegetation Communities	28	19.3	42.2	61.7	61.7	58.2
% Transect Length Comprising Upland Vegetation Communities	70	80.7	57.8	38.3	38.3	41.8
% 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. This changed slightly from 2023. 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 64.7 percent of the transect in 2023, a four percent increase since 2022. Total vegetative species remained the same from 2022. Total vegetative cover has remained relatively constant at 85–91 percent from 2017 to 2023.

Table 4. Data Summary for T-2 From 2010 and 2019 Through 2023 at the Easton Ranch Site

Monitoring Year	2010	2019	2020	2021	2022	2023
Transect Length (feet)	1,333	1,333	1,333	1,333	1,333	1,333
Vegetation Community Transitions Along Transect	11	14	13	11	11	10
Vegetation Communities Along Transect	4	9	9	9	9	7
Hydrophytic Vegetation Communities Along Transect	2	6	6	6	6	5
Total Vegetative Species	35	59	61	60	61	61
Total Hydrophytic Species	17	46	46	47	45	46
Total Upland Species	18	13	15	13	17	15
Estimated % Total Vegetative Cover	65	90	90	91	91	91
Estimated % Unvegetated	35	10	10	9	9	9
% Transect Length Comprising Hydrophytic Vegetation Communities	38.7	46.1	46.5	61.7	61.7	64.7
% Transect Length Comprising Upland Vegetation Communities	61.3	53.9	53.5	38.3	38.3	35.3
% Transect Length Comprising Unvegetated Open Water	0.0	0.0	0.0	0.0	0.0	0
% Transect Length Comprising Mud Flat	0.0	0.0	0.0	0.0	0.0	0

Data collected on T-3 (Wetland Mitigation Site Monitoring form, Appendix B) are summarized in Table 5. This transect remained relatively unchanged since 2022. T-3 is 732 feet long, runs west to east across the south end of the site, and intersects vegetation communities, Upland Type 13 and Wetland Types 11 and 14. Approximately 58 percent of the transect crossed wetland habitat in 2023, which is an almost four percent increase from 2022. The total number of species increased by one, with the addition of one upland species. Total vegetative cover has remained relatively constant at 85–91 percent from 2017 to 2023.

Table 5. Data Summary for T-3 From 2010 and 2019 Through 2023 at the Easton Ranch Site

Monitoring Year	2010	2019	2020	2021	2022	2023
Transect Length (feet)	732	732	732	732	732	732
Vegetation Community Transitions Along Transect	11	6	6	6	6	6
Vegetation Communities Along Transect	3	4	4	4	4	3
Hydrophytic Vegetation Communities Along Transect	1	2	2	2	2	2
Total Vegetative Species	24	40	29	27	27	28
Total Hydrophytic Species	11	27	19	19	19	19
Total Upland Species	13	13	10	8	8	9
Estimated % Total Vegetative Cover	65	91	90	91	91	91
Estimated % Unvegetated	35	9	10	9	9	9
% Transect Length Comprising Hydrophytic Vegetation Communities	45	51.5	54.8	54.5	54.5	57.8
% Transect Length Comprising Upland Vegetation Communities	55	48.5	45.2	45.5	45.5	42.2
% Transect Length Comprising Unvegetated Open Water	0.0	0.0	0.0	0.0	0.0	0
% Transect Length Comprising Mud Flat	0.0	0.0	0.0	0.0	0.0	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 14 years after construction because it is not possible to identify planted versus naturally recruited 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*), 51narrow-leaf willow (*Salix exigua*), 99 speckled alder (*Alnus incana*), and 85 willow cuttings were identified as surviving. During the 2023 monitoring event, only healthy trees and shrubs were observed, so it can be assumed all the woody species counted in 2021 were surviving in 2023.

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, are establishing well, and have slightly increased in cover since 2022. 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. 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. However, many of the younger saplings are experiencing considerable herbivory, slowing the expansion of scrub-shrub wetlands.

During the June 2023 monitoring, new infestations of Canada thistle (*Cirsium arvense*), a Priority 2B noxious weed in Montana, were identified (Figure A-3, Appendix A). In addition, all of the Canada thistle infestations found in 2022 were also identified in 2023 for a combined total of 14 populations. All the Canada thistle infestations were less than 0.1-acre in size. Several of the population's cover class was rated as trace (< 1 percent), other populations were rated low (1–5 percent), two populations were rated moderate (6-25 percent), and one population was rated high (26-100 percent). Canada thistle infestations were found in both upland and wetland habitats. Canada thistle was observed in WT's 4, 5, 11, 14, 15, 20, and 23, and UT 10.

Infestations of gypsy-flower (*Cynoglossum officinale*), a Priority 2B noxious weed in Montana, were observed in 2023 (Figure A-3, Appendix A). All gypsy-flower populations were rated as cover class trace and located in UTs 13 and 18. In addition, a new population 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, annual weed management efforts have effectively controlled the spread of noxious weed populations across the site. However, a slight increase in weed cover was observed in 2023 compared to 2022, and one new weed species was found. MDT has an ongoing weed-control program that conducted weed management in the fall of 2023 and will continue in 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 in the northern portion of the site. The surface-water flows into the site, emanate from an old flood channel draining a beaver pond complex along the northcentral boundary, and an irrigation canal located at the northeastern corner of the mitigation site. These sources of surface flow were not flowing during the June 2023 site visit. Approximately two percent of the site was inundated during the 2023 monitoring event, a one percent increase from 2022. During the 2023 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. Inundation depths ranged from 0.5 to 8 inches across the site. As in 2022, there was no recent evidence of overland flows from the Shields River within Transect 2 or the overflow channel. The overflow channel remained well vegetated, and the channel bottom remained stable.

Soils – Paired soil pits were excavated at ten locations within the mitigation area. The entire mitigation site was mapped as containing the Meadowcreek soil series by the Natural Resources Conservation Service (NRCS 2023), which is not classified as a hydric soil (Figure A-2, Appendix A). Soil textures within wetland soil pits ranged from silty clay loam to loam. Hydric soil indicators were observed within all wetland soil pits, including depleted matrix and redox dark surface.

Soil textures within upland soil pits ranged from silty clay loam to silt loam. No hydric soil indicators were observed in any of the upland soil pits. 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 2023 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 2023 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	2023	2023	2023
2008 Montana Wetland Assessment Method	Restoration	Preservation	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)	High (0.9)	High (1.0)
Groundwater Discharge/Recharge	Mod (0.7)	Mod (0.7)	Mod (0.7)
Uniqueness	Mod (0.4)	Mod (0.6)	Mod (0.6)
Recreation/Education Potential (bonus points)	NA	NA	NA
Actual Points/Possible Points	6.60 / 10	6.20 / 9	7.60 / 10
% of Possible Score Achieved	66%	69%	76%
Overall Category	II	II	II

Wildlife – Seventeen bird species were identified at the site in 2023, including a Bald Eagle (*Haliaeetus leucocephalus*) (Site Monitoring Form Appendix B). In addition to the bird species, white-tailed deer (*Odocoileus virginianus*) and raccoon (*Procyon lotor*) tracks were observed along the eastern project boundary.

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 coirwrapped 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 2023, 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.

Functional Units Summary – The 2023 functional units summary is summarized in Table 7. A total of 110.14 functional units were generated at the Easton site after applying the appropriate mitigation

ratios to the 2023 wetland acreage and multiplying that value by the points generated from the assessment area.

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

Mitigation Type	2023 Delineated Acreage ^a	Ratio	2023 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	6.20	1.74
Establishment (Creation)	12.84	1:1	12.84	7.60	97.58
Functional Units (Mitigation Credit Acres × Actual Points)					110.14

^a0.64 acres of project impacts are not accounted for in the reported acreages

Credit Summary — Table 8 summarizes the estimated wetland credits based on the USACE-approved credit ratios and the wetland delineation completed in June 2023. 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 impacts associated with constructing the mitigation wetland. The total mitigation credit estimated in 2023 totaled 15.07 credit acres, which is slightly less than observed in 2022. The site is still approximately 12.34 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.

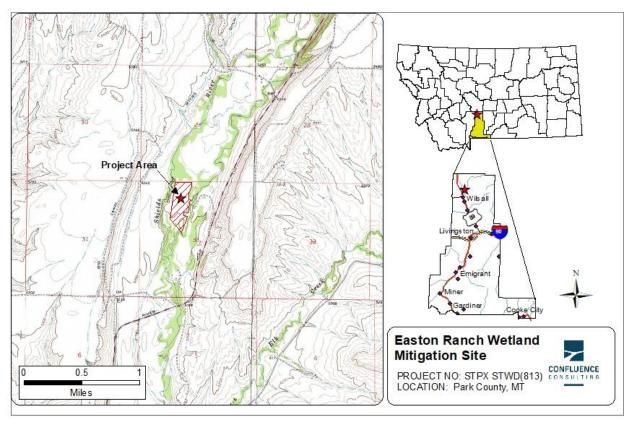
Table 8. Wetland Mitigation Credits Estimated for the Easton Ranch Site (2019–2023)

Proposed Mitigation Features	Compensatory Mitigation Type	USACE Mitigation Ratios	Anticipated Final Credit Acreages	Proposed Final Wetland Credits (Acres)	2020 Wetland Acreages	2020 Credit Estimated (Acres)	2021 Wetland Acreages	2021 Credit Estimated (Acres)	2022 Wetland Acreages	2022 Credit Estimated (Acres)	2023 Wetland Acreages	2023 Credit Estimated (Acres)
Creation of palustrine emergent wetland via shallow excavation	Establishment (Creation)	1:1	24.95	24.95	11.15	11.15	13.25	13.25	13.24	13.24	12.84	12.84
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	14.28	2.86	5.07	1.01	4.77	0.95	4.92	0.98
Project impacts			-0.67	-0.67	-0.67	-0.67	-0.67	-0.67	-0.67	-0.67	-0.67	-0.67
1	Total Mitigation Cred	dit Acres:		27.41		15.26		15.51		15.44		15.07

^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 – 2023 Monitoring Activity Locations; Figure A-3 – 2023 Mapped Site Features; and Figure A-4 – 2023 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 fourteenth 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 to discuss meeting these performance standards and potential adaptive management actions.

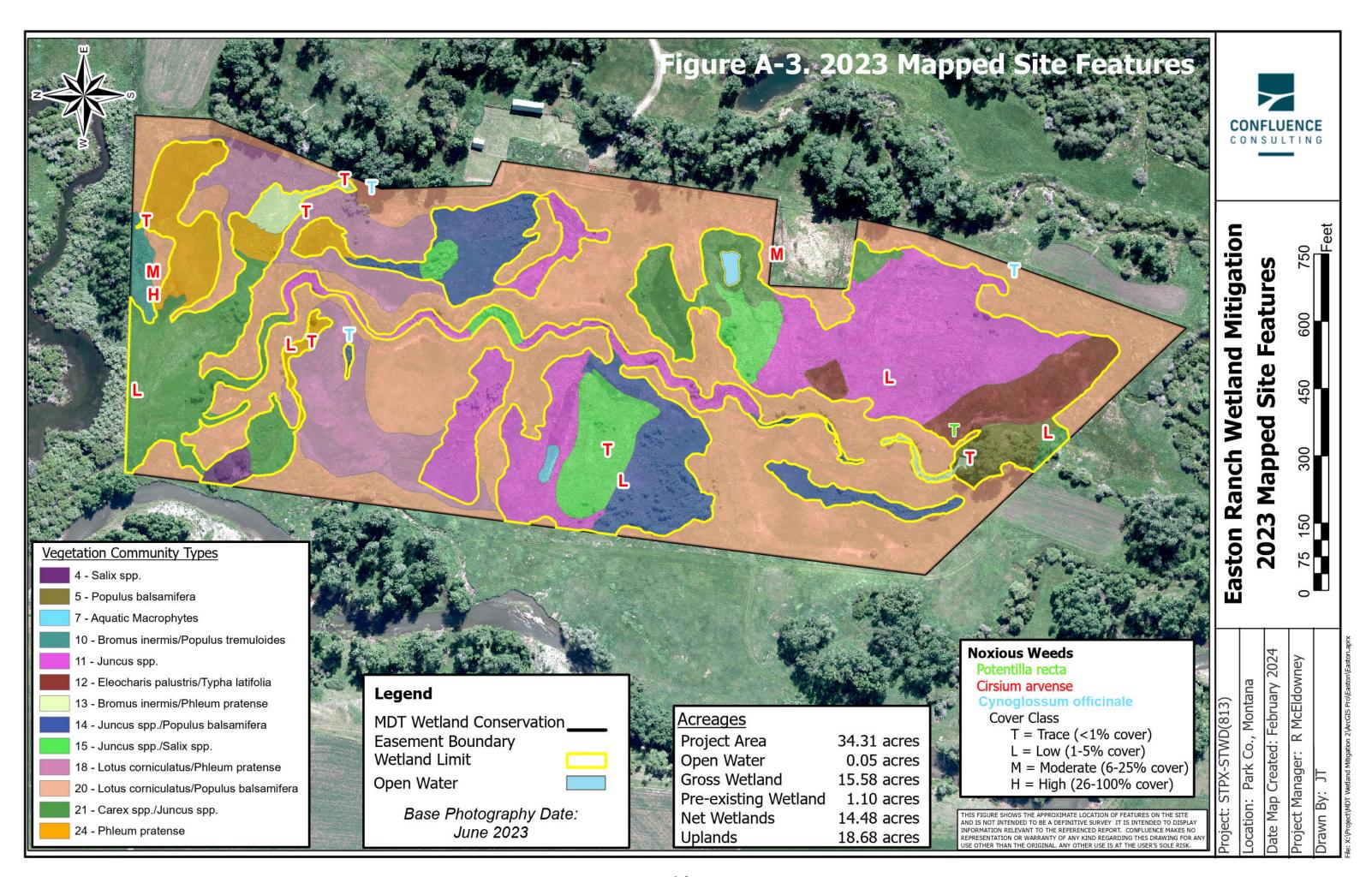
References

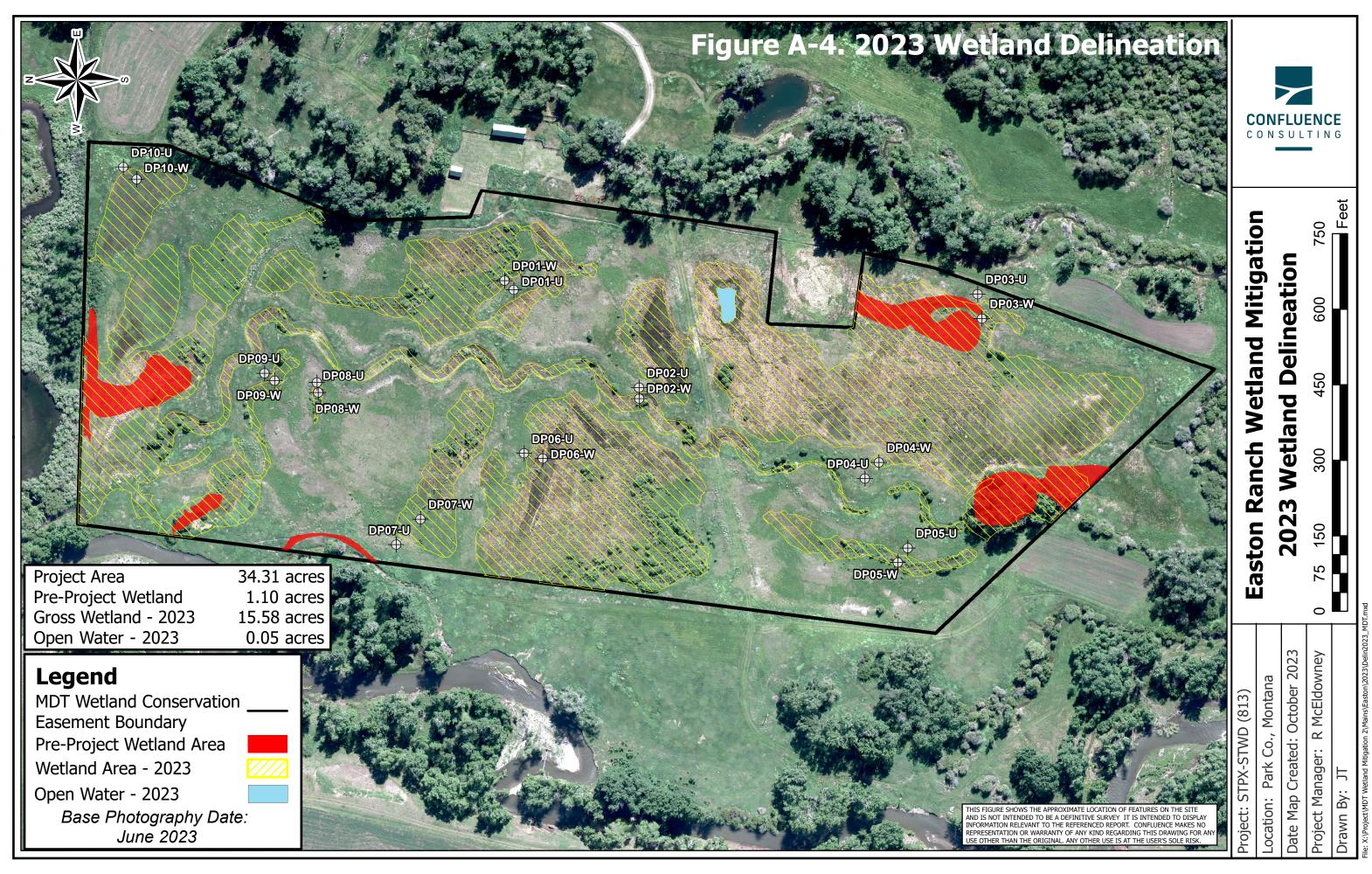
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APPENDIX A PROJECT AREA MAPS

MDT Wetland Mitigation Monitoring Easton Ranch Park County, Montana







APPENDIX B MONITORING FORMS

MDT Wetland Mitigation Monitoring Easton Ranch Park County, Montana

MDT WETLAND MITIGATION SITE MONITORING FORM

Project Site: <u>Easton</u>	Assessment Date/Time	6/20/2023
Person(s) conducting the ass	sessment: S Weyant, J Trilling, K Kane	
Weather: 80 degrees, sunny	<u> </u>	
MDT District: Butte	Milepost:_NA	_
Legal Description: T <u>4N</u> F	R 9E Section(s) 32 NW 1/4	
Initial Evaluation Date: 8/25/	2010Monitoring Year: <u>14</u> #Visits in Year: <u>1</u>	
Size of Evaluation Area: 3	4.31 (acres)	
Land use surrounding wetlan Agriculture, Shields River,	d: Scrub/Shrub and Forested Riparian corridors.	
	HYDROLOGY	
Surface Water Source: High gro	oundwater, periodic overbank flow from the Shields River, i	rrigation
Inundation: Ave	erage Depth: 0.2 (ft) Range of Depths: 0.1-1.5 (f	<u>ft)</u>
Percent of assessment area unde	er inundation:1 %	
Depth at emergent vegetation-op	en water boundary: <u>0.3 (ft)</u>	
	ed then are the soils saturated within 12 inches of surface:	Yes
	ne site (ex. – drift lines, erosion, stained vegetation, etc <u>:</u>	
	, saturation, and sulfidic odor, oxidized rhizospheres on livi	ng roots,
Groundwater Monitoring W		
•		
Record depth of water surface	e below ground surface, in feet.	
Additional Activities Checklist:		
Map emergent vegetation-open wat	er boundary on aerial photograph.	
	ring each site visit and look for evidence of past surface water	
elevations (drift lines, erosion, vegetation s		
Use GPS to survey groundwater modylydrology Notes:	mitoring well locations, il present.	
.,		
	vas more prevalent than during the 2022 monitoring event itoring occurring earlier in the year. In general, saturation w southern portion of the site.	/as

VEGETATION COMMUNITIES

Site Easton

(Cover Class Codes $\mathbf{0} = < 1\%$, $\mathbf{1} = 1.5\%$, $\mathbf{2} = 6.10\%$, $\mathbf{3} = 11.20\%$, $\mathbf{4} = 21.50\%$, $\mathbf{5} = >50\%$)

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	1
Salix drummondiana	4	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. Unchanged from 2022.

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	2
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% vegetation and therefore does not qualify as open water.

Community # 10 Community Type: Bromus inermis / Populus tremuloides Acres: 0.19

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: 5.54

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	3
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 remained relatively unchanged since 2022. This CT contains a wide diversity of native wetland vegetation.

Community # 12 Community Type: Eleocharis palustris / Typha latifolia Acres: 0.98

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 remained relatively unchanged since 2022.

Community # 13 Community Type: Bromus inermis / Phleum pratense Acres: 13.86

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
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Comments:

This CT increased in size significantly due to absorbing CTs 1, 16, and 17. In 2023 it was observed that the species composition of upland CTs 1, 16, and 17 were too similar to remain separate CTs and were combined with CT 13, which is similar in species composition to the CTs being removed.

Community # 14 Community Type: Juncus spp. / Populus balsamifera Acres: 2.39

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 2023. Populus balsamifera was observed as saplings and appear to be increasing in size. However significant herbivory was observed on the cottonwoods.

Community # 15 Community Type: Juncus spp. / Salix spp. Acres: 1.45

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	2
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		
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Comments:

In 2023 this CT did not change in size. Significant browse by wildlife was observed on willows in the CT.

Community #	<u>18</u>	Community Type:	Lotus corniculatus / Phleum pratense	Acres:	2.9
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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	1	Elymus trachycaulus	0
Equisetum arvense	1	Juncus balticus	2
Leymus cinereus	1	Lotus corniculatus	4
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			

Comments:

Upland CT first identified in 2018, mainly across the northern portion of site. In 2021 it was thought much of this CT in he northeastern portion of the project area was transitioning to wetland, however during the 2022 and 2023 monitoring events, wetlands in this area did not increase.

Community # 20 Community Type: Lotus corniculatus / Populus balsamifera Acres: 0.3

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 2022.

Community # 21 Community Type: Carex spp. / Juncus spp. Acres: 3

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
Commenter			

Comments:

A new CT mapped in 2019, within transects 1 and 2. This CT increased in size in 2023 by 0.44 acres because it absorbed CT 3 due to a convergence of species.

Community #	24	Community Type	: Phleum pratense /	Acres: 1	.33
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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	2
Equisetum arvense	1	Juncus balticus	2
Leymus cinereus	1	Lotus corniculatus	3
Medicago lupulina	1	Melilotus officinalis	0
Open Water	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. This new vegetation community absorbed CT 22 and 23.

Total Vegetation Community Acreage

32.58

VEGETATION TRANSECTS

Easton Easton		Date: <u>6/20/2023</u>	
Transect Number	er: <u> </u>	ass Direction from St	art:5
Interval Data: Ending Station	65 Community Type:	Carex spp. / Juncus spp.	
	65 Community Type: Cover class		Cover clas
Species	Cover class	Species	Cover cias
Agrostis stolonifera	1	Brassica kaber	
Carex nebrascensis	1	Carex pachystachya	
Carex pellita	1	Carex utriculata	
Cirsium arvense	0	Elymus repens	
Epilobium ciliatum	0	Equisetum arvense	
Juncus balticus	4	Juncus longistylis	
Juncus tenuis	1	Mentha arvensis	
Poa pratensis	1	Stachys pilosa	
Ending Station	93 Community Type:	Aquatic macrophytes /	
Species	Cover class	Species	Cover clas
Algae, green	3	Carex nebrascensis	
Carex pellita	1	Carex utriculata	
Eleocharis palustris	1	Glyceria grandis	
Hippuris vulgaris	0	Juncus balticus	
Juncus effusus	1	Juncus ensifolius	
Mentha arvensis	1	Open Water	
Ranunculus aquatilis	1	Ranunculus gmelinii	
Salix lutea	1	Typha latifolia	
Ending Station	137 Community Type:	Carex spp. / Juncus spp.	
Species	Cover class	Species	Cover clas
Agrostis stolonifera	0	Carex aquatilis	
Carex nebrascensis	1	Carex utriculata	
Epilobium ciliatum	1	Juncus balticus	
Juncus effusus	2	Juncus ensifolius	
Mentha arvensis	0	Open Water	
Phleum pratense	0	Poa palustris	
Poa pratensis	0	Salix bebbiana	
Salix lutea	1		

Ending Station	195	Community Type:	Bromus inermis / Phleum pra	tense
Species		Cover class	Species	Cover class
Agrostis stolonifera		2	Bare Ground	1
Brassica kaber		0	Carex nebrascensis	1
Chenopodium album		0	Cirsium arvense	1
Dactylis glomerata		1	Elymus repens	4
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 exigua		1	Salix lutea	1
Scirpus microcarpus		1	Taraxacum officinale	0
Typha latifolia		2		
Ending Station	468	Community Type:	Bromus inermis / Phleum pra	tense
Species		Cover class	Species	Cover class
Achillea millefolium		0	Agrostis stolonifera	2
Alopecurus arundinaceus		1	Brassica kaber	0
Bromus inermis		3	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	3
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	S	1	Alopecurus pratensis	1
Bare Ground		1	Carex pachystachya	1
Cirsium arvense		0	Cirsium arvense	0
Juncus balticus		4	Juncus effusus	2
Juncus tenuis		0	Phleum pratense	1
Poa palustris		1	Poa pratensis	1
Schedonorus pratensis		1		
Ending Station	562	Community Type:	Bromus inermis / Phleum pra	atense
Species		Cover class	Species	Cover class
Agrostis stolonifera		1	Alopecurus arundinaceus	3
Brassica kaber		1	Carex pachystachya	1
Carum carvi		1	Cynoglossum officinale	0
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 balsa	mifera
Species		Cover class	Species	Cover class
Agrostis stolonifera		1	Alopecurus arundinaceus	2
Bare Ground		1	Carex pachystachya	1
Carex pellita		1	Carum carvi	1
Cynoglossum officinale		0	Elymus repens	1
Equisetum arvense		1	Juncus balticus	1
Juncus effusus		1	Lotus corniculatus	4
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		1	Carex pachystachya	1
Carex pellita		1	Carum carvi	1
Cirsium arvense		0	Juncus balticus	4
Lotus corniculatus		2	Phalaris arundinacea	1
Populus balsamifera		3	Potentilla gracilis	0
Salix bebbiana		2	Salix boothii	2
Salix exigua		2	Stachys pilosa	0
Taraxacum officinale		0		
Ending Station	891	Community Type:	Lotus corniculatus / Phleum	n pratense
Species		Cover class	Species	Cover class
Achillea millefolium		0	Alnus incana	1
Bare Ground		1	Brassica kaber	0
Bromus tectorum		0	Carum carvi	2
Elymus trachycaulus		0	Equisetum arvense	1
Juncus balticus		2	Leymus cinereus	1
Lotus corniculatus		5	Medicago lupulina	1
Phalaris arundinacea		0	Phleum pratense	3
Poa pratensis		2	Populus balsamifera	1
Rumex salicifolius		1	Taraxacum officinale	1
Tragopogon dubius		0	Trifolium hybridum	1
Trifolium pratense		2		
Ending Station	1005	Community Type:	Lotus corniculatus / Phleum	n pratense
Species		Cover class	Species	Cover class
Alnus incana		1	Bare Ground	1
Camelina microcarpa		0	Carum carvi	2
Elymus repens		0	Elymus trachycaulus	0
Equisetum arvense		1	Juncus balticus	2
Leymus cinereus		1	Lotus corniculatus	4
Medicago lupulina		1	Phleum pratense	3
Poa pratensis		2	Populus balsamifera	1
Rumex salicifolius		1	Taraxacum officinale	1
Trifolium hybridum		1	Trifolium pratense	1

Ending Station	1032 Community Type:	Lotus corniculatus / Phleum pratense	
Species	Cover class	Species	Cover class
Bare Ground	1	Bromus inermis	1
Carum carvi	2	Cirsium arvense	0
Cornus alba	0	Elymus repens	1
Equisetum arvense	1	Juncus balticus	0
Leymus cinereus	3	Lotus corniculatus	4
Medicago lupulina	1	Phleum pratense	3
Poa pratensis	2	Populus balsamifera	1
Potentilla gracilis	0	Taraxacum officinale	1
Trifolium hybridum	1	Trifolium pratense	2
Ending Station	1147 Community Type:	Lotus corniculatus / Phleu	ım pratense
Species	Cover class	Species	Cover class
Bare Ground	1	Brassica kaber	0
Bromus inermis	1	Carum carvi	2
Cirsium arvense	1	Elymus repens	4
Equisetum arvense	2	Leymus cinereus	1
Lotus corniculatus	4	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	1	Carum carvi	2
Cirsium arvense	1	Elymus repens	4
Equisetum arvense	1	Leymus cinereus	1
Lotus corniculatus	4	Phleum pratense	3
Poa pratensis	2	Taraxacum officinale	1
Ending Station	1307 Community Type:	Lotus corniculatus / Phleu	ım 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 /		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
		Species Bromus inermis	Cover class
Species		•	
Species Agrostis stolonifera	Cover class	Bromus inermis	4
Species Agrostis stolonifera Carum carvi	Cover class	Bromus inermis Dactylis glomerata	4
Species Agrostis stolonifera Carum carvi Elymus repens	Cover class	Bromus inermis Dactylis glomerata Equisetum arvense	4
Species Agrostis stolonifera Carum carvi Elymus repens Leymus cinereus	Cover class 1 2 1 1	Bromus inermis Dactylis glomerata Equisetum arvense Lotus corniculatus	4 2 1 1

Transect Notes:

As in 2021, and 2022 no ponded water was observed within this transect in 2023. This transect remained largely unchanged from 2022. 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 215 Community Type: Carex spp. / Juncus spp.

	7 71		
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	3	Juncus longistylis	1
Juncus tenuis	1	Leymus cinereus	0
Lotus corniculatus	1	Lysimachia ciliata	0
Open Water	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	Stachys pilosa	0
Stachys pilosa	0	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	1	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:	e: Carex spp. / Juncus spp.	
Species		Cover class	Species	Cover class
Agrostis stolonifera		0	Bare Ground	1
Carex microptera		1	Carex pellita	1
Cirsium arvense		1	Equisetum arvense	1
Juncus balticus		2	Juncus tenuis	1
Lotus corniculatus		2	Lysimachia ciliata	1
Phleum pratense		1	Poa palustris	2
Poa pratensis		1	Populus balsamifera	2
Ranunculus macounii		0	Salix bebbiana	2
Salix lutea		1	Scirpus microcarpus	1
Stachys pilosa		1	Taraxacum officinale	1
Ending Station	655	Community Type:	Lotus corniculatus / Phleum	pratense
Species		Cover class	Species	Cover class
Alyssum alyssoides		0	Bare Ground	2
Bromus carinatus		0	Bromus inermis	1
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	Juncus balticus	3
Juncus effusus		1	Juncus tenuis	1
Lotus corniculatus		4	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	3
Carum carvi		1	Cirsium arvense	0
Elymus repens		1	Juncus balticus	1
Lotus corniculatus		2	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	Leymus cinereus	1
Mentha arvensis		1	Poa palustris	1
Populus balsamifera		2	Potentilla anserina	0
Salix bebbiana		3	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	3	
Salix drummondiana	2	Salix lasiandra	3	

Ending Station 1333 Community Type: Bromus inermis / Phleum pratense

0

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

Transect Notes:

Symphyotrichum subspicatu

The open water reported along this transect in 2021 was observed to be an emergent wetland in 2022 and again in 2023. The vegetation communities and wetland boundaries across this transect remained relatively unchanged since the 2022 monitoring event.

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 bal	samifera	
Species	Cover class	Species	Cover class	
Agrostis stolonifera	0	Carum carvi	1	
Equisetum arvense	1	Juncus balticus	4	
Lotus corniculatus	4	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	3	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 bals	amifera	
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	3	
Phleum pratense	1	Poa palustris	1	
Poa pratensis	1	Populus balsamifera	4	
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	3
Carum carvi		1	Dactylis glomerata	0
Elymus repens		3	Equisetum arvense	1
Juncus balticus		1	Lotus corniculatus	1
Phleum pratense		4	Poa pratensis	2
Taraxacum officinale		1	Thlaspi arvense	1
Trifolium pratense	1			
Ending Station	691	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	4
Juncus longistylis		1	Leymus cinereus	0
Lotus corniculatus		1	Poa pratensis	1
Populus balsamifera		1	Salix bebbiana	2
Salix lutea		1	Solidago gigantea	1
Ending Station	732	Community Type:	Bromus inermis / Phleum p	oratense
Species		Cover class	Species	Cover class
Agrostis stolonifera		1	Bromus inermis	3
Carum carvi		1	Dactylis glomerata	0
Elymus repens		2	Equisetum arvense	1
Lotus corniculatus		1	Phleum pratense	2
Poa pratensis		4	Taraxacum officinale	1
Trifolium pratense		1		

Transect Notes:

The vegetation community boundaries and composition within this transect remained nearly unchanged from 2022. This transect has remained relatively stable since 2017.

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 14 years, deciphering planted versus volunteer willows was difficult and therefore used best professional judgement. 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

Bir	ds
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Were man-made nesting structures installed	? <u>Yes</u>
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 PP4b) was knocked over and needs to be resecured to the fencepost. The two boxes at the southwest corner of the project area are missing their roofs. Unchanged since 2022.

Species	#Observed	Behavior	Habitat
American Crow	5	L	
American Robin	2	L	
Bald Eagle	1	FO	
Common Nighthawk	2	FO	
Eastern Kingbird	4	L, FO	
Golden Eagle	1	FO	
House Wren	6	L	
Killdeer	1	L, F	
Mallard	2	L	
Mourning Dove	3	L	
Red-naped Sapsucker	1	L	
Red-tailed Hawk	1	FO	
Red-winged Blackbird	24	L, FO, F	
Sandhill Crane	2	L, FO	
Starling	3	FO	
Tree Swallow	10	FO	
Wilson's Phalarope	1	F	
Wilson's Snipe	2	F, L	
Yellow Warbler	3	L	
Yellow-headed Blackbird	d 4	L	

Bird Comments

Eagle nest outside of the southwestern portion of project was not occupied this year but an immature Golden Eagle and a mature Bald Eagle were observed soaring over the project area.

BEHAVIOR CODES

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

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

Raccoon Yes No No White-tailed Deer 6 Yes Yes No

Wildlife Comments:

Site utilized by diversity of bird and wildlife species.

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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	46.0587914834	-110.638144797			
DP01w	46.0588423395	-110.638073567			
DP02u	46.0581001962	-110.63889537			
DP02w	46.0580987494	-110.638981998			
DP03u	46.0562634049	-110.638124662			
DP03w	46.0562381341	-110.638314749			
DP04u	46.0568629488	-110.639580112			
DP04w	46.0567877597	-110.639451702			
DP05u	46.0566234219	-110.640120133			
DP05w	46.0566767361	-110.640234402			
DP06u	46.0587224565	-110.639423514			
DP06w	46.0586200035	-110.639462254			
DP07u	46.0594114683	-110.640152663			
DP07w	46.059281427	-110.639948676			
DP08u	46.0598562416	-110.638891608			
DP08w	46.0598495525	-110.638969981			
DP09u	46.0601430034	-110.638825365			
DP09w	46.0600870776	-110.638882878			
DP10u	46.0609288137	-110.637227287			
DP10w	46.0608552072	-110.63731976			
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	R-2	Southwest corner	

PP7	46.055286	-110.639137	Southeast corner
T-1 End	46.060627	-110.637779	View of CT 10 and 18
T-1 Start	46.057281	-110.638306	View of CT 11 and 7
T-2 End	46.057594	-110.640343	View of CT 1
T-2 Start	46.060139	-110.639229	View of CT 3
T-3 End	46.056114	-110.637924	View of CT 1 and 11
T-3 Start	46.056984	-110.640656	View of CT 13

Comments:

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ADDITIONAL ITEMS CHECKLIST

	Hydrology
✓ ✓ line:	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 s, 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
✓ N	lap vegetation community boundaries
▼ C	complete Vegetation Transects
	Soils
✓ Д	Assess soils
	Wetland Delineations
√ Sun	Delineate wetlands according to applicable USACE protocol (1987 form or
Sup ✓	plement) Delineate wetland – upland boundary onto aerial photograph.
Wet	land Delineation Comments
	otal wetland acreage decreased 0.35 acres since 2022. Wetland boundaries have changed little in he past three years.
	Functional Assessments
✓ form	Complete and attach full MDT Montana Wetland Assessment Method field as.
Fun	ctional Assessment Comments:
T	otal functional units for 2023 are 109.11. Functional units have changed little in the past few years.

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? Yes

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.

Project/Site: Easton Ranch	(Citv/Count	/: Park Coι	unty	Sampling Date: 2023-06-20
		-		State: Montana	·
• •				nge: S32 T4N R9E	
Landform (hillslope, terrace, etc.): Berm					Slope (%): 0
Subregion (LRR): E 44			•	· 	
Soil Map Unit Name: 155A - Meadowcreek, rarely floods				-	
Are climatic / hydrologic conditions on the site typical for this					
	-				esent? Yes No
Are Vegetation, Soil, or Hydrologys				·	<u> </u>
Are Vegetation, Soil, or Hydrology n SUMMARY OF FINDINGS – Attach site map				eded, explain any answers	
Hydrophytic Vegetation Present? Yes No			3 p		
Hydric Soil Present? Yes No	° ~	ls th	ne Sampled		
Wetland Hydrology Present? Yes No	o /	with	nin a Wetlan	d? Yes	No
Remarks:		L			-
1 inch higher in elevation than DP01v	٧.				
VEGETATION – Use scientific names of plan	ts.				
- 30 ft r	Absolute		t Indicator	Dominance Test works	heet:
Tree Stratum (Plot size: 30 ft r) 1	% Cover			Number of Dominant Spe That Are OBL, FACW, or	
2				Total Number of Domina	
3	·			Species Across All Strata	a: <u>2</u> (B)
4		= Total Co		Percent of Dominant Spe	
Sapling/Shrub Stratum (Plot size: 15 ft r	<u> </u>	= Total Co	over	That Are OBL, FACW, or	` ` '
1.				Prevalence Index works	
2				Total % Cover of: OBL species 0	$\frac{\text{Multiply by:}}{\text{x 1 = } 0}$
3					$x = \frac{1}{0}$
4					x 3 = 87
5		-		FACU species 1	
Herb Stratum (Plot size: 5 ft r)	0	= Total Co	over		x 5 = 350
1 Bromus inermis	60	~	UPL	Column Totals: 100	
2 Alopecurus arundinaceus	29		FAC		
3. Thlaspi arvense	10		UPL	Prevalence Index : Hydrophytic Vegetation	
4. Galium aparine	1		FACU	1 - Rapid Test for Hy	
5				2 - Dominance Test	
6				3 - Prevalence Index	
7				4 - Morphological Ac	daptations ¹ (Provide supporting
8					or on a separate sheet)
9				5 - Wetland Non-Vas	
10					nytic Vegetation ¹ (Explain)
11	400			be present, unless distur	and wetland hydrology must bed or problematic.
Woody Vine Stratum (Plot size:)	100	= Total Co	ver		· ·
1				Hydrophytic	
2.				Vegetation	.,
	^	= Total Co		Present? Yes	No
% Bare Ground in Herb Stratum 0					
Remarks:					
No hydrophytic vegetation present a	t samp	le site.			

SOIL Sampling Point: DP01u

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) 2 cm I Histosol (A2) Stripped Matrix (S6) Red P Histosol (A2) Stripped Matrix (S6) Red P Histosol (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very S Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other Depleted Below Dark Surface (A11) Depleted Matrix (F3) Pepleted Below Dark Surface (A12) Redox Dark Surface (F6) Indicators Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Wetland Sandy Gleyed Matrix (S4) Redox Depressions (F8) Unless Restrictive Layer (if present): Type: Depth (inches): Hydric Soil P Remarks: No hydric soil indicators observed. Hydric Soil wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Second Saturation (A3) Saturation (A3) Saturation (A3) Saturation (A3) Saturation (A3) Saturation (A3) Aquatic Invertebrates (B13) Dry Sediment Deposits (B3) Aquatic Invertebrates (B13) Dry Sediment Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Get P Recent Iron Reduction in Tilled Soils (C6) FA6 Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Rai	
11-17 10YR 3/2 100	Remarks
"Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. "Local Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histos (A1)	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histics Epipedon (A2)	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histics Epipedon (A2)	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histics Epipedon (A2)	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histics Epipedon (A2)	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histics Epipedon (A2)	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histics Epipedon (A2)	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histics Epipedon (A2)	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histics Epipedon (A2)	
Histosol (A1) Sandy Redox (S5) 2 cm I Histic Epipedon (A2) Stripped Matrix (S6) Red P Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very S Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Indicators observed. IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Second Surface Water (A1) Water-Stained Leaves (B9) (except Water Arts) Aquatic Invertebrates (B13) Dra High Water Table (A2) MLRA 1, 2, 4A, and 4B) Sail Crust (B11) Dra Water Marks (B1) Aquatic Invertebrates (B13) Dra Water Marks (B1) Aquatic Invertebrates (B13) Dra Drift Deposits (B2) Hydrogen Sulfide Odor (C1) Sat Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Ger Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Ger Drift Deposits (B3) Stunted or Stressed Plants (D1) (LRR A) Rai Inon Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Rai Inundation Vis ble on Aerial Imagery (B7) Other (Explain in Remarks) Fro Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrology (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	tion: PL=Pore Lining, M=Matrix.
Histic Epipedon (A2) Stripped Matrix (S6) Red F Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very S Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Inick Dark Surface (A12) Redox Dark Surface (F6) Inick Dark Surface (A12) Redox Dark Surface (F7) Wetland Sandy Gleyed Matrix (S4) Redox Depressions (F8) Uniless Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Premarks: No hydric soil indicators observed. Hydric Soil Premarks: Hydric Soil Premarks: Hydric Soil Premarks: Hydric Soil Premarks (B9) (except Water (A1) Water Stained Leaves (B9) (except Water (A1) High Water Table (A2) MLRA 1, 2, 4A, and 4B) Sail Crust (B11) Dra Saituration (A3) Sail Crust (B11) Dra Saituration (A3) Aquatic Invertebrates (B13) Dra Saituration (A3) Dra Aquatic Invertebrates (B13) Dra Saituration (A3) Dra Aquatic Invertebrates (B13) Dra Saituration (B2) Dra Saituration (B2) Hydrogen Sulfide Odor (C1) Sait Dracks (B3) Oxidized Rhizospheres along Living Roots (C3) Get Presence of Reduced Iron (C4) Sha Iron Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) FA Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Rai Inundation Vis ble on Aerial Imagery (B7) Other (Explain in Remarks) Fro Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrology (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	s for Problematic Hydric Soils ³ :
Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1) Very S Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Matrix (F3) Sandy Gleyed Matrix (S4) Redox Dark Surface (F7) wetland Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless Restrictive Layer (if present): Type: Depth (inches): Depth (inches): No hydric soil indicators observed. Hydric Soil	Muck (A10)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless Restrictive Layer (if present): Type: Depth (inches): Hydric Soil PRemarks: No hydric soil indicators observed. Hydric Soil premarks: No hydric soil indicators observed. Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Second Surface Water (A1) Water-Stained Leaves (B9) (except Water (A1) Aquatic (B11) Dara (Parent Material (TF2)
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) 3Indicators Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland unless. Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Presents: Type: Depth (inches): Hydric Soil Presents: Wetland Hydrology Indicators Primary Indicators (minimum of one required; check all that apply) Second Surface Water (A1) Water-Stained Leaves (B9) (except Water Marks (B1) Aquatic Invertebrates (B13) Dry Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Sat Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Get Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Recent Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC Surface Water Present? Yes No V Depth (inches): Wetland Hydrology Indicators: Vermarks: Depth (inches): Wetland Hydrology Indicators (Date of Pack all that apply) Second Seco	Shallow Dark Surface (TF12)
Thick Dark Surface (A12)	(Explain in Remarks)
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) wetland sandy Gleyed Matrix (S4) Redox Depressions (F8) unless Restrictive Layer (if present): Type: Depth (inches): Hydric Soil PRemarks: No hydric soil indicators observed. Hydric Soil PRemarks: Hydric Soil Indicators (minimum of one required; check all that apply)	s of hydrophytic vegetation and
	d hydrology must be present,
Restrictive Layer (if present): Type: Depth (inches): Depth (inches): No hydric soil indicators observed. AyDROLOGY	disturbed or problematic.
Type:	<u> </u>
Remarks: No hydric soil indicators observed. Pythrology Wetland Hydrology Indicators:	
No hydric soil indicators observed.	Present? Yes No 🔽
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Second Surface Water (A1) High Water Table (A2) Saturation (A3) Saturation (A3) Sediment Deposits (B2) Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Algal Mat or Crust (B4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) Surface Soil Cracks (B6) Inundation Vis ble on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): Wetland Hydrology Indicators Water Apply Second MLRA 1, 2, 4A, and 4B) Aquatic Invertebrates (B13) Dry Aquatic Invertebrates (B13) Dry Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Sat Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Geo Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Sha Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Rai Inundation Vis ble on Aerial Imagery (B7) Other (Explain in Remarks) Fro Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): Wetland Hydrology Indicators Remarks:	
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) Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Water Table Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: MLRA 1, 2, 4A, and 4B) Aquatic Invertebrates (B13) Dry Aquatic Invertebrates (B13) Dry Aquatic Invertebrates (B13) Dry Saturation Presents (B3) Field Observation Present? Yes No Depth (inches): Wetland Hydrology (Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	dary Indicators (2 or more required)
Saturation (A3) Salt Crust (B11) Dra Water Marks (B1) Aquatic Invertebrates (B13) Dry Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Sat Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Gec Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Sha Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Rai Inundation Vis ble on Aerial Imagery (B7) Other (Explain in Remarks) Fro Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Uper Depth (inches): Wetland Hydrology Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	ater-Stained Leaves (B9) (MLRA 1, 2,
	4A, and 4B)
	ainage Patterns (B10)
Drift Deposits (B3) Oxidized Rhizospheres along Living Roots (C3) Ged Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shate Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FA0 Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Rai Inundation Vis ble on Aerial Imagery (B7) Other (Explain in Remarks) Fro Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrology Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	y-Season Water Table (C2)
Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shate Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FACO	turation Visible on Aerial Imagery (C9)
Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FA0 Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Rai Inundation Vis ble on Aerial Imagery (B7) Other (Explain in Remarks) Fro Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Seturation Present? Yes No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Rai Inundation Vis ble on Aerial Imagery (B7) Other (Explain in Remarks) Fro Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrology Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	allow Aquitard (D3)
Inundation Vis ble on Aerial Imagery (B7) Other (Explain in Remarks) Fro Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrology Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	C-Neutral Test (D5)
Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No ✓ Depth (inches): Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	ised Ant Mounds (D6) (LRR A)
Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	ost-Heave Hummocks (D7)
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	
Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology I (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	
Saturation Present? Yes No Depth (inches): Wetland Hydrology I (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Breading Var
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Present? Yes No
No wetland hydrology present.	
ino wetianu nyurology present.	

		-	-	unty Sampling Date: 2023-06-20
Applicant/Owner: MDT				State: Montana Sampling Point: DP01w
Investigator(s): S Weyant	;	Section,	, Township, Ra	nge: S32 T4N R9E
Landform (hillslope, terrace, etc.): Swale				
Subregion (LRR): E 44	Lat: 46.	05884	12	Long: -110.638074 Datum: NAD 83
Soil Map Unit Name: 155A - Meadowcreek, rarely floo				
Are climatic / hydrologic conditions on the site typical for ti				· · · · · · · · · · · · · · · · · · ·
	-			
Are Vegetation, Soil, or Hydrology				
Are Vegetation, Soil, or Hydrology				eded, explain any answers in Remarks.) ocations, transects, important features, etc.
		Samp	ing point it	ocations, transects, important reatures, etc.
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes		Is	s the Sampled	Area
Wetland Hydrology Present?			vithin a Wetlar	• •
Remarks:				
	d coll			
Sample point located within wetlan	u ceii.			
VEGETATION – Use scientific names of pla	nts.			
Tree Stratum (Plot size: 30 ft r	Absolute % Cover		ant Indicator	Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4	0	= Total	Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft r	4=			Prevalence Index worksheet:
1. Populus balsamifera	15			Total % Cover of: Multiply by:
2. Salix exigua	1		FACW	OBL species 58 x 1 = 58
3				FACW species 11 x 2 = 22
4				FAC species 21 x 3 = 63
5				FACU species <u>0</u> x 4 = <u>0</u>
Herb Stratum (Plot size: 5 ft r	16	= I otal	Cover	UPL species <u>0</u> x 5 = <u>0</u>
1. Scirpus microcarpus	50	✓	OBL	Column Totals: <u>90</u> (A) <u>143</u> (B)
2. Juncus balticus	10		FACW	Prevalence Index = B/A = 1.59
3. Carex pellita	8		OBL	Hydrophytic Vegetation Indicators:
4. Alopecurus arundinaceus	3		FAC	1 - Rapid Test for Hydrophytic Vegetation
5. Equisetum arvense	2		FAC	✓ 2 - Dominance Test is >50%
6. Lotus corniculatus	_ 1		FAC	✓ 3 - Prevalence Index is ≤3.0 ¹
7				4 - Morphological Adaptations ¹ (Provide supporting
8				data in Remarks or on a separate sheet)
9				5 - Wetland Non-Vascular Plants ¹
10				Problematic Hydrophytic Vegetation¹ (Explain)
11				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	74	= Total	Cover	be present, unless distarbed or problematic.
1 2				Hydrophytic Vegetation
	_	= Total	Cover	Present? Yes No No
% Bare Ground in Herb Stratum 26 Remarks:		· i Otal		
		•.•		
Evidence of hydrophytic vegetation includes than 3.	ciudes a p	oositiv	ve domina	nce test and and a prevalence index

US Army Corps of Engineers

SOIL Sampling Point: DP01w

		e to the dep	otn needed to docum			or confirm	the absence	or indicators.)
Depth (inches)	Matrix Color (moist)	%	Color (moist)	x Feature %	Type ¹	Loc ²	Texture	Remarks
0 - 4	10YR 3/2	100					Silty Clay Loam	
4 - 16	10YR 3/2	85	10YR 6/6	15	С	M	Silty Clay Loam	Charcoal in pit
-		_	-					<u> </u>
	-			-				
			-					
			-					
¹ Type: C=Co	ncentration, D=De	pletion, RM	=Reduced Matrix, CS	=Covere	d or Coate	ed Sand Gra	ains. ² Loc	cation: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Appli	cable to all	LRRs, unless other	wise not	ted.)		Indicato	rs for Problematic Hydric Soils ³ :
Histosol	, ,		Sandy Redox (S					n Muck (A10)
	ipedon (A2)		Stripped Matrix		4) (Parent Material (TF2)
Black His	stic (A3) n Sulfide (A4)		Loamy Mucky N Loamy Gleyed I			t MLRA 1)		y Shallow Dark Surface (TF12) er (Explain in Remarks)
	l Below Dark Surfa	ce (A11)	Depleted Matrix		<u>~)</u>		Our	ei (Explain in Remarks)
	rk Surface (A12)	(* * * * *)	✓ Redox Dark Su	` ')		3Indicato	ors of hydrophytic vegetation and
Sandy M	lucky Mineral (S1)		Depleted Dark S	Surface (l	F7)		wetla	nd hydrology must be present,
	leyed Matrix (S4)		Redox Depress	ions (F8)			unles	s disturbed or problematic.
	ayer (if present):							
Type:								
	ches):		<u> </u>				Hydric Soil	Present? Yes No
Remarks:								
HYDROLO	GY drology Indicators							
-			d; check all that appl	()			Secor	ndary Indicators (2 or more required)
	Water (A1)	Ono roquire	Water-Stai		es (B9) (e	xcept		Vater-Stained Leaves (B9) (MLRA 1, 2,
	ter Table (A2)			1, 2, 4A,		моори		4A, and 4B)
Saturation			Salt Crust		,		D	rainage Patterns (B10)
Water M	arks (B1)		Aquatic Inv	ertebrate	es (B13)		D	ry-Season Water Table (C2)
Sedimen	t Deposits (B2)		Hydrogen	Sulfide O	dor (C1)			aturation Visible on Aerial Imagery (C9)
Drift Dep	osits (B3)		Oxidized F	Rhizosphe	eres along	Living Root	ts (C3) 🔽 G	Seomorphic Position (D2)
_	t or Crust (B4)		Presence		•	•		hallow Aquitard (D3)
	osits (B5)		Recent Iro					AC-Neutral Test (D5)
	Soil Cracks (B6)		Stunted or			1) (LRR A)		aised Ant Mounds (D6) (LRR A)
	on Vis ble on Aerial			olain in Re	emarks)		<u> </u>	rost-Heave Hummocks (D7)
Field Observ	Vegetated Concav	ve Surrace	(88)					
Surface Water		Vec	No Depth (inc	chae).				
Water Table			No Depth (inc					
Saturation Pr			No Pepth (inc				and Hydrolog	y Present? Yes No
(includes cap	oillary fringe)							y riesent: res No
Describe Rec	corded Data (strear	m gauge, m	onitoring well, aerial p	photos, p	revious ins	spections), i	f available:	
Remarks:								
The soil	was very m	oist.						
	, ,	•						

Project/Site: Easton Ranch	(City/County	r: Park Cou	unty	Sampling Date: 20	23-06-21
Applicant/Owner: MDT		-			Sampling Point: DP	
Investigator(s): S Weyant						
Landform (hillslope, terrace, etc.): Berm				-	Slope ((%): 5
Subregion (LRR): E 44						
Soil Map Unit Name: 155A - Meadowcreek, rarely floods						
Are climatic / hydrologic conditions on the site typical for this						
Are Vegetation, Soil, or Hydrologys	-					No
Are Vegetation, Soil, or Hydrology n				eded, explain any answe		_ 110
SUMMARY OF FINDINGS – Attach site map				,	,	ures, etc.
Hydrophytic Vegetation Present? Yes No	o v					
Hydric Soil Present? Yes No	o <u> </u>		ne Sampled		🗸	
Wetland Hydrology Present? Yes No	· <u> </u>	with	nin a Wetlan	d? Yes	No	
Remarks:						
3 inches higher elevation than DP02	W.					
VEGETATION – Use scientific names of plant	ts.					
Tree Stratum (Plot size: 30 ft r		Dominant		Dominance Test work	sheet:	
1	% Cover			Number of Dominant Sp That Are OBL, FACW, or		(A)
2				Total Number of Domin	ant	
3				Species Across All Stra	4	(B)
4				Percent of Dominant Sp	pecies _	
Sapling/Shrub Stratum (Plot size: 15 ft r)		= Total Co	over	That Are OBL, FACW, o	or FAC: 0	(A/B)
1				Prevalence Index work		
2.				Total % Cover of: OBL species 0		<u>/:</u>
3					x 1 = 0 $x 2 = 0$	
4					x 2 = 0 x 3 = 9	
5	·				x 4 = 0	
Herb Stratum (Plot size: 5 ft r)		= Total Co	over	UPL species 82	x 5 = 410	
1. Bromus inermis	80	~	UPL	·	(A) 419	(B)
2. Thlaspi arvense	2	_	UPL	Prevalence Index	- D/A - 493	
3. Poa pratensis	2		FAC	Hydrophytic Vegetation		
4. Equisetum arvense	1		FAC	1 - Rapid Test for H		n
5				2 - Dominance Tes	t is >50%	
6	·			3 - Prevalence Inde	ex is ≤3.0 ¹	
7				4 - Morphological A		
8				data in Remarks	s or on a separate she	eet)
9				Problematic Hydron		kolain)
10 11				¹ Indicators of hydric soil		
	0.50/	= Total Co	ver	be present, unless distu	irbed or problematic.	3,
Woody Vine Stratum (Plot size:)		10141 00	• • • • • • • • • • • • • • • • • • • •			
1	·			Hydrophytic		
2				Vegetation Present? Yes	s No	
% Bare Ground in Herb Stratum 15	-	= Total Co	ver	100		_
Remarks:						
No hydrophytic vegetation present a	t samp	le site.				

SOIL Sampling Point: DP02u

Profile Description: (Describe to the depth i	ieeded to document the indicator of co	nfirm the absence of indicators.)	
Depth Matrix	Redox Features		
	Color (moist) % Type ¹ Lo	· · · · · · · · · · · · · · · · · · ·	
<u>0 - 16</u> <u>10YR 3/2</u> <u>100</u>		Silt Loam	
-			
-			
·			
-			
¹ Type: C=Concentration, D=Depletion, RM=Re	duced Matrix, CS=Covered or Coated Sa	nd Grains. ² Location: PL=Pore Lining, M=I	Matrix.
Hydric Soil Indicators: (Applicable to all LRI		Indicators for Problematic Hydric	
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)	
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)	
Black Histic (A3)	Loamy Mucky Mineral (F1) (except ML	RA 1) Very Shallow Dark Surface (TF	12)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)	
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	3	
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation	
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	Depleted Dark Surface (F7) Redox Depressions (F8)	wetland hydrology must be prese unless disturbed or problematic.	ent,
Restrictive Layer (if present):	Redux Depressions (Fo)	diffess disturbed of problematic.	
Type:			
Depth (inches):	_	Hydric Soil Present? Yes	No 🗸
Remarks:	-	Tryunc 3011 Tesent: Tes	
iveniairo.			
No hydric soil indicators obse	rved.		
HYDROLOGY			
HYDROLOGY Wetland Hydrology Indicators:			
	neck all that apply)	Secondary Indicators (2 or more r	required)
Wetland Hydrology Indicators:	neck all that apply) Water-Stained Leaves (B9) (exce p		
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; ch			
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; character (A1)	Water-Stained Leaves (B9) (excep	t Water-Stained Leaves (B9) (I	
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; character (A1) High Water Table (A2)	Water-Stained Leaves (B9) (exception of the MLRA 1, 2, 4A, and 4B)	t Water-Stained Leaves (B9) (I 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2	WLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; cf Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stained Leaves (B9) (exception of the MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	t Water-Stained Leaves (B9) (I 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2 Saturation Visible on Aerial Ir	WLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check of the surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stained Leaves (B9) (exception of the proof of the	water-Stained Leaves (B9) (I 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2 Saturation Visible on Aerial Ir GRoots (C3) Geomorphic Position (D2)	WLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; cf	Water-Stained Leaves (B9) (exception of the MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)	water-Stained Leaves (B9) (I 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2 Saturation Visible on Aerial Ir Geomorphic Position (D2) Shallow Aquitard (D3)	WLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; cf	Water-Stained Leaves (B9) (exception of the content	Water-Stained Leaves (B9) (I 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2 Saturation Visible on Aerial Ir GRoots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5)	MLRA 1, 2,) nagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; cf	Water-Stained Leaves (B9) (exception MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soon Stunted or Stressed Plants (D1) (Lanceton MLRA)	Water-Stained Leaves (B9) (I 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2 Saturation Visible on Aerial Ir Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LR	MLRA 1, 2,) nagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; cf	Water-Stained Leaves (B9) (exception of the content	Water-Stained Leaves (B9) (I 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2 Saturation Visible on Aerial Ir GRoots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5)	MLRA 1, 2,) nagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; cf	Water-Stained Leaves (B9) (exception MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soon Stunted or Stressed Plants (D1) (Lanceton MLRA)	Water-Stained Leaves (B9) (I 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2 Saturation Visible on Aerial Ir Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LR	MLRA 1, 2,) nagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; cf	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (L. Other (Explain in Remarks)	Water-Stained Leaves (B9) (I 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2 Saturation Visible on Aerial Ir Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LR	MLRA 1, 2,) nagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; cf	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (L Other (Explain in Remarks) ✓ Depth (inches): ■	Water-Stained Leaves (B9) (I 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2 Saturation Visible on Aerial Ir Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LR	MLRA 1, 2,) nagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; cf	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (L Other (Explain in Remarks)	Water-Stained Leaves (B9) (I 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2 Saturation Visible on Aerial Ir Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LR Frost-Heave Hummocks (D7)	MLRA 1, 2,) nagery (C9) R A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; cf	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (L Other (Explain in Remarks) ✓ Depth (inches): ■	Water-Stained Leaves (B9) (I 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2 Saturation Visible on Aerial Ir Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LR	MLRA 1, 2,) nagery (C9) R A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; cf	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (L Other (Explain in Remarks)	Water-Stained Leaves (B9) (I 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Ir GROOTS (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LR Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes	MLRA 1, 2,) nagery (C9) R A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; cf	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (L Other (Explain in Remarks)	Water-Stained Leaves (B9) (I 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Ir GROOTS (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LR Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes	MLRA 1, 2,) nagery (C9) R A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; cf	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So Stunted or Stressed Plants (D1) (L Other (Explain in Remarks)	Water-Stained Leaves (B9) (I 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Ir GROOTS (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LR Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes	MLRA 1, 2,) nagery (C9) R A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; cf	Water-Stained Leaves (B9) (exception of the provided records of the provided r	Water-Stained Leaves (B9) (I 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Ir GROOTS (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LR Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes	MLRA 1, 2,) nagery (C9) R A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; cf	Water-Stained Leaves (B9) (exception of the provided records of the provided r	Water-Stained Leaves (B9) (I 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Ir GROOTS (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LR Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes	MLRA 1, 2,) nagery (C9) R A)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; cf	Water-Stained Leaves (B9) (exception of the provided records of the provided r	Water-Stained Leaves (B9) (I 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Ir GROOTS (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Is (C6) FAC-Neutral Test (D5) RR A) Raised Ant Mounds (D6) (LR Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes	MLRA 1, 2,) nagery (C9) R A)

Project/Site: Easton Ranch	(City/County	: Park Co	unty	Sampling Date:	2023-06-20
Applicant/Owner: MDT				State: Montana	Sampling Point:	DP02w
Investigator(s): J Trilling, S Weyant, K Kane		Section, To	wnship, Rar	nge: S32 T4N R9E		
Landform (hillslope, terrace, etc.): Swale		Local relief	(concave, o	convex, none): Concave	e Slo	pe (%): 5
Subregion (LRR): E 44				. ,		
Soil Map Unit Name: 155A - Meadowcreek, rarely floode						
Are climatic / hydrologic conditions on the site typical for this	time of vea	ır? Yes	✓ No	(If no. explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology si	-					No
Are Vegetation, Soil, or Hydrology na				eded, explain any answe		
SUMMARY OF FINDINGS - Attach site map s	showing	samplin	g point lo	ocations, transects	, important fe	eatures, etc.
Hydrophytic Vegetation Present? Yes No)			-		
			ie Sampled in a Wetlan		No	
Wetland Hydrology Present? Yes No	<u> </u>	With	iii a vvetiaii	iu: 165		-
Remarks:	ooll					
Sample point located within wetland	ceii.					
VEGETATION – Use scientific names of plant						
Tree Stratum (Plot size: 30 ft r	Absolute % Cover			Dominance Test work		
1				Number of Dominant Sp That Are OBL, FACW, of		(A)
2				Total Number of Domin		
3				Species Across All Stra		(B)
4				Percent of Dominant Sp	nacias	
0 15 (0) 1 0) 1 (D) 1 1 1E ft r	0	= Total Co	ver	That Are OBL, FACW, of		0 (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft r)			FACW	Prevalence Index worl	ksheet:	
1. Alnus incana			FACW	Total % Cover of:	<u>Multipl</u>	y by:
2. Salix bebbiana 3. Salix lutea			OBL	OBL species 9	x 1 = 9	
			OBL	FACW species 51	x 2 = 102	2
4				FAC species 3	x 3 = 9	
5		T-4-1 O-			x 4 = <u>4</u>	
Herb Stratum (Plot size: 5 ft r	0	= Total Co	over	UPL species 1	x 5 = 5	
1. Juncus balticus	50	~	FACW	Column Totals: 65	(A) <u>129</u>	(B)
2. Carex nebrascensis	5		OBL	Prevalence Index	= B/A = 1.98	
3. Carex pellita	3		OBL	Hydrophytic Vegetation		
4. Poa pratensis	2		FAC	✓ 1 - Rapid Test for H		ation
5. Mentha arvensis	1		FACW	✓ 2 - Dominance Tes		
6. Taraxacum officinale	<u>1</u>		FACU	✓ 3 - Prevalence Inde	ex is ≤3.0 ¹	
7. Equisetum arvense	1		FAC	4 - Morphological A	daptations ¹ (Prov	ride supporting
8. Lycopus asper	1		OBL		s or on a separate	sheet)
9. Potentilla recta	1		UPL	5 - Wetland Non-Va		
10				Problematic Hydrop		
11				¹ Indicators of hydric soil be present, unless distu		
Woody Vine Stratum (Plot size:)	65	= Total Cov	ver			
1				Herden wheet		
2.				Hydrophytic Vegetation		
	_	= Total Cov	ver	Present? Yes	s No	
% Bare Ground in Herb Stratum 35						
Remarks:						
Evidence of hydrophytic vegetation inclu	udes a p	ositive	domina	nce test, prevale	nce Index b	elow 3,
and positive rapid test.						

SOIL Sampling Point: DP02w

Profile Desc Depth	cription: (Describ Matrix		pth needed to do	cument the edox Feature		or confirm	the absend	ce of indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 4	10YR 3/2	100					Silt Loan	 1
4 - 16	2.5Y 4/2	85	10YR 4/6	15	С	M	Sandy Loan	- -
4-10	2.51 4/2		10111 4/0				Odnay Loan	<u> </u>
-								
	_						-	
	-		-					<u> </u>
17			A. Dadward Matrix				21	
			M=Reduced Matrix, II LRRs, unless ot			ed Sand Gr		ocation: PL=Pore Lining, M=Matrix. stors for Problematic Hydric Soils ³ :
-		ilcable to a			ieu.)			•
Histosol	pipedon (A2)		Sandy Redo Stripped Ma	. ,			· · · · · · · · · · · · · · · · · · ·	cm Muck (A10) ed Parent Material (TF2)
	istic (A3)		Loamy Much		1) (excer	t MLRA 1)		ery Shallow Dark Surface (TF12)
	en Sulfide (A4)		Loamy Gley	•		,	· · · · · · · · · · · · · · · · · · ·	ther (Explain in Remarks)
	d Below Dark Surf	ace (A11)	✓ Depleted Ma		,			,
Thick D	ark Surface (A12)		Redox Dark	Surface (F6)		³ Indica	ators of hydrophytic vegetation and
-	Mucky Mineral (S1)		Depleted Da					tland hydrology must be present,
	Gleyed Matrix (S4)		Redox Depr	essions (F8)			unl	ess disturbed or problematic.
	Layer (if present)							
Type:								
Depth (in	ches):						Hydric So	oil Present? Yes No No
HYDROLO	GY							
	drology Indicator	's:						
-			ed; check all that a	(ylqq			Sec	condary Indicators (2 or more required)
✓ Surface				Stained Leav	/es (B9) (except		Water-Stained Leaves (B9) (MLRA 1, 2,
	ater Table (A2)			RA 1, 2, 4A,				4A, and 4B)
✓ Saturati	, ,		Salt Cr		,			Drainage Patterns (B10)
Water M	larks (B1)		· · · · · · · · · · · · · · · · · · ·	Invertebrat	es (B13)			Dry-Season Water Table (C2)
	nt Deposits (B2)			en Sulfide C			_	Saturation Visible on Aerial Imagery (C9)
	posits (B3)		Oxidize	ed Rhizosphe	eres along	Living Roc	ots (C3) 🔽	Geomorphic Position (D2)
Algal Ma	at or Crust (B4)		Presen	ce of Reduc	ed Iron (C	(4)		Shallow Aquitard (D3)
Iron Dep	oosits (B5)		Recent	Iron Reduct	ion in Tille	ed Soils (C6	S) <u>~</u>	FAC-Neutral Test (D5)
Surface	Soil Cracks (B6)		Stunted	d or Stressed	d Plants ([01) (LRR A)	Raised Ant Mounds (D6) (LRR A)
Inundati	on Vis ble on Aeria	al Imagery (B7) Other (Explain in R	emarks)			Frost-Heave Hummocks (D7)
Sparsel	y Vegetated Conc	ave Surface	(B8)					
Field Obser	vations:	-						
Surface Wat	er Present?	Yes	No Depth	(inches): 6				
Water Table	Present?		No Depth					
Saturation P	resent? pillary fringe)	Yes	No Depth	(inches): <u>7</u>		Wetla	and Hydrolo	ogy Present? Yes No
Describe Re	corded Data (stream	am gauge, n	nonitoring well, aer	ial photos, p	revious in	spections),	if available:	
Remarks:								
					_	. .		
		-						s, a high water table at a
depth of	f 9 inches, a	and surf	ace water p	resent	less th	nan 3 fe	eet awa	y from sample point.

Project/Site: _Easton Ranch	(City/County	յ։ Park Coւ	unty Sampling Date: 2023-06-20
Applicant/Owner: MDT		-	•	Market
Investigator(s): S Weyant	;	Section, To	ownship, Rar	nge: S32 T4N R9E
Landform (hillslope, terrace, etc.): Terrace		Local relie	f (concave, c	convex, none): Convex Slope (%): 5
, ,			•	Long: -110.638125 Datum: NAD 83
Soil Map Unit Name: 155A - Meadowcreek, rarely flood				
Are climatic / hydrologic conditions on the site typical for th				
Are Vegetation, Soil, or Hydrology	-			
Are Vegetation, Soil, or Hydrology				eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map				
Hydrophytic Vegetation Present? Yes N	10 V			
Hydric Soil Present? Yes N	No		ne Sampled	
Wetland Hydrology Present? Yes N	No	with	nin a Wetlan	d? Yes No
Remarks:				
DP03u is a foot higher in elevation than DP03w. DP03 has soils, it lacks sustained wetland hydrology and do		•		· ·
VEGETATION – Use scientific names of plan	nts.			
20.6	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r)	% Cover		Status	Number of Dominant Species
1			· <u></u>	That Are OBL, FACW, or FAC: 0 (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4		= Total Co		Percent of Dominant Species That Are OBL_FACW_or FAC: 0.00 (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft r)		- 10181 00	JVC1	
1				Prevalence Index worksheet: Total % Cover of: Multiply by:
2				OBL species 0 x 1 = 0
3			<u> </u>	FACW species 2 x 2 = 4
4			·	FAC species 1 x 3 = 3
5		-		FACU species 52 x 4 = 208
Herb Stratum (Plot size: 5 ft r)	0	= Total Co	over	UPL species 20 x 5 = 100
1. Dactylis glomerata	50	~	FACU	Column Totals: <u>75</u> (A) <u>315</u> (B)
2. Bromus inermis	20	~	UPL	Prevalence Index = B/A = 4.20
3. Juncus balticus	2		FACW	Hydrophytic Vegetation Indicators:
4. Schedonorus pratensis	2		FACU	1 - Rapid Test for Hydrophytic Vegetation
5. Equisetum arvense	_ 1		FAC	2 - Dominance Test is >50%
6			<u> </u>	3 - Prevalence Index is ≤3.0 ¹
7				4 - Morphological Adaptations ¹ (Provide supporting
8				data in Remarks or on a separate sheet)
9				5 - Wetland Non-Vascular Plants ¹
10			·	Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must
11	7-	T-4-1 O-		be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	7.5	= Total Co	ver	
1				Hydrophytic
2				Vegetation
	_	= Total Co	ver	Present? Yes No
% Bare Ground in Herb Stratum 25 Remarks:				
	_			
No hydrophytic vegetation present	at samp	ie site.		

SOIL Sampling Point: DP03u

Profile Desc	rintion: (Describe	to the de	pth needed to docur	nent the	indicator	or confirm	the absence	of indicators)
Depth	Matrix	to the de		x Feature		or commi	i tile absence	of malcators.
(inches)	Color (moist)	%	Color (moist)	% realure	Type ¹	Loc ²	Texture	Remarks
0 - 7	10YR 3/2	100					Silt Loam	
7 - 18	10YR 4/2	90	10YR 5/6	10	C	M	Loam	Along sandy pockets
	1011(4/2	_ 30	1011370	10		141	Loain	Along sandy pockets
			· -					
-								
				-	<u> </u>			
	-		· -	-	<u> </u>			
					- ———			
¹ Type: C=Co	oncentration, D=De	oletion, RN	1=Reduced Matrix, CS	S=Covere	ed or Coate	ed Sand Gr	rains. ² Lo	cation: PL=Pore Lining, M=Matrix.
Hydric Soil	ndicators: (Applic	cable to al	I LRRs, unless other	rwise no	ted.)		Indicate	ors for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Redox (S5)			2 c	m Muck (A10)
Histic Ep	pipedon (A2)		Stripped Matrix	(S6)				d Parent Material (TF2)
Black Hi	stic (A3)		Loamy Mucky N	Mineral (F	1) (except	MLRA 1)	Ver	ry Shallow Dark Surface (TF12)
	n Sulfide (A4)		Loamy Gleyed		2)		Oth	er (Explain in Remarks)
	d Below Dark Surfac	ce (A11)	✓ Depleted Matrix				2	
	ark Surface (A12)		Redox Dark Su	•	,			ors of hydrophytic vegetation and
-	lucky Mineral (S1)		Depleted Dark					and hydrology must be present,
	leyed Matrix (S4) ayer (if present):		Redox Depress	sions (F8)			unie	ss disturbed or problematic.
	-ayer (ii present).							
Type:								
Depth (inc	cnes):						Hydric Soi	I Present? Yes No
Remarks:								
Although	n this sample	e point	has hydric so	oils, it	lacks v	wetland	d hydrolo	ogy and hydrophytic
•	•	, p 0 c		,			,	9, 4.1.4.1., 4.1.0, 1.1., 1.1.0
vegetati	OH.							
HYDROLO	GY							
	drology Indicators							
_			ed; check all that appl	v)			Saco	ndary Indicators (2 or more required)
	-	one require		-	(00 (DO) (e	veent		
· · · · · · · · · · · · · · · · · · ·	Water (A1)		Water-Sta			xcept	'	Water-Stained Leaves (B9) (MLRA 1, 2,
	iter Table (A2)			1, 2, 4A,	and 4B)		-	4A, and 4B)
Saturation			Salt Crust		(D40)			Orainage Patterns (B10)
· · · · · · · · · · · · · · · · · · ·	arks (B1)		Aquatic In		, ,			Ory-Season Water Table (C2)
	nt Deposits (B2)		Hydrogen			5		Saturation Visible on Aerial Imagery (C9)
	posits (B3)				_	_		Geomorphic Position (D2)
_	it or Crust (B4)		Presence					Shallow Aquitard (D3)
	osits (B5)		Recent Iro					FAC-Neutral Test (D5)
	Soil Cracks (B6)		Stunted or			1) (LRR A		Raised Ant Mounds (D6) (LRR A)
	on Vis ble on Aerial			olain in R	emarks)		F	Frost-Heave Hummocks (D7)
	Vegetated Concav	e Surface	(B8)					
Field Obser			. 4					
Surface Water			No Depth (in					
Water Table	Present?	res	No Depth (in	ches):				
Saturation P	resent?	/es	No Depth (in	ches):		Wetl	and Hydrolog	yy Present? Yes No
(includes cap	oillary fringe)	2 001100	nonitoring well, aerial	nhotos =	rovious iss	nootions'	if available:	
Describe Rec	corded Data (Stream	i gauge, ii	ionitoning well, aerial	priotos, p	revious iris	spections),	ii available.	
Remarks:								
No evide	ence of wetla	and hy	drology obse	rved.				
		,	<u> </u>					

Project/Site: Easton Ranch	(City/Count	v· Park Cou	unty Sampling Date: 2023-06-21
		-	-	State: Montana Sampling Point: DP03w
Investigator(s): S Weyant				
Landform (hillslope, terrace, etc.): Floodplain				
			•	Long: -110.638315 Datum: NAD 83
Soil Map Unit Name: 155A - Meadowcreek, rarely floode				<u> </u>
Are climatic / hydrologic conditions on the site typical for this	-			· · · · · · · · · · · · · · · · · · ·
Are Vegetation, Soil, or Hydrologys	gnificantly	disturbed?	Are "	Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrologyn	aturally pro	blematic?	(If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	samplii	ng point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No)			_
Hydric Soil Present? Yes No	·		he Sampled hin a Wetlan	
Wetland Hydrology Present? Yes No	D	Wit	nin a wetian	id? fes No
Remarks:				
Sample point located within wetland	cell 3.			
VEGETATION – Use scientific names of plant	ts.			
20 ft r	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r) 1	% Cover			Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
2				Total Number of Dominant
3				Species Across All Strata: 3 (B)
4				Percent of Dominant Species
Carling/Church Charters (Dlat sines 15 ft r	0	= Total C	over	That Are OBL, FACW, or FAC: 100.00 (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft r) 1. Salix bebbiana	35	~	FACW	Prevalence Index worksheet:
2. Salix lasiandra	8		FACW	Total % Cover of: Multiply by:
	· —			OBL species <u>7</u> x 1 = <u>7</u>
3				FACW species 66 x 2 = 132
4 5				FAC species 17 x 3 = 51
·	43	= Total C	over	FACU species <u>5</u> x 4 = <u>20</u>
Herb Stratum (Plot size: 5 ft r)				UPL species $3 \times 5 = 15$
1. Juncus balticus	20		FACW	Column Totals: <u>98</u> (A) <u>225</u> (B)
2. Lotus corniculatus	15		FAC	Prevalence Index = B/A = 2.30
3. Carex nebrascensis	5		OBL	Hydrophytic Vegetation Indicators:
4. Taraxacum officinale	5	-	FACU	1 - Rapid Test for Hydrophytic Vegetation
5. Juncus ensifolius	3		FACW	✓ 2 - Dominance Test is >50%
6. Carex pellita 7 Medicago sativa	2 2	-	UPL	✓ 3 - Prevalence Index is ≤3.0 ¹
8. Equisetum arvense	1		FAC	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
g Trifolium arvense	<u>†</u>		UPL	5 - Wetland Non-Vascular Plants ¹
10. Cirsium arvense	1		FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
11	·			¹Indicators of hydric soil and wetland hydrology must
11.	55	= Total Co	over	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		_ 10ta100	7001	
1			= 	Hydrophytic
2				Vegetation Present? Yes No
N. Borro Construction II. J. Ct. 1. AF	0	= Total Co	over	Present? Yes No
% Bare Ground in Herb Stratum 45 Remarks:				
Evidence of hydrophytic vegetation i	nclude	s a pos	sitive do	ominance test.

SOIL Sampling Point: DP03w

Profile Desc	cription: (Describ	e to the de	pth needed to docu	ment the	indicator	or confir	m the absence	of indicators.)
Depth	Matrix		Redo	x Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-7	10YR 3/2	100	· 				Silty Clay Loam	
7 - 18	2.5Y 4/2	80	7.5YR 5/8	20	<u>C</u>	М	Sandy Clay Loam	Gravel and cobbles 14
				_				
-								
_		-						
						•	·	
					-		-	
	_				<u> </u>	-		
1								
			I=Reduced Matrix, C			ed Sand G		cation: PL=Pore Lining, M=Matrix.
-		icable to al	I LRRs, unless othe		ea.)			ors for Problematic Hydric Soils ³ :
Histosol	pipedon (A2)		Sandy Redox (Stripped Matrix					n Muck (A10) I Parent Material (TF2)
l —	istic (A3)		Loamy Mucky		1) (except	MLRA 1	· · · · · · · · · · · · · · · · · · ·	y Shallow Dark Surface (TF12)
	en Sulfide (A4)		Loamy Gleyed					er (Explain in Remarks)
	d Below Dark Surfa	ace (A11)	<u>✓</u> Depleted Matri		,			, ,
	ark Surface (A12)		Redox Dark Su	ırface (F6))		³ Indicato	ors of hydrophytic vegetation and
-	Mucky Mineral (S1)		Depleted Dark		=7)			nd hydrology must be present,
	Bleyed Matrix (S4)		Redox Depress	sions (F8)			unles	s disturbed or problematic.
_	Layer (if present):	:						
Type:								./
	ches):						Hydric Soil	Present? Yes No
Remarks:								
Promine	nt redoximo	orphic c	oncentration	s com	mon w	ithin t	he deplet	ed matrix.
HYDROLO	GY							
Wetland Hy	drology Indicator	s:						
Primary India	cators (minimum of	f one require	ed; check all that app	ly)			Secoi	ndary Indicators (2 or more required)
Surface	Water (A1)		Water-Sta	ined Leav	es (B9) (e	xcept	v	Vater-Stained Leaves (B9) (MLRA 1, 2,
	ater Table (A2)			1, 2, 4A,	, , ,	•		4A, and 4B)
✓ Saturation			Salt Crust		,		D	Prainage Patterns (B10)
Water M	larks (B1)		Aquatic In	vertebrate	es (B13)		<u> </u>	Pry-Season Water Table (C2)
	nt Deposits (B2)		Hydrogen					saturation Visible on Aerial Imagery (C9)
	posits (B3)		Oxidized I	Rhizosphe	eres along	Living Ro		Geomorphic Position (D2)
Algal Ma	at or Crust (B4)		Presence	of Reduce	ed Iron (C4	1)		hallow Aquitard (D3)
_	posits (B5)		Recent Iro					AC-Neutral Test (D5)
Surface	Soil Cracks (B6)		Stunted o	r Stressec	l Plants (D	1) (LRR /	A) R	taised Ant Mounds (D6) (LRR A)
Inundati	on Vis ble on Aeria	al Imagery (E	37) Other (Ex	plain in Re	emarks)		F	rost-Heave Hummocks (D7)
Sparsely	y Vegetated Conca	ve Surface	(B8)					
Field Obser	vations:							
Surface Wat	er Present?	Yes	No Depth (in	ches):				
Water Table			No Pepth (in					
Saturation P	resent?		No Depth (in				land Hydrolog	y Present? Yes V No No
(includes car				•				
Describe Re	corded Data (strea	ım gauge, m	nonitoring well, aerial	pnotos, pi	revious ins	pections)	, if available:	
Damanta								
Remarks:								
Evidence	e of wetland	d hydro	logy visible ir	n soil s	aturat	ion to	7 inches.	Very moist soil above the
saturate	d soils.							
33.3.3.								
1								

Project/Site: Easton Ranch	(Citv/County	Park Cou	unty Sampling Date: 2023-06-2	20
				State: Montana Sampling Point: DP04u	
• •				nge: S32 T4N R9E	
Landform (hillslope, terrace, etc.): Berm					
				Long: -110.63958 Datum: NAD 83	
Soil Map Unit Name: 155A - Meadowcreek, rarely floods					
•					
Are climatic / hydrologic conditions on the site typical for this	-				
Are Vegetation, Soil, or Hydrologys				Normal Circumstances" present? Yes No	
Are Vegetation, Soil, or Hydrologyn				eded, explain any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map		samplin	g point lo	ocations, transects, important features, et	C.
Hydrophytic Vegetation Present? Yes No.		le th	e Sampled	Area	
Hydric Soil Present? Yes N			in a Wetlan	•	
Wetland Hydrology Present? Yes No Remarks:					
Upland sample point adjacent to DPC)4w and	d wetla	nd cell	4.	
VEGETATION – Use scientific names of plan	ts.				
30 ft r	Absolute	Dominant		Dominance Test worksheet:	
Tree Stratum (Plot size: 30 ft r) 1	% Cover			Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)	
2				Total Number of Dominant	
3				Species Across All Strata: 2 (B)	
4				Percent of Dominant Species	
Sapling/Shrub Stratum (Plot size: 15 ft r		= Total Co	ver	That Are OBL, FACW, or FAC: 50 (A/B)
1				Prevalence Index worksheet:	
2.				Total % Cover of: Multiply by:	
3.				OBL species $0 \times 1 = 0$	
4.				FACW species $\frac{1}{23}$ $\times 2 = \frac{2}{60}$	
5				FAC species 23 x 3 = 69	
- 6		= Total Co	ver	FACU species $\frac{15}{46}$ $x 4 = \frac{60}{230}$ UPL species $\frac{46}{230}$	
Herb Stratum (Plot size: 5 ft r	40		LIBI	UPL species 46 $x = 230$ Column Totals: 85 (A) 361 (B)	
Bromus inermis Elymus trachycaulus					
3. Dactylis glomerata	20 15		FACU	Prevalence Index = B/A = 4.25	
Thlaspi arvense	6		UPL	Hydrophytic Vegetation Indicators:	
5. Poa pratensis	3		FAC	1 - Rapid Test for Hydrophytic Vegetation	
6. Equisetum hyemale	1		FACW	2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 ¹	
7				3 - Prevalence index is ≤3.0 4 - Morphological Adaptations¹ (Provide supporting)	~
8.				data in Remarks or on a separate sheet)	y
9.				5 - Wetland Non-Vascular Plants ¹	
10				Problematic Hydrophytic Vegetation ¹ (Explain)	
11				¹ Indicators of hydric soil and wetland hydrology must	
	0.50/	= Total Co	ver	be present, unless disturbed or problematic.	
Woody Vine Stratum (Plot size:)					
1				Hydrophytic Vegetation	
2				Present? Yes No V	
% Bare Ground in Herb Stratum 15	-	= Total Co	vei		
Remarks:					
No hydrophytic vegetation present a	t samp	le site.			

SOIL Sampling Point: DP04u

Profile Desc	cription: (Descri	be to the depth	needed to docu	ment the i	ndicator	or confirn	n the absence	e of indicators.)
Depth	Matrix			ox Features	4			
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 13	7.5YR 3/2	100					Loam	
-								
	-							
-								
¹Type: C=Co	oncentration, D=D	epletion RM=R	educed Matrix C	S=Covered	or Coate	d Sand G	rains ² l c	ocation: PL=Pore Lining, M=Matrix.
	Indicators: (App					u cunu ci		ors for Problematic Hydric Soils ³ :
Histosol			_ Sandy Redox		,			cm Muck (A10)
	oipedon (A2)	_	_ Stripped Matrix					ed Parent Material (TF2)
-	stic (A3)	_	_ Loamy Mucky	Mineral (F1	l) (except	MLRA 1)	Ve	ry Shallow Dark Surface (TF12)
Hydroge	en Sulfide (A4)	_	_ Loamy Gleyed	Matrix (F2)		Oth	her (Explain in Remarks)
	d Below Dark Sur	, , _	_ Depleted Matri				2	
	ark Surface (A12)		_ Redox Dark Si	, ,				tors of hydrophytic vegetation and
	Mucky Mineral (S1		_ Depleted Dark	•	7)			and hydrology must be present, ess disturbed or problematic.
	Gleyed Matrix (S4) Layer (if present)		_ Redox Depres	SIONS (FO)			unie	ess disturbed or problematic.
	obbles and gra							
, , <u> </u>	ches): 13						Usalvia Cai	il Dracent? Vec No V
	cries). <u>10</u>						nyaric Soi	il Present? Yes No
Remarks:								
No hydri	c soil indic	ators obse	erved.					
HYDROLO	GY							
Wetland Hy	drology Indicato	rs:						
Primary India	cators (minimum c	of one required;	check all that app	ly)			Seco	ondary Indicators (2 or more required)
Surface	Water (A1)		Water-Sta	ained Leave	es (B9) (e :	xcept	\	Water-Stained Leaves (B9) (MLRA 1, 2,
High Wa	ater Table (A2)		MLRA	1, 2, 4A, a	ind 4B)			4A, and 4B)
Saturation	on (A3)		Salt Crus	t (B11)			[Drainage Patterns (B10)
Water M	larks (B1)		Aquatic Ir	nvertebrate	s (B13)		[Dry-Season Water Table (C2)
Sedimer	nt Deposits (B2)		Hydrogen	Sulfide Oc	dor (C1)		\$	Saturation Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)		Oxidized	Rhizosphei	res along	Living Roo	ots (C3) (Geomorphic Position (D2)
Algal Ma	at or Crust (B4)		Presence	of Reduce	d Iron (C4	!)		Shallow Aquitard (D3)
Iron Dep	oosits (B5)		Recent Ire	on Reduction	on in Tilled	d Soils (Ce	6) f	FAC-Neutral Test (D5)
Surface	Soil Cracks (B6)		Stunted o	r Stressed	Plants (D	1) (LRR A	() F	Raised Ant Mounds (D6) (LRR A)
Inundati	on Vis ble on Aeri	al Imagery (B7)	Other (Ex	plain in Re	marks)		۱	Frost-Heave Hummocks (D7)
Sparsely	y Vegetated Conc	ave Surface (B8	3)					
Field Obser	vations:							
Surface Wat	er Present?		Depth (ir					
Water Table	Present?	Yes No	Depth (ir	nches):		_		
Saturation P	resent?	Yes No	Depth (ir	nches):		Wetl	land Hydrolog	gy Present? Yes No
(includes car	oillary fringe) corded Data (stre	am daugo mon	toring wall parial	nhotos ne	avious inc	nections)	if available:	
Describe Ne	corded Data (Stre	am gauge, mom	itoring well, aeriai	priotos, pre	evious ilis	pections),	ii availabie.	
Domestra								
Remarks:								
No wetla	and hydrolo	ogy preser	nt.					
Ī								

Project/Site: Easton Ranch	C	City/County	: Park Co	unty Sampling Date: 2023-06-20
Applicant/Owner: MDT	_	-		State: Montana Sampling Point: DP04w
Investigator(s): S Weyant	S			
Landform (hillslope, terrace, etc.): Swale				
				Long: -110.639452 Datum: NAD 83
Soil Map Unit Name: 155A - Meadowcreek, rarely floode				
Are climatic / hydrologic conditions on the site typical for this	s time of yea	r? Yes	✓ No_	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysi				
Are Vegetation, Soil, or Hydrologyn				
SUMMARY OF FINDINGS - Attach site map	showing	samplin	g point le	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	0			
	0		ne Sampled nin a Wetlan	
Wetland Hydrology Present? Yes No	0		in a wena	103 <u>103 103 103 103 103 103 103 103 103 103 </u>
Remarks:				
Sample point located within wetland	cell.			
VEGETATION – Use scientific names of plant	ts.			
Tree Stratum (Plot size: 30 ft r	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
2.				Total Number of Dominant
3				Species Across All Strata: 3 (B)
4				Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15 ft r	0	= Total Co	ver	That Are OBL, FACW, or FAC: 100.00 (A/B)
1. Salix lasiandra	1	~	FACW	Prevalence Index worksheet:
2.				Total % Cover of: Multiply by:
3				OBL species $\frac{70}{1}$ $x = \frac{70}{2}$
4				FACW species $\frac{1}{4}$ $x = 2$ FAC species $\frac{1}{4}$ $x = 12$
5				FAC species $\frac{4}{0}$ $x 3 = \frac{12}{0}$ FACU species 0 $x 4 = 0$
	1	= Total Co	over	UPL species 1 x 5 = 5
Herb Stratum (Plot size: 5 ft r) 1. Carex utriculata	45	~	OBL	Column Totals: <u>76</u> (A) <u>89</u> (B)
2. Scirpus microcarpus	15	<u> </u>	OBL	
3. Carex nebrascensis	5		OBL	Prevalence Index = $B/A = 1.17$
4. Carex aquatilis	5		OBL	Hydrophytic Vegetation Indicators: ✓ 1 - Rapid Test for Hydrophytic Vegetation
5. Leymus cinereus	2		FAC	✓ 2 - Dominance Test is >50%
6. Elymus repens	1		FAC	✓ 3 - Prevalence Index is ≤3.0 ¹
7. Poa pratensis	1		FAC	4 - Morphological Adaptations ¹ (Provide supporting
8. Bromus inermis	1		UPL	data in Remarks or on a separate sheet)
9				5 - Wetland Non-Vascular Plants ¹
10				Problematic Hydrophytic Vegetation ¹ (Explain)
11	75			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	<u>75 </u>	= Total Cov	ver	
1				Hydrophytic
2.				Vegetation
	_	= Total Cov	ver	Present? Yes No No
% Bare Ground in Herb Stratum 25 Remarks:				
		ooiti	d o 100 !:	man toot municipalismes landary halary 2
Evidence of hydrophytic vegetation incl	uaes a p	ositive	aomina	nce test, prevalence index below 3,
and rapid test.				

SOIL Sampling Point: DP04w

		to the de	pth needed to docu			or confirm	m the absence of	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Color (moist)	ox Feature %	es Type ¹	Loc ²	Texture	Remarks
0 - 10	7.5YR 3/2	100	COIOI (IIIOISI)		1 ypc	LUC	Loam	Nemano
10 - 18	10YR 4/2	95	10YR 6/8	5	С		Loam	
10-10	10111 7/2		10 110 0/0			141	Loam	
						· ——	· -	
							. <u> </u>	
		_			_		. <u></u> .	
					_			_
¹Type: C=Co	oncentration, D=Der	oletion, RM	1=Reduced Matrix, C	S=Covere	d or Coat	ed Sand G	Frains. ² Loca	ation: PL=Pore Lining, M=Matrix.
•			I LRRs, unless other					s for Problematic Hydric Soils ³ :
Histosol	` '		Sandy Redox ((S5)			2 cm	Muck (A10)
	ipedon (A2)		Stripped Matrix					Parent Material (TF2)
Black His			Loamy Mucky			t MLRA 1)		Shallow Dark Surface (TF12)
	n Sulfide (A4)	- (044)	Loamy Gleyed		2)		Other	r (Explain in Remarks)
	l Below Dark Surfac irk Surface (A12)	æ (ATT)	✓ Depleted Matri Redox Dark St)		³ Indicator	s of hydrophytic vegetation and
	lucky Mineral (S1)		Depleted Dark					d hydrology must be present,
	leyed Matrix (S4)		Redox Depres					disturbed or problematic.
Restrictive L	ayer (if present):							
Type:								
Depth (inc	ches):						Hydric Soil F	Present? Yes 🗸 No
Remarks:							•	
HYDROLO	GY drology Indicators:	:						
-			ed; check all that app	ly)			Second	dary Indicators (2 or more required)
-	Water (A1)		Water-Sta		/es (B9) (except	Wa	ater-Stained Leaves (B9) (MLRA 1, 2,
High Wa	ter Table (A2)		MLRA	1, 2, 4A,	and 4B)	-		4A, and 4B)
Saturatio	on (A3)		Salt Crus	t (B11)			Dra	ainage Patterns (B10)
Water M	arks (B1)		Aquatic Ir	vertebrate	es (B13)		Dr	y-Season Water Table (C2)
	t Deposits (B2)		Hydrogen		. ,			turation Visible on Aerial Imagery (C9)
-	osits (B3)		Oxidized		_	_	· · —	eomorphic Position (D2)
_	t or Crust (B4)		Presence					allow Aquitard (D3)
-	osits (B5)		Recent In					.C-Neutral Test (D5)
	Soil Cracks (B6)	Imagan, (F	Stunted o)1)(LKK A		uised Ant Mounds (D6) (LRR A)
	on Vis ble on Aerial Vegetated Concav			piaiii iii K	emarks)		FIG	ost-Heave Hummocks (D7)
Field Observ		e ourrace	(50)					
Surface Water		/es	No Depth (ir	rches).				
Water Table			No Depth (ir					
Saturation Pr			No Depth (ir				land Hydrology	Present? Yes No
(includes cap	illary fringe)							11050Hz. 105 NO
Describe Red	corded Data (stream	n gauge, m	nonitoring well, aerial	photos, p	revious in	spections),	, if available:	
Remarks:								
Soil is ve	ery moist.							

Project/Site: Easton Ranch	(City/County	Park Co	unty Sampling Date: 2023-06-2
Applicant/Owner: MDT				State: Montana Sampling Point: DP05u
Investigator(s): S Weyant	;	Section, To	wnship, Ra	nge: S32 T4N R9E
Landform (hillslope, terrace, etc.): Floodplain				
				Long: -110.64012 Datum: NAD 83
Soil Map Unit Name: 155A - Meadowcreek, rarely floo				
Are climatic / hydrologic conditions on the site typical for the				
Are Vegetation, Soil, or Hydrology	-			
Are Vegetation, Soil, or Hydrology				eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map				
Hydrophytic Vegetation Present? Yes			9 00	
Hydric Soil Present? Yes		Is th	e Sampled	
Wetland Hydrology Present? Yes	No 🔽	with	in a Wetlar	nd? Yes No
Remarks:		l l		
Upland sample point adjacent to DF	05w and	d wetla	nd cell	5.
VEGETATION – Use scientific names of pla	nts.			
Tree Stratum (Plot size: 30 ft r	Absolute % Cover			Dominance Test worksheet:
1			Status	Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
2.				
3.				Total Number of Dominant Species Across All Strata: 1 (B)
4.				
	0	= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B
Sapling/Shrub Stratum (Plot size: 15 ft r)	_			Prevalence Index worksheet:
1. Salix lasiandra	_ 1		FACW	Total % Cover of: Multiply by:
2. Salix bebbiana 3. Salix boothii	$-\frac{1}{1}$		FACW FACW	OBL species 0 x 1 = 0
			FACW	FACW species 18 x 2 = 36
4				FAC species 66 x 3 = 198
5	3	= Total Co		FACU species <u>8</u> x 4 = <u>32</u>
Herb Stratum (Plot size: 5 ft r)		- Total Co	vei	UPL species 1 x 5 = 5
1. Lotus corniculatus	60		FAC	Column Totals: <u>93</u> (A) <u>271</u> (B)
2. Juncus balticus	15		FACW	Prevalence Index = B/A = 2.91
3. Carex microptera	_ 5		FACU	Hydrophytic Vegetation Indicators:
4. Poa pratensis	_ 3		FAC	<u>✓</u> 1 - Rapid Test for Hydrophytic Vegetation
5. Taraxacum officinale	_ 3		FACU	✓ 2 - Dominance Test is >50%
6. Equisetum arvense	<u>2</u>		FAC	3 - Prevalence Index is ≤3.0 ¹
7. Cirsium arvense	_ '		FAC UPL	4 - Morphological Adaptations (Provide supporting
8. Carex careyana	<u> </u>		UPL	data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹
9				9 - Wetland Non-Vascular Flants Problematic Hydrophytic Vegetation¹ (Explain)
10.				Indicators of hydric soil and wetland hydrology must
11	90	= Total Cov		be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		. Total Col		
1				Hydrophytic
2				Vegetation Present? Yes No
% Bare Ground in Herb Stratum 10	0	= Total Cov	/er	1103CIII: 103 NU
Remarks:				
	drank: +:	0 11000	otion it :	door not have watland hidealagues
Although this sample point contains hy	uropnyti	c veget	สเเบท เปิ	does not have wetland hydrology or
hydric soils.				

SOIL Sampling Point: DP05u

Depth	ription: (Describe Matrix		Redox Features	<u> </u>	
(inches)	Color (moist)	%	Color (moist) % Type ¹ Loc ²	Texture	Remarks
0 - 6	10YR 3/2	100		Sandy Loam	
6 - 20	10YR 4/2	100		Loamy Sand	
-					
-					
-	-				
¹ Type: C=Co	ncentration, D=De	pletion, RM	=Reduced Matrix, CS=Covered or Coated Sand		: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Appli	cable to al	LRRs, unless otherwise noted.)	Indicators fo	r Problematic Hydric Soils ³ :
Histosol (Sandy Redox (S5)	2 cm Mud	• •
	ipedon (A2)		Stripped Matrix (S6)		nt Material (TF2)
Black His			Loamy Mucky Mineral (F1) (except MLRA		llow Dark Surface (TF12)
	n Sulfide (A4) Below Dark Surfa	re (A11)	Loamy Gleyed Matrix (F2)Depleted Matrix (F3)	Other (Ex	plain in Remarks)
	rk Surface (A12)	ice (ATT)	Redox Dark Surface (F6)	³ Indicators of	hydrophytic vegetation and
	ucky Mineral (S1)		Depleted Dark Surface (F7)		drology must be present,
-	leyed Matrix (S4)		Redox Depressions (F8)		urbed or problematic.
	ayer (if present):				-
Type:					
Depth (inc	hes):			Hydric Soil Pres	ent? Yes No <u> </u>
Remarks:				I	
No hydrid	c soil indica	tors ob	served.		
IYDROLOG			served.		
IYDROLOG	GY Irology Indicators	s:	served.	Secondary	Indicators (2 or more required)
IYDROLO(Wetland Hyd Primary Indica	GY Irology Indicators	s:			Indicators (2 or more required) Stained Leaves (B9) (MLRA 1, 2,
IYDROLOG Wetland Hyd Primary Indica	GY Irology Indicators ators (minimum of	s:	ed; check all that apply)	Water-	
IYDROLOG Wetland Hyd Primary Indica	GY rology Indicators ators (minimum of Water (A1) rer Table (A2)	s:	d; check all that apply) Water-Stained Leaves (B9) (except	Water- 4A ,	Stained Leaves (B9) (MLRA 1, 2,
IYDROLOG Wetland Hyd Primary Indica Surface \ High Wat	rology Indicators ators (minimum of Water (A1) er Table (A2) n (A3)	s:	ed; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water- 4A, Draina	Stained Leaves (B9) (MLRA 1, 2, and 4B)
IYDROLOG Wetland Hyd Primary Indica Surface N High Wat Saturatio Water Ma	rology Indicators ators (minimum of Water (A1) er Table (A2) n (A3)	s:	d; check all that apply) Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Water- 4A, Draina Dry-Se	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10)
Wetland Hyd Primary Indica Surface N High Wat Saturatio Water Ma Sedimen Drift Dep	rology Indicators ators (minimum of Nater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3)	s:	Mc; check all that apply) 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 F	Water- 4A, Draina Dry-Se Satura Roots (C3) Geome	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2)
Wetland Hyd Primary Indica Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat	rology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)	s:	d; check all that apply) 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 F	Water- 4A, Draina Dry-Se Satura Roots (C3) Geomo	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3)
IYDROLOG Wetland Hyd Primary Indica Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat	rology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)	s:	ed; check all that apply) 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 F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils	Water- 4A, Draina Dry-Se Satura Roots (C3) Geomo Shallov (C6) FAC-N	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5)
Primary Indication Surface Note that the second se	rology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6)	s: one require	ed; check all that apply) 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 F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRF	Water- 4A, Draina Dry-Se Satura Roots (C3) Geomo Shallow (C6) FAC-N R A) Raised	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A)
Wetland Hyd Primary Indica Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Depo Surface S Inundatio	Irology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) in Vis ble on Aeria	s: one require	MLRA 1, 2, 4A, and 4B) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRF	Water- 4A, Draina Dry-Se Satura Roots (C3) Geomo Shallow (C6) FAC-N R A) Raised	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5)
Wetland Hyd Primary Indica Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Depo Surface S Inundatio Sparsely	rology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Vis ble on Aeria Vegetated Conca	s: one require	MLRA 1, 2, 4A, and 4B) MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRF	Water- 4A, Draina Dry-Se Satura Roots (C3) Geomo Shallow (C6) FAC-N R A) Raised	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A)
Wetland Hyd Primary Indica Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Depo Surface S Inundatio Sparsely	rology Indicators ators (minimum of Vater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Vis ble on Aeria Vegetated Conca	one require	Mater-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRF (B8)	Water- 4A, Draina Dry-Se Satura Roots (C3) Geomo Shallow (C6) FAC-N R A) Raised	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A)
Primary Indicators Surface Naturation Water May Sedimentors Iron Depote Surface Water	rology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Vis ble on Aeria Vegetated Conca vations: or Present?	s: one require I Imagery (E ve Surface	wd; check all that apply) 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 Foresence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRF Other (Explain in Remarks) No Pepth (inches):	Water- 4A, Draina Dry-Se Satura Roots (C3) Geomo Shallow (C6) FAC-N R A) Raised	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A)
Wetland Hyd Primary Indica Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Depa Surface S Inundatio Sparsely Field Observ Surface Water	rology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) tor Crust (B4) tor Crust (B4) tor Crust (B6) n Vis ble on Aeria Vegetated Conca ations: or Present?	one require I Imagery (Eve Surface Yes	Murch (Bell) 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 Foresence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRF (B8)) No Pepth (inches): Depth (inches):	Water- 4A, Draina Dry-Se Satura Roots (C3) — Geomo Shallov (C6) ✓ FAC-N R A) — Raised Frost-F	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A) deave Hummocks (D7)
Wetland Hyd Primary Indica Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Depo Surface S Inundatio Sparsely Field Observ Surface Water Saturation Pro	rology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Vis ble on Aeria Vegetated Conca vations: or Present? Present?	one require I Imagery (Eve Surface Yes	MLRA 1, 2, 4A, and 4B) — 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 Foundation (C4) — Presence of Reduced Iron (C4) — Recent Iron Reduction in Tilled Soils Foundation (C4) — Stunted or Stressed Plants (D1) (LRF 10) — Other (Explain in Remarks) No — Depth (inches): — Depth (inches):	Water- 4A, Draina Dry-Se Satura Roots (C3) — Geomo Shallov (C6) ✓ FAC-N R A) — Raised Frost-F	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A)
Primary Indication Wetland Hyde Primary Indication Surface N High Wat Saturation Water Ma Sedimen Drift Dep Algal Mat Iron Depo Surface S Inundation Sparsely Field Observ Surface Water Water Table If Saturation Pro (includes cap	rology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) in Vis ble on Aeria Vegetated Conca rations: ar Present? Present? esent? esent? elilary fringe)	one require I Imagery (Eve Surface Yes Yes Yes	Murch (Bell) 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 Foresence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRF (B8)) No Pepth (inches): Depth (inches):	Water- 4A,	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A) deave Hummocks (D7)
Primary Indication Wetland Hyde Primary Indication Surface N High Wat Saturation Water Ma Sedimen Drift Dep Algal Mat Iron Depo Surface S Inundation Sparsely Field Observ Surface Water Water Table If Saturation Pro (includes cap	rology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) in Vis ble on Aeria Vegetated Conca rations: ar Present? Present? esent? esent? elilary fringe)	one require I Imagery (Eve Surface Yes Yes Yes	MLRA 1, 2, 4A, and 4B) — 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 Foundation (C4) — Presence of Reduced Iron (C4) — Recent Iron Reduction in Tilled Soils Foundation (C4) — Stunted or Stressed Plants (D1) (LRF 10) — Other (Explain in Remarks) No — Depth (inches): No — Depth (inches): No — Depth (inches): No — Depth (inches): No — Depth (inches): — W	Water- 4A,	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A) deave Hummocks (D7)
Primary Indication Wetland Hyde Primary Indication Surface N High Wat Saturation Water Ma Sedimen Drift Dep Algal Mat Iron Depo Surface S Inundation Sparsely Field Observ Surface Water Water Table If Saturation Pro (includes cap	rology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) in Vis ble on Aeria Vegetated Conca rations: ar Present? Present? esent? esent? elilary fringe)	one require I Imagery (Eve Surface Yes Yes Yes	MLRA 1, 2, 4A, and 4B) — 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 Foundation (C4) — Presence of Reduced Iron (C4) — Recent Iron Reduction in Tilled Soils Foundation (C4) — Stunted or Stressed Plants (D1) (LRF 10) — Other (Explain in Remarks) No — Depth (inches): No — Depth (inches): No — Depth (inches): No — Depth (inches): No — Depth (inches): — W	Water- 4A,	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A) deave Hummocks (D7)
Wetland Hyd Primary Indica Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Dep Surface S Inundatio Sparsely Field Observ Surface Water Water Table If Saturation Pro (includes cap) Describe Reco	rology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) in Vis ble on Aeria Vegetated Conca vations: ar Present? Present? esent? ellary fringe) orded Data (streat	one require I Imagery (E ve Surface Yes Yes Yes T gauge, m	Murch (Bell) 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 Feresence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRF) Other (Explain in Remarks) (B8) No Depth (inches): No Depth (inches): No Depth (inches): Wonitoring well, aerial photos, previous inspection	Water- 4A,	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9) orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A) deave Hummocks (D7)
Wetland Hyd Primary Indica Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Dep Surface S Inundatio Sparsely Field Observ Surface Water Water Table If Saturation Pro (includes cap) Describe Reco	rology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) in Vis ble on Aeria Vegetated Conca rations: ar Present? Present? esent? esent? elilary fringe)	one require I Imagery (E ve Surface Yes Yes Yes T gauge, m	Murch (Bell) 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 Feresence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRF) Other (Explain in Remarks) (B8) No Depth (inches): No Depth (inches): No Depth (inches): Wonitoring well, aerial photos, previous inspection	Water- 4A,	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9 orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A) deave Hummocks (D7)
Wetland Hyd Primary Indica Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Dep Surface S Inundatio Sparsely Field Observ Surface Water Water Table If Saturation Pro (includes cap) Describe Reco	rology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) in Vis ble on Aeria Vegetated Conca vations: ar Present? Present? esent? ellary fringe) orded Data (streat	one require I Imagery (E ve Surface Yes Yes Yes T gauge, m	Murch (Bell) 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 Feresence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRF) Other (Explain in Remarks) (B8) No Depth (inches): No Depth (inches): No Depth (inches): Wonitoring well, aerial photos, previous inspection	Water- 4A,	Stained Leaves (B9) (MLRA 1, 2, and 4B) ge Patterns (B10) ason Water Table (C2) tion Visible on Aerial Imagery (C9 orphic Position (D2) w Aquitard (D3) eutral Test (D5) Ant Mounds (D6) (LRR A) deave Hummocks (D7)

Project/Site: Easton Ranch	C	City/County	Park Cou	unty	Sampling Date: 2023-06-20
Applicant/Owner: MDT		, ,			Sampling Point: DP05w
• •	۶	Section To	wnship Rar	nge: S32 T4N R9E	
Landform (hillslope, terrace, etc.): Floodplain				-	Slone (%)· 5
Subregion (LRR): E 44			,	, -	
Soil Map Unit Name: 155A - Meadowcreek, rarely floods					
•				<u></u>	
Are climatic / hydrologic conditions on the site typical for this	_				
Are Vegetation, Soil, or Hydrologys					
Are Vegetation, Soil, or Hydrologyn	aturally prob	olematic?	(If ne	eded, explain any answer	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing	samplin	g point lo	ocations, transects,	important features, etc
	0	lo 4h	a Campled	A	
	0		e Sampled in a Wetlan	d? Yes ✓	No
	0				
Remarks:					
Sample point located within wetland	cell.				
VEGETATION – Use scientific names of plant	ts.				
7. 0. 1. (D. 1.) 30 ft r				Dominance Test works	sheet:
	% Cover		Status	Number of Dominant Sp	pecies (A)
1				That Are OBL, FACW, o	or FAC: 4 (A)
2				Total Number of Domina	
3				Species Across All Strat	ta: <u>4</u> (B)
4	0	= Total Co		Percent of Dominant Sp	
Sapling/Shrub Stratum (Plot size: 15 ft r)	<u> </u>	- 10tal C0	vei	That Are OBL, FACW, o	` ` '
1. Populus balsamifera	35		FAC	Prevalence Index work	
2. Salix bebbiana	15	~	FACW	Total % Cover of:	
3. Alnus incana	10		FACW		x 1 = 1
4. Salix lasiandra	4		FACW	0.5	x 2 = 130 x 3 = 255
5. Salix exigua	1		FACW	1 AO Species	$x = \frac{233}{40}$
- 0	65	= Total Co	ver	FACU species 10 UPL species 0	x 5 = 0
Herb Stratum (Plot size: 5 ft r	40		E40	Column Totals: 161	(A) 426 (B)
1. Lotus corniculatus	40			Column Totals. 101	(A) <u>420</u> (B)
2. Phalaris arundinacea 3 Juncus balticus	20 15		FACW	Prevalence Index	
3. Juncus paiticus 4 Taraxacum officinale	10		FACU FACU	Hydrophytic Vegetatio	
5. Poa pratensis	5		FAC	1 - Rapid Test for H	
6. Elymus trachycaulus	5		FAC	✓ 2 - Dominance Test	
7. Carex pellita	1		OBL	✓ 3 - Prevalence Inde	
8	· <u>-</u>				daptations ¹ (Provide supporting or on a separate sheet)
9.				5 - Wetland Non-Va	·
10					phytic Vegetation ¹ (Explain)
11.				1 ·	and wetland hydrology must
	00	= Total Cov	/er	be present, unless distu	
Woody Vine Stratum (Plot size:)		10101 001			
1				Hydrophytic	
2				Vegetation Present? Yes	s No
0/ Para Cround in Hort Strature A	0 :	= Total Cov	/er	rieseit! Tes	, 140
% Bare Ground in Herb Stratum 4 Remarks:					
					and an are held to the state
Evidence of hydrophytic vegetation incl	uues a p	ositivė	uomina	nce test and a pre	svalence index below

SOIL Sampling Point: DP05w

		to the dep	needed to docum			or commi	the absence	or indicators.)
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Feature:	Type ¹	Loc²	Texture	Remarks
0 - 7	10YR 3/2	100					Sandy Clay Loam	
7 - 16	2.5Y 4/2	95	10YR 5/4	5	С	M	Silt Loam	Sand and gravel 70%, 30% Silt 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.) Indicators for Problematic Hydric Soils ³ :								
Histosol (A1) Sandy Redox (S5)							n Muck (A10)	
Histic Epipedon (A2) Stripped Matrix (S6)						Red Parent Material (TF2)		
	Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1)						Very Shallow Dark Surface (TF12) Other (Explain in Remarks)	
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Matrix (F3)								
Depleted Scient Balk Surface (K11) Redox Dark Surface (F6)							³ Indicators of hydrophytic vegetation and	
Sandy M	Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)						wetland hydrology must be present,	
Sandy Gleyed Matrix (S4) Redox Depressions (F8)							unless disturbed or problematic.	
Restrictive L	ayer (if present):							
Type:								
	hes):						Hydric Soil	Present? Yes No
Remarks:								
Distinct redoximorphic concentrations common.								
HYDROLO	GY							
Wetland Hydrology Indicators:								
Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required)								ndary Indicators (2 or more required)
Surface Water (A1) Water-Stained Leaves (B9) (except						except	Water-Stained Leaves (B9) (MLRA 1, 2,	
High Wat	_ High Water Table (A2) MLRA 1, 2, 4A, and 4B)							4A, and 4B)
✓ Saturation (A3) Salt Crust (B ²				•				rainage Patterns (B10)
	Water Marks (B1) Aquatic Invertebrates (B13)						Dry-Season Water Table (C2)	
Sediment Deposits (B2) Hydrogen Sulfide Odor (C1)								aturation Visible on Aerial Imagery (C9)
	osits (B3)				_	Living Root		Geomorphic Position (D2)
Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3)								
Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6								AC-Neutral Test (D5)
Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A						(LKK A)		aised Ant Mounds (D6) (LRR A)
Inundation Vis ble on Aerial Imagery (B7) Other (Explain in Remarks) Frost-Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8)								
Field Observ		Canaco	(20)					
Surface Water		⁄es	No Depth (inc	hes):				
Water Table Present? Yes No Depth (inches):								
 _ + + + + + + + + + + + + + + + + +							and Hydrology Present? Yes No	
(includes capillary fringe)								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
_								
Remarks:								
Evidence of wetland hydrology visible in soil saturation to 7 inches.								
		-	 -					

Project/Site: Easton Ranch	(City/Count	v· Park Cou	unty Sampling Date: 2023-06-20
		-	-	State: Montana Sampling Point: DP06u
Investigator(s): S Weyant				
Landform (hillslope, terrace, etc.): Floodplain				
				Long: -110.639424 Datum: NAD 83
• , , —				· · · · · · · · · · · · · · · · · · ·
Soil Map Unit Name: 155A - Meadowcreek, rarely floode				· · · · · · · · · · · · · · · · · · ·
Are climatic / hydrologic conditions on the site typical for this	-			
Are Vegetation, Soil, or Hydrologys	ignificantly of	disturbed?	Are "	Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrologyn	aturally pro	blematic?	(If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	samplir	ng point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	o _ ′			
Hydric Soil Present? Yes No	0		he Sampled	• •
Wetland Hydrology Present? Yes No	o <u> </u>	Witi	hin a Wetlan	d? fes No
Remarks:				
Upland sample point adjacent to DPC	06w and	d wetla	and cell	6.
VEGETATION – Use scientific names of plan	ts.			
20 ft r	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r) 1.	% Cover			Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
2.				Total Number of Dominant
3				Species Across All Strata: 3 (B)
4				Percent of Dominant Species
Carling/Charle Charles (Dlat sings 15 ft r	0	= Total Co	over	That Are OBL, FACW, or FAC: 33.33 (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft r				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species 0 x 1 = 0
4				FACW species $\frac{0}{2}$ x 2 = $\frac{0}{2}$
5				FAC species 28 x 3 = 84
		= Total Co	over	FACU species 31 x 4 = 124
Herb Stratum (Plot size: 5 ft r)				UPL species 21 x 5 = 105
1. Taraxacum officinale	30		FACU	Column Totals: <u>80</u> (A) <u>313</u> (B)
2. Lotus corniculatus	25		FAC	Prevalence Index = B/A = 3.91
3. Bromus inermis	20		UPL	Hydrophytic Vegetation Indicators:
4. Cirsium arvense	1	-	FAC	1 - Rapid Test for Hydrophytic Vegetation
5. Carex careyana	1		UPL	2 - Dominance Test is >50%
6. Poa pratensis	1 1		FACU	3 - Prevalence Index is ≤3.0 ¹
7. Carex microptera 8. Phleum pratense	1		FAC	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
	· 	-	FAC	5 - Wetland Non-Vascular Plants ¹
9				Problematic Hydrophytic Vegetation ¹ (Explain)
10				Indicators of hydric soil and wetland hydrology must
11.	00	= Total Co		be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		_ 10tal C0	vei	
1		-		Hydrophytic
2				Vegetation
	0	= Total Co	over	Present? Yes No
% Bare Ground in Herb Stratum 20				
Remarks:				
No hydrophytic vegetation present a	t samp	le site.	•	

SOIL Sampling Point: DP06u

	Color (moist)	%	Color	(moist)	%	Type ¹	Loc ²	Texture		Remarks	
0 - 9	10YR 3/2	100	_					Silt Loar	<u>n</u>		
9 - 16	10YR 4/2	85	7.5YR	4/6	15	С	M	Sandy Loai	n		
-											
			-								
						-					
								· <u></u>			
						_					
			_			_					
-											
Гуре: C=Coi	ncentration, D=De	epletion, RN	√=Reduced	Matrix, C	S=Covere	ed or Coate	ed Sand G	rains. ² l	ocation: PL=	Pore Lining, M=M	latrix.
	ndicators: (Appl									lematic Hydric S	
_ Histosol (A1)		Sand	ly Redox ((S5)			2	cm Muck (A10	0)	
	pedon (A2)			ped Matrix	. ,				ed Parent Mat		
_ Black His						1) (excep	MLRA 1		-	ark Surface (TF12	2)
	Sulfide (A4)	(8.4.4)		ny Gleyed		2)		c	ther (Explain i	n Remarks)	
	Below Dark Surfa	ice (A11)		eted Matri		`		31	-t		
	rk Surface (A12) ucky Mineral (S1)			ox Dark Su eted Dark	•	•				ohytic vegetation a yy must be presen	
	eyed Matrix (S4)			ox Depres						or problematic.	ιι,
	ayer (if present):		11000	ох Бергео.	310113 (1 0)	<u>'</u>		1	- Coo diotarbed	or problematic.	
-	., (p										
. , , ,								Hydric S	oil Present?	Yes 🗸 N	No
Denth (incl	hes).										
Remarks: Ithough retland h	hydric soil			ed, th	is sam	iple po	int lac				and
Remarks: Ithough retland h	hydric soil nydrology.	s were		ed, th	is sam	iple po	int lac				and
emarks: Ithough retland h rDROLOG Vetland Hyd	hydric soil nydrology. SY	s were	observ			nple po	int lac	ks hydro	ophytic v		
emarks: Ithough retland h rDROLOG Vetland Hyd rimary Indica _ Surface V	hydric soil nydrology. SY rology Indicators ators (minimum of Vater (A1)	s were	observ	II that app	oly)	nple po		ks hydro	ophytic v condary Indica Water-Staine	regetation a	equired)
lthough retland h retland h retland Hyd rimary Indica Surface V High Wat	hydric soil nydrology. BY rology Indicators ators (minimum of Vater (A1) er Table (A2)	s were	obser\ ed; check a	III that app Water-Sta	oly) ained Leav	/es (B9) (e		ks hydro	ophytic v condary Indica Water-Staine 4A, and 4	regetation a	equired)
emarks: Ithough Tetland I TOROLOG Tetland Hyd Timary Indica Surface V High Wate Saturation	hydric soil nydrology. GY rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3)	s were	obser\ ed; check a	II that app Water-Sta	oly) ained Leav	/es (B9) (e		ks hydro	condary Indica Water-Staine 4A, and 4 Drainage Pat	egetation and terms (2 or more restricted Leaves (B9) (Moreover) (B10)	equired)
Ithough Vetland h Vetland Hyd	hydric soil nydrology. GY rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1)	s were	observed; check a	II that app Water-Sta MLRA Salt Crust Aquatic In	ained Leav a 1, 2, 4A, t (B11) nvertebrate	/es (B9) (e and 4B) es (B13)		See	condary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season N	egetation and testing testing (2 or more restricted Leaves (B9) (Marker) (B10) Water Table (C2)	equired) ILRA 1, 2
Ithough Yetland I YDROLOG Yetland Hyd Timary Indica Surface V High Wate Saturation Water Ma Sediment	hydric soil hydrology. GY rology Indicators ators (minimum of Vater (A1) er Table (A2) in (A3) arks (B1) t Deposits (B2)	s were	observ ed; check a — —	Il that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen	oly) ained Leav a1, 2, 4A, t (B11) avertebrate s Sulfide C	ves (B9) (e and 4B) es (B13) odor (C1)	xcept	ks hydro	condary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi	egetation and tors (2 or more restricted Leaves (B9) (Market) Itterns (B10) Water Table (C2) sible on Aerial Im	equired) ILRA 1, 2
Ithough Yetland h YDROLOG Wetland Hyd Irimary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo	hydric soil nydrology. BY rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3)	s were	observed; check a	Il that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I	oly) ained Leav a1, 2, 4A, t (B11) nvertebrate a Sulfide C Rhizosphe	ves (B9) (e and 4B) es (B13) odor (C1) eres along	xcept Living Ro	See ots (C3)	condary Indicate Water-Staine 4A, and 4 Drainage Pate Dry-Season V Saturation Vi Geomorphic	egetation and terms (2 or more respected Leaves (B9) (Moreover) Sterms (B10) Water Table (C2) Sible on Aerial Im Position (D2)	equired) ILRA 1, 2
Ithough Vetland I Vetland I Vetland Hyd Ve	hydric soil nydrology. GY rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) posits (B3) t or Crust (B4)	s were	ed; check a	Il that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence	ained Leav 1, 2, 4A, t (B11) nvertebrate Sulfide C Rhizosphe of Reduc	ves (B9) (e and 4B) es (B13) edor (C1) eres along ed Iron (C-	xcept Living Ro	See See Cots (C3)	condary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui	eters (2 or more red Leaves (B9) (More) Iterns (B10) Water Table (C2) sible on Aerial Im Position (D2) tard (D3)	equired) ILRA 1, 2
Ithough Vetland I Vetland I Vetland Hyd Ve	hydric soil nydrology. GY rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) posits (B3) or Crust (B4) posits (B5)	s were	ed; check a	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro	ained Leav 1, 2, 4A, t (B11) nvertebrate s Sulfide C Rhizosphe of Reduct	ves (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (Cition in Tille	xcept Living Ro 4) d Soils (C	See	condary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral	eterns (2 or more restricted Leaves (B9) (Moreover) Water Table (C2) sible on Aerial Im Position (D2) tard (D3) Test (D5)	equired) ILRA 1, 2 agery (C
Ithough Vetland I Vetland I Vetland Hyd Ve	hydric soil nydrology. BY rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) posits (B3) t or Crust (B4) posits (B5) Soil Cracks (B6)	s: one requir	ed; check a	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o	ained Leavan, 1, 2, 4A, the (B11) invertebrate a Sulfide Control Reduction Reduction Stressed	ves (B9) (e and 4B) es (B13) elor (C1) eres along ed Iron (C- cion in Tille	xcept Living Ro 4) d Soils (C	See	condary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M	eterns (2 or more red Leaves (B9) (MB) Water Table (C2) sible on Aerial Im Position (D2) tard (D3) Test (D5) Hounds (D6) (LRR	equired) ILRA 1, 2 agery (C
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emarks: Ithough Tetland It TOROLOG Vetland Hyd rimary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely ield Observation	hydric soil hydrology. GY rology Indicators ators (minimum of Vater (A1) er Table (A2) in (A3) arks (B1) d Deposits (B2) posits (B3) er Crust (B4) posits (B5) Soil Cracks (B6) in Vis ble on Aeria Vegetated Conca	S Were	ed; check a	Il that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o Other (Ex	ained Leave ained Leave a 1, 2, 4A, t (B11) nvertebrate a Sulfide C Rhizosphe of Reduct on Reduct or Stressed cplain in Re	ves (B9) (e and 4B) es (B13) edor (C1) eres along ed Iron (C- tion in Tille d Plants (D emarks)	xcept Living Ro 4) d Soils (C 1) (LRR 4	See	condary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M	eterns (2 or more red Leaves (B9) (MB) Water Table (C2) sible on Aerial Im Position (D2) tard (D3) Test (D5) Hounds (D6) (LRR	equired) ILRA 1, 2 agery (C
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emarks: Ithough Tetland I TOROLOG Tetland Hyd Timary Indicate Surface V High Wate Saturation Water Mate Sediment Drift Depot Algal Mate Iron Depot Surface S Inundation Sparsely Tield Observent Water Table For Includes capital	hydric soil hydrology. GY rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) posits (B3) t or Crust (B4) posits (B5) coil Cracks (B6) n Vis ble on Aeria Vegetated Conca ations: r Present? Present? esent? ellary fringe)	S Were S: one requir I Imagery (ve Surface Yes Yes Yes Yes	ed; check a ed; check a B7) (B8) No No No	Il that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o Other (Ex	ained Leavant, 1, 2, 4A, at (B11) avertebrate of Reduction Reduction Reduction Replain in Reduction Researches):	ves (B9) (e and 4B) es (B13) odor (C1) eres along ed Iron (C- tion in Tille d Plants (D emarks)	Living Ro 4) d Soils (C 1) (LRR A	ots (C3)	condary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M Frost-Heave	eterns (2 or more red Leaves (B9) (MB) Water Table (C2) sible on Aerial Im Position (D2) tard (D3) Test (D5) Hounds (D6) (LRR	equired) ILRA 1, 2 agery (C
Ithough Vetland I Vetland I Vetland Hyd Ve	hydric soil hydrology. GY rology Indicators ators (minimum of Vater (A1) er Table (A2) in (A3) arks (B1) is Deposits (B2) posits (B3) is or Crust (B4) posits (B5) Soil Cracks (B6) in Vis ble on Aeria Vegetated Conca ations: r Present? ersent?	S Were S: one requir I Imagery (ve Surface Yes Yes Yes Yes	ed; check a ed; check a B7) (B8) No No No	Il that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o Other (Ex	ained Leavant, 1, 2, 4A, at (B11) avertebrate of Reduction Reduction Reduction Replain in Reduction Researches):	ves (B9) (e and 4B) es (B13) odor (C1) eres along ed Iron (C- tion in Tille d Plants (D emarks)	Living Ro 4) d Soils (C 1) (LRR A	ots (C3)	condary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M Frost-Heave	regetation and regetation and regetation and regetation and regetation and regetation (2 or more regetation (2	equired) ILRA 1, 2 agery (C
Ithough Vetland I Vetland I Vetland Hyd Ve	hydric soil hydrology. GY rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) posits (B3) t or Crust (B4) posits (B5) coil Cracks (B6) n Vis ble on Aeria Vegetated Conca ations: r Present? Present? esent? ellary fringe)	S Were S: one requir I Imagery (ve Surface Yes Yes Yes Yes	ed; check a ed; check a B7) (B8) No No No	Il that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o Other (Ex	ained Leavant, 1, 2, 4A, at (B11) avertebrate of Reduction Reduction Reduction Replain in Reduction Researches):	ves (B9) (e and 4B) es (B13) odor (C1) eres along ed Iron (C- tion in Tille d Plants (D emarks)	Living Ro 4) d Soils (C 1) (LRR A	ots (C3)	condary Indica Water-Staine 4A, and 4 Drainage Pat Dry-Season V Saturation Vi Geomorphic Shallow Aqui FAC-Neutral Raised Ant M Frost-Heave	regetation and regetation and regetation and regetation and regetation and regetation (2 or more regetation (2	equired) ILRA 1, 2 agery (C

Project/Site: Easton Ranch	c	City/County	Park Co	unty s	Sampling Date:	2023-06-20
Applicant/Owner: MDT				State: Montana	Sampling Point:	DP06w
Investigator(s): S Weyant	Ş	Section, To	wnship, Rai	nge: S32 T4N R9E		
Landform (hillslope, terrace, etc.): Floodplain				=	Slor	oe (%): 0
Subregion (LRR): E 44						
Soil Map Unit Name: 155A - Meadowcreek, rarely floode						
Are climatic / hydrologic conditions on the site typical for this						
Are Vegetation, Soil, or Hydrologysi	-					, No
Are Vegetation, Soil, or Hydrologyna				eded, explain any answers		110
SUMMARY OF FINDINGS – Attach site map s				•	,	atures, etc.
	<u>_</u>	<u> </u>		· · · · ·	•	,
			e Sampled			
Wetland Hydrology Present? Yes No	o	with	in a Wetlan	id? Yes	No	.
Remarks:						
Located in a cattail fringe around ope	en wate	er.				
VEGETATION – Use scientific names of plant	ts.					
-	Absolute	Dominant	Indicator	Dominance Test works	heet:	
	% Cover		Status	Number of Dominant Spe	ecies	
1				That Are OBL, FACW, or	FAC: 4	(A)
2				Total Number of Domina		
3				Species Across All Strata	a: <u>4</u>	(B)
4	0	= Total Co		Percent of Dominant Spe		
Sapling/Shrub Stratum (Plot size: 15 ft r)	<u> </u>	= Total Co	ver	That Are OBL, FACW, or) (A/B)
1. Salix exigua	3		FACW	Prevalence Index works		
2. Salix bebbiana	1		FACW	Total % Cover of:		<u>/ by:</u>
3. Salix lutea	1		OBL	OBL species 3 FACW species 74	x 1 = <u>3</u>	
4				-	$\frac{1}{2} \times 3 = \frac{3}{3}$	
5					x 4 = 8	
Herb Stratum (Plot size: 5 ft r)	5	= Total Co	ver	UPL species 0	x 5 = 0	
1. Juncus balticus	70		FACW	Column Totals: 80	(A) 162	(B)
2. Carex nebrascensis	1		OBL			
3 Taraxacum officinale	1		FACU	Prevalence Index = Hydrophytic Vegetation		
4. Lycopus asper	1		OBL	✓ 1 - Rapid Test for Hy		ation
5. Equisetum arvense	1		FAC	✓ 2 - Dominance Test		20011
6. Carex microptera	1		FACU	✓ 3 - Prevalence Index		
7				4 - Morphological Ad	daptations¹ (Provi	de supporting
8				data in Remarks	•	sheet)
9				5 - Wetland Non-Vas		
10				Problematic Hydroph	-	
11	7-			¹ Indicators of hydric soil a be present, unless disturb	and wetland hydr bed or problemat	ology must
Woody Vine Stratum (Plot size:)	75 :	= Total Cov	er er	, , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , ,	
1				Hydrophytic		
2.				Vegetation		
	_	= Total Cov		Present? Yes	No	
% Bare Ground in Herb Stratum 25						
Remarks:						
Evidence of hydrophytic vegetation inclu	udes a p	ositive	domina	nce test, prevalen	ce Index be	elow 3,
and rapid test.						

SOIL Sampling Point: DP06w

Profile Desc	cription: (Describe	to the de	pth needed to docu	ment the	indicator	or confirm	n the absence	of indicators.)
Depth	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0 - 4	2.5Y 4/2	100					Silt Loam	Roots
4 - 10	2.5Y 4/2	90	10YR 5/8	10	С	М	Silt Loam	
-								
	_							
				_				
<u> </u>								·
		-					-	
				_				
			1=Reduced Matrix, C			ed Sand G		cation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	cable to al	I LRRs, unless othe	rwise not	ted.)		Indicato	ors for Problematic Hydric Soils ³ :
Histosol	` '		Sandy Redox (m Muck (A10)
	pipedon (A2)		Stripped Matrix					Parent Material (TF2)
	istic (A3)		Loamy Mucky	•		: MLRA 1		y Shallow Dark Surface (TF12)
	en Sulfide (A4) d Below Dark Surfa	oo (A11)	 Loamy Gleyed✓ Depleted Matri		2)		Oth	er (Explain in Remarks)
	ark Surface (A12)	ce (ATT)	Redox Dark Su	. ,	١		3Indicate	ors of hydrophytic vegetation and
·	Mucky Mineral (S1)		Depleted Dark	•	•			and hydrology must be present,
-	Gleyed Matrix (S4)		Redox Depress					ss disturbed or problematic.
	Layer (if present):							
Type: Co	obbles with streaked	l concentra	ntions					
Depth (in	ches): 10						Hydric Soil	Present? Yes No
Remarks:							-1	
Eaint roo	dovimorphic	conco	ntrations con	mon	within :	tha da	nloted m	atriv
anicie	aoxiiiioi pi iic	COLICE		1111011	VV I (I I I I I I	ine de	pieteu iii	atrix.
HYDROLO	GY							
	drology Indicators	•						
-			ed; check all that app	lv)			Seco	ndary Indicators (2 or more required)
✓ Surface		one require		•	/es (B9) (e	vcent		Vater-Stained Leaves (B9) (MLRA 1, 2,
_	ater Table (A2)			1, 2, 4A,		Accpt	<u> </u>	4A, and 4B)
✓ Saturati			Salt Crust		ana 4D)		Г	Orainage Patterns (B10)
	Marks (B1)		Aquatic In	` ,	es (B13)			Ory-Season Water Table (C2)
	nt Deposits (B2)		Hydrogen				·	Saturation Visible on Aerial Imagery (C9)
	posits (B3)				eres along	Livina Ro		Geomorphic Position (D2)
	at or Crust (B4)			•	ed Iron (C4	-		Shallow Aquitard (D3)
_	posits (B5)		Recent Iro					AC-Neutral Test (D5)
	Soil Cracks (B6)		Stunted o					Raised Ant Mounds (D6) (LRR A)
	ion Vis ble on Aerial	Imagery (E				, ,		rost-Heave Hummocks (D7)
	y Vegetated Concav	• • •	· —		,			, ,
Field Obser	-		. ,					
Surface Wat	ter Present?	Yes 🗸	No Depth (in	iches): 6				
Water Table			No Depth (in			_		
Saturation P	resent?	Yes 🔽	No Depth (in	iches): 6			land Hydrolog	y Present? Yes No
	pillary fringe)							<u> </u>
Describe Re	corded Data (strear	n gauge, m	nonitoring well, aerial	photos, p	revious ins	pections),	, if available:	
Remarks:								
Evidenc	e of wetland	hydro	logy visible ir	n soil s	aturat	ion to	6 inches	and surface water within
	f sample poi	-						
3.5500	. Jampio pon							
ĺ								

Project/Site: Easton Ranch	(City/County:	Park Cou	unty Sampling Date: 2023-06-20
Applicant/Owner: MDT		, ,		Montone DD07
	Ş	Section. Tov	vnship. Rar	nge: S32 T4N R9E
Landform (hillslope, terrace, etc.): Floodplain				
, , ,			•	Long: -110.640153 Datum: NAD 83
Soil Map Unit Name: 155A - Meadowcreek, rarely floode				
Are climatic / hydrologic conditions on the site typical for this				-
Are Vegetation, Soil, or Hydrologysi	-			
Are Vegetation, Soil, or Hydrologyn SUMMARY OF FINDINGS – Attach site map 9				
Hydrophytic Vegetation Present? Yes No			, po	outroine, management, important reactions, etc.
Hydric Soil Present? Yes No		Is the	e Sampled	
Wetland Hydrology Present? Yes No	o	withi	n a Wetlan	d? Yes No
Remarks:		I		
Upland sample point adjacent to DPC	7w and	d wetlar	nd cell :	7.
VEGETATION – Use scientific names of plant	te .			
VEGETATION – Ose scientific fiames of plant		Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r	% Cover			Number of Dominant Species
1				That Are OBL, FACW, or FAC: 0 (A)
2				Total Number of Dominant
3				Species Across All Strata: 1 (B)
4				Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15 ft r		= Total Cov	/er	That Are OBL, FACW, or FAC: 0 (A/B)
1				Prevalence Index worksheet:
2.				Total % Cover of: Multiply by:
3				OBL species $\frac{0}{2}$ $\times 1 = \frac{0}{2}$
4				FACW species $\frac{0}{2}$ $\times 2 = \frac{0}{0}$
5.				FAC species $\frac{3}{9}$ $\times 3 = \frac{9}{9}$
		= Total Cov	/er	FACU species 0 $x = 0$ UPL species 70 $x = 350$
Herb Stratum (Plot size: 5 ft r	0.5		LIBI	Column Totals: 73 (A) 359 (D)
· ·	65			Column Totals. 73 (A) 333 (B)
2. Medicago sativa 3 Cirsium arvense	3		UPL FAC	Prevalence Index = B/A = 4.92
				Hydrophytic Vegetation Indicators:
4. 5.				1 - Rapid Test for Hydrophytic Vegetation
6.				2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 ¹
7.				4 - Morphological Adaptations ¹ (Provide supporting
8.				data in Remarks or on a separate sheet)
9				5 - Wetland Non-Vascular Plants ¹
10				Problematic Hydrophytic Vegetation ¹ (Explain)
11				¹ Indicators of hydric soil and wetland hydrology must
	73%	= Total Cov	er	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic Vegetation
2				Present? Yes No
% Bare Ground in Herb Stratum 27		= Total Cov	eı	
Remarks:				
No hydrophytic vegetation present a	t sampl	le site.		

SOIL Sampling Point: DP07u

Profile Desc	cription: (Descri	e to the dept	needed to docu	ment the i	ndicator	or confirm	n the absence	of indicators.)
Depth	Matrix			x Feature	4			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0 - 11	10YR 3/2	100					Loam	
11 - 18	10YR 4/2	100					Sandy Loam	
-								
				_				
¹ Type: C=C	oncentration, D=D	epletion, RM=I	Reduced Matrix, C	S=Covered	d or Coate	d Sand Gr	rains. ² Loc	cation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (App	licable to all L	RRs, unless othe	rwise not	ed.)		Indicato	rs for Problematic Hydric Soils ³ :
Histosol	(A1)	_	Sandy Redox (S5)			2 cm	n Muck (A10)
Histic E _l	pipedon (A2)	-	Stripped Matrix	(S6)			Red	Parent Material (TF2)
	istic (A3)	_	Loamy Mucky			MLRA 1)		Shallow Dark Surface (TF12)
	en Sulfide (A4)	<u>-</u>	Loamy Gleyed	•	2)		Othe	er (Explain in Remarks)
	d Below Dark Surf	ace (A11)	Depleted Matri				3, ,, ,	
	ark Surface (A12) /lucky Mineral (S1	_	Redox Dark Sun Depleted Dark	, ,				ors of hydrophytic vegetation and nd hydrology must be present,
-	Bleyed Matrix (S4)		Redox Depres	•	7)			is disturbed or problematic.
	Layer (if present)		redox Depres	310113 (1 0)			dilies	s distarbed or problematic.
Type:	_a, c. (p. ccc)	-						
Depth (in	ches).						Hydric Soil	Present? Yes No
Remarks:	CI1C3).						Tryunc con	1103cm: 103 10
ixemarks.								
No hydri	ic soil indic	ators obs	erved.					
HYDROLO	GY							
Wetland Hy	drology Indicator	's:						
Primary India	cators (minimum c	f one required;	check all that app	ly)			Secon	ndary Indicators (2 or more required)
Surface	Water (A1)		Water-Sta	ined Leav	es (B9) (e :	xcept	W	/ater-Stained Leaves (B9) (MLRA 1, 2,
High Wa	ater Table (A2)		MLRA	1, 2, 4A, a	and 4B)			4A, and 4B)
Saturati	on (A3)		Salt Crust	(B11)			D	rainage Patterns (B10)
Water M	larks (B1)		Aquatic Ir	vertebrate	s (B13)		D	ry-Season Water Table (C2)
Sedime	nt Deposits (B2)		Hydrogen	Sulfide O	dor (C1)		S	aturation Visible on Aerial Imagery (C9)
Drift De	posits (B3)		Oxidized	Rhizosphe	res along	Living Roc	ots (C3) G	eomorphic Position (D2)
Algal Ma	at or Crust (B4)		Presence	of Reduce	ed Iron (C4	1)	SI	hallow Aquitard (D3)
Iron Dep	oosits (B5)		Recent Ire	on Reducti	on in Tille	d Soils (C6	6) F/	AC-Neutral Test (D5)
Surface	Soil Cracks (B6)		Stunted o	r Stressed	Plants (D	1) (LRR A	.) R	aised Ant Mounds (D6) (LRR A)
Inundati	on Vis ble on Aeri	al Imagery (B7	Other (Ex	plain in Re	emarks)		Fi	rost-Heave Hummocks (D7)
Sparsely	y Vegetated Conc	ave Surface (B	8)					
Field Obser	vations:							
Surface Wat	er Present?	Yes N	lo Depth (ir	iches):				
Water Table	Present?	Yes N	lo 🔽 Depth (ir	iches):				
Saturation P	resent?	Yes N	lo 🔽 Depth (ir	iches):		Wetl	and Hydrology	y Present? Yes No
(includes cap	pillary fringe)	am gougo mor	nitoring well, aerial	nhotoo nr	aviava ina	nactional	if available:	
Describe Re	corded Data (Sirea	am gauge, mor	illoring well, aeriai	priotos, pr	evious iris	pections),	ii avaliable.	
Derstand								
Remarks:								
No wetla	and hydrolo	gy prese	nt.					
1								

Project/Site: Easton Ranch	C	City/County:	Park Cou	unty	Sampling Date:	2023-06-20
Applicant/Owner: MDT						
Investigator(s): S Weyant				nge: S32 T4N R9E		
Landform (hillslope, terrace, etc.): Floodplain					∋ Slor	oe (%): 0
Subregion (LRR): E 44	<u> </u>		,			. ,
Soil Map Unit Name: 155A - Meadowcreek, rarely floods						
Are climatic / hydrologic conditions on the site typical for this						
Are Vegetation, Soil, or Hydrologysi	-					, No
						110
Are Vegetation, Soil, or Hydrology n SUMMARY OF FINDINGS – Attach site map s				eded, explain any answer		atures, etc.
Hydrophytic Vegetation Present? Yes No						
1			e Sampled	Area		
Wetland Hydrology Present? Yes No	<u> </u>	with	in a Wetlan	d? Yes	No	•
Remarks:						
Located within wetland cell at the we	estern p	ortion	of the s	site.		
VEGETATION – Use scientific names of plant	ts.					
Tree Stratum (Plot size: 30 ft r		Dominant Species?		Dominance Test works		
1	% Cover		Status	Number of Dominant Sp That Are OBL, FACW, or		(A)
2.						(` ')
3.				Total Number of Domina Species Across All Strat		(B)
4					·	
0 1: 401 1 01 1 (DL) : 15 ft r	0	= Total Co	ver	Percent of Dominant Sp That Are OBL, FACW, o		(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft r 1. Populus balsamifera	5	~	FAC	Prevalence Index work	ksheet:	
	· ———		170	Total % Cover of:		/ by:
3.					x 1 = 5	
4.				FACW species 55		
5.				FAC species 32	x 3 = 96	
	5	= Total Co	ver	FACU species 10	x 4 = 40	
Herb Stratum (Plot size: 5 ft r)			= 1 O.1.		x = 0 (A) 251	(D)
1. Juncus balticus	30		FACW	Column Totals: 102	(A) <u>251</u>	(B)
2. Phalaris arundinacea 3. Lotus corniculatus	25 25	<u></u>	FACW FAC	Prevalence Index		
Taraxacum officinale	10		FACU	Hydrophytic Vegetatio		
5. Carex pellita	5		OBL	1 - Rapid Test for H		ation
6. Poa pratensis	2		FAC	✓ 2 - Dominance Test✓ 3 - Prevalence Inde		
7.				4 - Morphological A		de supporting
8.					s or on a separate	
9.				5 - Wetland Non-Va	ascular Plants ¹	
10				Problematic Hydrop	ohytic Vegetation ¹	(Explain)
11				¹ Indicators of hydric soil		
W 1 1/2 0/ 1 (B) 1	97	= Total Cov	er	be present, unless distu	Thed of problemat	IC.
Woody Vine Stratum (Plot size:)						
1				Hydrophytic Vegetation		
2	_	= Total Cov			s No	
% Bare Ground in Herb Stratum 0						
Remarks:						
Evidence of hydrophytic vegetation incl	udes a p	ositive	domina	nce test and a pre	evalence Ind	ex below
3						

SOIL Sampling Point: DP07w

Profile Desc	cription: (Descri	ibe to the de	pth needed to docu	ment the	indicator	or confir	m the absenc	e of indicators.)	
Depth	Matri	х	Redo	ox Feature	es				
(inches)	Color (moist)) %	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	_ <u> </u>	Remarks
0-6	10YR 3/2	100	· -	_			Silty Clay Loan	<u> </u>	
6 - 16	10YR 3/2	93	10YR 4/6	7	С	М	Silty Clay Loan	n	
							-		
								_	
-									
-									
¹Tyne: C=C	oncentration D=I	Denletion RM	/=Reduced Matrix, C	S=Covere	d or Coate	ed Sand G	Grains ² I	ocation: PI =Pore	Lining, M=Matrix.
			I LRRs, unless other			o ound c			atic Hydric Soils ³ :
Histosol			Sandy Redox (,			cm Muck (A10)	, , , , , , , , , , , , , , , , , , , ,
	pipedon (A2)		Stripped Matrix				·	ed Parent Materia	I (TF2)
	istic (A3)		Loamy Mucky		1) (except	MLRA 1		ery Shallow Dark	
Hydroge	en Sulfide (A4)		Loamy Gleyed	Matrix (F	2)		Ot	ther (Explain in Re	emarks)
	d Below Dark Sur	, ,	Depleted Matri	` '			•		
	ark Surface (A12)		✓ Redox Dark Sugar	•	•			tors of hydrophyti	_
	Mucky Mineral (S	•	Depleted Dark					land hydrology m	·
	Gleyed Matrix (S4 Layer (if present	•	Redox Depres	sions (F8)			unie	ess disturbed or p	robiematic.
	Layer (II present	.).							
Type:	-h\.						Hudele Ca	ii Dunnamio Va	V No
	ches):						Hydric Sc	oil Present? Ye	es No
Remarks:									
Promine	nt redoxim	orphic c	oncentration	s com	mon w	ithin r	edox daı	rk surface	
		•							
HYDROLO	GY								
Wetland Hy	drology Indicate	ors:							
Primary Indi	cators (minimum	of one require	ed; check all that app	ly)			<u>Sec</u>	ondary Indicators	(2 or more required)
Surface	Water (A1)		Water-Sta	ained Leav	es (B9) (e	xcept	_	Water-Stained Le	eaves (B9) (MLRA 1, 2,
High Wa	ater Table (A2)		MLRA	1, 2, 4A,	and 4B)			4A, and 4B)	
Saturati	on (A3)		Salt Crus	t (B11)				Drainage Pattern	s (B10)
Water M	farks (B1)		Aquatic Ir	vertebrate	es (B13)			Dry-Season Water	er Table (C2)
Sedime	nt Deposits (B2)		Hydrogen	Sulfide C	dor (C1)				e on Aerial Imagery (C9)
Drift De	posits (B3)		Oxidized	Rhizosphe	eres along	Living Ro	oots (C3) 🔽	Geomorphic Pos	tion (D2)
Algal Ma	at or Crust (B4)		Presence	of Reduc	ed Iron (C4	4)		Shallow Aquitard	
-	posits (B5)		Recent Ire					FAC-Neutral Tes	
	Soil Cracks (B6)		Stunted o			1) (LRR A		Raised Ant Moun	
	ion Vis ble on Aer		,	plain in R	emarks)		_	Frost-Heave Hun	nmocks (D7)
-	y Vegetated Cond	cave Surface	(B8)						
Field Obser			.,						
Surface Wat	ter Present?		No Depth (ir						
Water Table	Present?		No Depth (ir						
Saturation P		Yes	No Depth (ir	nches):		Wet	land Hydrolo	gy Present? You	es No
	pillary fringe) corded Data (stre	am naune m	nonitoring well, aerial	nhotos n	revious ins	nections)	if available:		
Describe No	oorded Data (Stre	am gaage, n	ionitoring wen, dend	priotos, p	TOVIOUS IIIC	pections)	, ii avaliabic.		
Remarks:									
Soil is ve	ery moist.								

Project/Site: Easton Ranch	(City/County	յ։ Park Cou	unty Sampling Date: 2023-06-20
Applicant/Owner: MDT			'	State: Montana Sampling Point: DP08u
	Ş	Section. To	wnship. Rar	nge: S32 T4N R9E
Landform (hillslope, terrace, etc.): Shoulder				
· · · · · · · · · · · · · · · · · · ·			•	Long: -110.638892 Datum: NAD 83
Soil Map Unit Name: 155A - Meadowcreek, rarely floode				
Are climatic / hydrologic conditions on the site typical for this				
Are Vegetation, Soil, or Hydrologysi	_			
Are Vegetation, Soil, or Hydrology no SUMMARY OF FINDINGS – Attach site map s				eded, explain any answers in Remarks.)
Hydrophytic Vegetation Present? Yes V			9	outroine, managere, imperium reasures, cier
Hydric Soil Present? Yes No		Is th	ne Sampled	
Wetland Hydrology Present? Yes No	·	with	nin a Wetlan	d? Yes No
Remarks:		<u> </u>		
Located 3 feet above DP08w.				
VEGETATION – Use scientific names of plant				
VEGETATION – Ose scientific flames of plant	Absolute	Dominant	t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r	% Cover			Number of Dominant Species
1				That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15 ft r)	0	= Total Co	over	That Are OBL, FACW, or FAC: 100.00 (A/B)
1				Prevalence Index worksheet:
2.				Total % Cover of: Multiply by:
3.				OBL species $\frac{2}{15}$ $\times 1 = \frac{2}{30}$
4.				FACW species $\frac{15}{33}$ $x = \frac{30}{99}$
5				1 AO species X 3 =
	0	= Total Co	over	FACU species $\frac{5}{15}$ $x 4 = \frac{20}{75}$ UPL species $x 5 = 75$
Herb Stratum (Plot size: 5 ft r 1. Lotus corniculatus	25	./	EAC	Column Totals: 70 (A) 226 (B)
2. Juncus balticus	15		FAC FACW	
3 Bromus inermis	12		UPL	Prevalence Index = B/A = 3.23
4 Poa pratensis	5		FAC	Hydrophytic Vegetation Indicators:
5. Taraxacum officinale	5		FACU	1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is >50%
6. Carex careyana	3		UPL	3 - Prevalence Index is ≤3.0 ¹
7. Phleum pratense	3		FAC	4 - Morphological Adaptations ¹ (Provide supporting
8. Potamogeton gramineus	2		OBL	data in Remarks or on a separate sheet)
9				5 - Wetland Non-Vascular Plants ¹
10				Problematic Hydrophytic Vegetation¹ (Explain)
11				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	70	= Total Co	ver	The second and the second seco
1				Hydrophytic
2.				Hydrophytic Vegetation
	_	= Total Co	ver	Present? Yes No No
% Bare Ground in Herb Stratum 30	-			
Remarks:				
Evidence of hydrophytic vegetation i	nclude	s a pos	sitive do	minance test.

SOIL Sampling Point: DP08u

Profile Desc	cription: (Descri	be to the depth	needed to docu	ment the i	ndicator	or confirm	m the absence	e of indicate	ors.)	
Depth	Matrix			ox Features	4					
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0 - 11	10YR 3/2	100					Silt Loan	<u> </u>		
								_		
-										
_	_						-	_		
	_									
<u> </u>										
-										
¹Type: C=Ce	oncentration, D=D	epletion, RM=F	Reduced Matrix, C	S=Covered	or Coate	d Sand G	rains. ² L	ocation: PL=	Pore Lining, M	1=Matrix.
			RRs, unless other						olematic Hydr	
Histosol	(A1)		Sandy Redox	(S5)			2	cm Muck (A1	0)	
Histic Ep	oipedon (A2)	_	Stripped Matrix	(S6)			R	ed Parent Ma	terial (TF2)	
	stic (A3)	_	Loamy Mucky			MLRA 1)		•	ark Surface (T	F12)
	en Sulfide (A4)		Loamy Gleyed	•)		0	ther (Explain	in Remarks)	
	d Below Dark Sur	–	Depleted Matri				31			
	ark Surface (A12) /lucky Mineral (S1		Redox Dark Subjected Dark	. ,	7)			•	phytic vegetati gy must be pre	
-	Gleyed Matrix (S4)		Depleted Dark Redox Depres	•	')			-	or problemation	
	Layer (if present								- F	
Type: Co		•								
Depth (inc	ches): 11						Hydric Sc	oil Present?	Yes	No 🗸
Remarks:	,									
l										
No hydri	c soil indic	ators obs	erved.							
	CV									
HYDROLO										
	drology Indicato						0			
	-	of one required;	check all that app		(50) (<u>Sec</u>	•	ators (2 or mor	
·	Water (A1)			ained Leave	, , ,	xcept	_		ed Leaves (B9)) (MLRA 1, 2,
_	ater Table (A2)			1, 2, 4A, a	ind 4B)			4A, and 4		
Saturatio	, ,		Salt Crus	• •	- (D40)		_	Drainage Pa	, ,	20)
Water M	, ,		Aquatic Ir						Water Table (
	nt Deposits (B2) posits (B3)			Sulfide Od		Livina Bo			Position (D2)	I Imagery (C9)
-	at or Crust (B4)			of Reduce				Shallow Aqu		
	osits (B5)			on Reduction	•	•		FAC-Neutral		
-	Soil Cracks (B6)		Stunted o						//ounds (D6) (I	RR A)
	on Vis ble on Aeri	al Imagery (B7)				., (=::::			Hummocks (E	
	Vegetated Conc			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,		_		(-	- /
Field Obser			-,							
Surface Wat	er Present?	Yes N	o <u> </u>	nches):						
Water Table			o Pepth (ir							
Saturation P			o V Depth (ir				land Hydrolo	av Present?	Yes	No 🗸
(includes car	oillary fringe)						-	, gy 1 1000mm		
Describe Re	corded Data (stre	am gauge, mon	itoring well, aerial	photos, pre	evious ins	pections),	, if available:			
Remarks:					·		<u> </u>			
No wetla	and hydrolo	gy prese	nt.							
		J) [556								

Project/Site: Easton Ranch	C	City/County:	Park Cou	unty Sampling Date: 2023-06-20
Applicant/Owner: MDT				Martin
• •	5	Section, To	wnship. Rar	nge: S32 T4N R9E
Landform (hillslope, terrace, etc.): Depression				
				Long: -110.63897 Datum: NAD 83
Soil Map Unit Name: 155A - Meadowcreek, rarely floode				
Are climatic / hydrologic conditions on the site typical for this				
	-			
Are Vegetation, Soil, or Hydrologysi				
Are Vegetation, Soil, or Hydrologyn SUMMARY OF FINDINGS – Attach site map 9				
			g point it	cations, transects, important reatures, etc.
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes No No No No No No No No No N	0	Is the	e Sampled	Area
Wetland Hydrology Present? Yes No		withi	in a Wetlan	d? Yes No
Remarks:		<u> </u>		
Sample point located within wetland	cell			
Cample point located within wettand				
VEGETATION – Use scientific names of plant	ts.			
Tree Stratum (Plot size: 30 ft r	Absolute			Dominance Test worksheet:
,	% Cover		Status	Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
1				That Are OBL, FACW, or FAC: 3 (A)
2				Total Number of Dominant Species Across All Strata: 3 (B)
4.				Species Across Air Strata.
T	0	= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft r		. 0.0		Prevalence Index worksheet:
1. Populus balsamifera	45		FAC	Total % Cover of: Multiply by:
2. Salix exigua	5		FACW	OBL species 2 x 1 = 2
3. Salix boothii	2		FACW	FACW species 22 x 2 = 44
4. Salix lutea	1		OBL	FAC species 95 x 3 = 285
5				FACU species 0 x 4 = 0
Herb Stratum (Plot size: 5 ft r	53	= Total Co	ver	UPL species 0 x 5 = 0
1. Lotus corniculatus	50		FAC	Column Totals: <u>119</u> (A) <u>331</u> (B)
2 Juncus balticus	15	~	FACW	Prevalence Index = B/A = 2.78
3. Potamogeton gramineus	1		OBL	Hydrophytic Vegetation Indicators:
4.				1 - Rapid Test for Hydrophytic Vegetation
5				✓ 2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 ¹
7				4 - Morphological Adaptations ¹ (Provide supporting
8				data in Remarks or on a separate sheet)
9				5 - Wetland Non-Vascular Plants ¹
10				Problematic Hydrophytic Vegetation¹ (Explain)
11				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	66 =	= Total Cov	er	Bo procent, unious distances of processing to
1				Historia
2.				Hydrophytic Vegetation
	_	Total Cov		Present? Yes No
% Bare Ground in Herb Stratum 34				
Remarks:	<u> </u>			
Evidence of hydrophytic vegetation incl	udes a p	ositive	domina	nce test and a prevalence Index below
3	-			-

SOIL Sampling Point: DP08w

Profile Desc Depth	ription: (Describ Matrix		pth needed to docui	ment the ox Featur		or confirm	the absence	of indicators.)
(inches)	Color (moist)	%	Color (moist)	% realui	Type ¹	Loc ²	Texture	Remarks
0 - 4	2.5Y 3/2	100					Sandy Loam	
4 - 7	2.5Y 3/2	100			_		Loamy Sand	Gravel and cobbles
7 - 12	2.5Y 4/2	95	10YR 5/8	5	С	М	Sandy Loam	Sand and cobbles
				-				
								
				_				·
1 _{Typo: C=C}	noontration D=D	anletica DN	4-Reduced Matrix Ct		od or Cost	ad Sand Ca		potion: DI =Doro Lining M=Motriy
			I=Reduced Matrix, CS I LRRs, unless othe			eu Sand Gr		cation: PL=Pore Lining, M=Matrix. ors for Problematic Hydric Soils ³ :
Histosol			Sandy Redox (· · · · · · · · · · · · · · · · · · ·			n Muck (A10)
	ipedon (A2)		Stripped Matrix					Parent Material (TF2)
Black His			Loamy Mucky I		F1) (excep	t MLRA 1)		y Shallow Dark Surface (TF12)
	n Sulfide (A4)		Loamy Gleyed	Matrix (F	⁻ 2)			er (Explain in Remarks)
	l Below Dark Surfa	ace (A11)	Depleted Matrix				2	
	ark Surface (A12)		Redox Dark Su		•			ors of hydrophytic vegetation and
-	lucky Mineral (S1)		Depleted Dark					nd hydrology must be present,
	leyed Matrix (S4) ayer (if present):		Redox Depress	sions (F8)		unles	s disturbed or problematic.
	ches):						Hydric Soil	Present? Yes V No No
Remarks:							. 13 4116 3011	
	cv							
HYDROLO								
-	drology Indicator		ed; check all that appl	v)			Seco	ndary Indicators (2 or more required)
	Water (A1)	. one require		•	ves (B9) (e	excent		Vater-Stained Leaves (B9) (MLRA 1, 2,
	ter Table (A2)				, and 4B)	oopt	v	4A, and 4B)
✓ Saturation			Salt Crust		, ,		D	rainage Patterns (B10)
Water M	• •		Aquatic In		tes (B13)			ry-Season Water Table (C2)
	it Deposits (B2)		Hydrogen					aturation Visible on Aerial Imagery (C9)
	oosits (B3)					Living Roo		Geomorphic Position (D2)
	t or Crust (B4)				ced Iron (C	_		hallow Aquitard (D3)
_	osits (B5)					d Soils (C6		AC-Neutral Test (D5)
	Soil Cracks (B6)					1) (LRR A)		aised Ant Mounds (D6) (LRR A)
	on Vis ble on Aeria	al Imagery (E	·		•	,	·	rost-Heave Hummocks (D7)
Sparsely	Vegetated Conca	ve Surface	(B8)					
Field Observ	vations:		_					
Surface Water			No Depth (in					
Water Table			No Depth (in					
Saturation Pr (includes cap		Yes	No Depth (in	ches): <u>1</u>	U	Wetla	and Hydrolog	y Present? Yes No
		ım gauge, m	nonitoring well, aerial	photos, p	orevious ins	spections), i	if available:	
Remarks:								
	of wetland	d hydro	laav visihla ir	soil e	saturat	ion at 1	nches	
	e of wetland	d hydro	logy visible ir	soil :	saturat	ion at 1	0 inches	•
	e of wetland	d hydro	logy visible ir	soil :	saturat	ion at 1	0 inches	

Project/Site: Easton Ranch	C	City/County:	Park Cou	unty Sampling Date: 2023-06-21
Applicant/Owner: MDT				State: Montana Sampling Point: DP09u
Investigator(s): S Weyant, K Kane		Section, To	wnship, Rar	nge: S32 T4N R9E
Landform (hillslope, terrace, etc.): Floodplain	।	Local relief	(concave, o	convex, none): Linear Slope (%): 0
Subregion (LRR): E 44	_ Lat: 46.0	060143		Long: -110.638825 Datum: NAD 83
Soil Map Unit Name: 155A - Meadowcreek, rarely floode	ed-Nesda c	omplex, 0	to 2 perce	ent slopes NWI classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this	time of yea	r? Yes	✓ No_	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology si	ignificantly o	listurbed?	Are "	Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology na				eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	samplin	g point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	·			
Hydric Soil Present? Yes No			e Sampled in a Wetlan	•
Wetland Hydrology Present? Yes No		WILII	iii a wellali	IU! 165 NO
Remarks:	_			
Upland sample point adjacent to DPC	9w and	d wetla	nd cell	9.
VEGETATION – Use scientific names of plant				
Tree Stratum (Plot size: 30 ft r	Absolute % Cover			Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2.				Total Number of Dominant
3				Species Across All Strata: 1 (B)
4				Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15 ft r		= Total Co	ver	That Are OBL, FACW, or FAC: 0 (A/B)
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				OBL species $0 \times 1 = 0$
4				FACW species $\frac{0}{0}$ $x = 2$ $\frac{0}{0}$ $x = 3$
5				FAC species 0 $x 3 = 0$ FACU species 0 $x 4 = 0$
Herb Stratum (Plot size: 5 ft r)		= Total Co	ver	UPL species 80 x 5 = 400
	80	V	UPL	Column Totals: 80 (A) 400 (B)
2.				Prevalence Index = B/A = 5.00
3.				Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 ¹
7				4 - Morphological Adaptations¹ (Provide supporting
8				data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹
9				Problematic Hydrophytic Vegetation¹ (Explain)
10 11				¹ Indicators of hydric soil and wetland hydrology must
· · · · · · · · · · · · · · · · · · ·	000/	= Total Cov		be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		- Total Gov	Ci	
1				Hydrophytic
2				Vegetation Present? Yes No
% Bare Ground in Herb Stratum 20		= Total Cov	er	100
Remarks:				<u></u>
No hydrophytic vegetation present a	t samnl	e site		
Transpiry to vogetation prosent a	Coampi	5 5166.		

SOIL Sampling Point: DP09u

Profile Desc	ription: (Descril	be to the depth	needed to docu	ment the i	ndicator	or confirn	n the absence	e of indicator	rs.)	
Depth	Matrix			ox Features	4					
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	<u> </u>	Remarks	
1 - 16	10YR 3/2	100					Silt Loam			
-										
								·		
l — —	•						-	·		
-										
_										
1Type: C=C	oncentration, D=D	lonlotion DM-E	Poducod Matrix C	S=Covered	d or Coato	d Sand C	roino ² l o	ootion: DI =0	Poro Lining M	-Motrix
	Indicators: (App					u Sanu G			Pore Lining, Mi l ematic Hydri	
Histosol		indubic to un E	_ Sandy Redox		Ju.,			m Muck (A10	•	
	oipedon (A2)	_	Stripped Matrix					d Parent Mate		
Black Hi		_	_ Loamy Mucky	` '	1) (except	MLRA 1)			ark Surface (TI	=12)
	n Sulfide (A4)	_	Loamy Gleyed			,		ner (Explain ir	•	/
	d Below Dark Surf	face (A11)	Depleted Matri	•	,			` .	,	
Thick Da	ark Surface (A12)	_	_ Redox Dark Si	urface (F6)					hytic vegetation	
-	lucky Mineral (S1		_ Depleted Dark	•	7)				y must be pres	
	Gleyed Matrix (S4)		Redox Depres	sions (F8)			unle	ss disturbed	or problematic	•
	Layer (if present)):								
Type:										
Depth (inc	ches):						Hydric Soi	il Present?	Yes	No
Remarks:										
No hydri	c soil indica	ators obse	erved							
i vo iiyaii	c son maic		or vea.							
HYDROLO	GY									
	drology Indicator	re·								
_	cators (minimum c		check all that ann	lv)			Sacc	andary Indicat	ors (2 or more	required)
	Water (A1)	one required,		ained Leave	ac (B0) (a c	vcent		•	d Leaves (B9)	
	iter Table (A2)			1, 2, 4A, a		Acept		4A, and 4l		(WILKA 1, 2,
Saturation			Salt Crus		iiiu 46)		ı	Drainage Patt		
Water M	, ,		Aquatic Ir	• •	e (B13)		· · · · · · · · · · · · · · · · · · ·	•	Vater Table (C	2)
	nt Deposits (B2)			Sulfide Oc					sible on Aerial	
	posits (B3)					Livina Roc	ots (C3) (inagory (00)
-	at or Crust (B4)			of Reduce	_	_		Shallow Aquit		
	oosits (B5)			on Reduction				FAC-Neutral		
-	Soil Cracks (B6)		Stunted o				· —		ounds (D6) (L	RR A)
	on Vis ble on Aeri	al Imagery (B7)	Other (Ex			, (Hummocks (D	
	/ Vegetated Conc				,				,	,
Field Obser			<u>, </u>							
Surface Water		Yes No	Depth (ir	nches):						
Water Table			Depth (ir							
Saturation P			Depth (ir				land Hydrolog	ny Dracant?	Vos	No V
(includes car		1631	Depti (ii	iciies)		_ ****	iana myanolog	gy r resent:	163	140
Describe Re	corded Data (stream	am gauge, mon	itoring well, aerial	photos, pre	evious ins	pections),	if available:			
Remarks:										
No wate	and hydrolo	an praca	nt							
INO WELL	and mydroic	yyy piesei	14.							

Project/Site: Easton Ranch	C	City/Cou	ntv. Park Co	unty Sampling Date: 2023-06-21
Applicant/Owner: MDT		Jily/ Oou	<u></u>	State: Montana Sampling Point: DP09w
• •		Soction	Township Par	nge: S32 T4N R9E
Landform (hillslope, terrace, etc.): Depression				
· · · · · · · · · · · · · · · · · · ·			•	,
				Long: -110.638883 Datum: NAD 83
Soil Map Unit Name: 155A - Meadowcreek, rarely flood				· · · · · · · · · · · · · · · · · · ·
Are climatic / hydrologic conditions on the site typical for this				
Are Vegetation, Soil, or Hydrologys	ignificantly o	disturbed	d? Are "	Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology r	aturally prob	blematic	? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	samp	ling point le	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes N	0			
Hydric Soil Present? Yes N			s the Sampled vithin a Wetlan	•
Wetland Hydrology Present? Yes N	0	VV	ittiiii a wetiai	NO
Remarks:				
Sample point located within wetland	cell.			
VEGETATION – Use scientific names of plan	ts.			
Tree Stratum (Plot size: 30 ft r	Absolute		ant Indicator	Dominance Test worksheet:
1			s? Status	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4	0	= Total	Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft r)				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species 30 x 1 = 30
3				FACW species $2 x 2 = 4$
4 5			<u> </u>	FAC species 41 x 3 = 123
0	0	= Total	Cover	FACU species $\frac{11}{x}$ $x = 44$
Herb Stratum (Plot size: 5 ft r			00101	UPL species $\frac{2}{x}$ $x = \frac{10}{x}$
1. Lotus corniculatus	35		FAC	Column Totals: <u>86</u> (A) <u>211</u> (B)
2. Carex pellita	30		OBL	Prevalence Index = B/A = 2.45
3. Taraxacum officinale	10		<u>FACU</u>	Hydrophytic Vegetation Indicators:
4. Poa pratensis	3		<u>FAC</u>	1 - Rapid Test for Hydrophytic Vegetation
5. Carex careyana	2		UPL	✓ 2 - Dominance Test is >50%
6. Juncus balticus	2 2		FACW FAC	✓ 3 - Prevalence Index is ≤3.0 ¹
7. Equisetum arvense 8. Carex microptera	1		FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
g. Elymus repens	1		FAC	5 - Wetland Non-Vascular Plants ¹
	- —			Problematic Hydrophytic Vegetation¹ (Explain)
10 11.			<u> </u>	¹Indicators of hydric soil and wetland hydrology must
111.	86	= Total (Cover	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		- Total v	OOVCI	
1				Hydrophytic
2				Vegetation Present? Yes No
0/ Para Cround in Hash Stratum 14	0 :	= Total (Cover	TIESCILL! IES NO
% Bare Ground in Herb Stratum 14 Remarks:				
		! ! !	٠ ام م	man took and a manualament to the first
Evidence of hydrophytic vegetation incl	uaes a p	OSITIN	ve domina	nce test and a prevalence index below
3.				

SOIL Sampling Point: DP09w

Depth (inches)	Matrix Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 4	10YR 3/2	100	Color (molot)				Silty Clay Loam	romano
4 - 16	10YR 4/2	85	7.5YR 5/8	 15		М	Silty Clay Loam	Has slightly more sand than top laye
4 10	10111 4/2		7.011070					That originally more baria than top layer
	-		<u> </u>					
-								
-								
-								
-	-				_			-
Lyne: C=C	oncentration D=D	enletion RN	- ∕/=Reduced Matrix, 0	S=Cover	ed or Coat	ed Sand Gr	ains ² l or	cation: PL=Pore Lining, M=Matrix.
			II LRRs, unless oth			ca Garia Gi		ors for Problematic Hydric Soils ³ :
_ Histosol	I (A1)		Sandy Redox	(S5)	•			n Muck (A10)
	pipedon (A2)		Stripped Matr				· 	Parent Material (TF2)
_ Black H	istic (A3)		Loamy Mucky	Mineral (I	-1) (excep	ot MLRA 1)	Ver	y Shallow Dark Surface (TF12)
	en Sulfide (A4)		Loamy Gleye	,	2)		Oth	er (Explain in Remarks)
	d Below Dark Surf	ace (A11)	<u>✓</u> Depleted Mat				31	and the selection of the second of the second
	ark Surface (A12) Mucky Mineral (S1)		Redox Dark S Depleted Dar	`	,			ors of hydrophytic vegetation and nd hydrology must be present,
-	Gleyed Matrix (S4)		Redox Depre					s disturbed or problematic.
	Layer (if present)	<u> </u>			/			
Type:								
Depth (in	ches):						Hydric Soil	Present? Yes No
romine		orphic c	concentration	ns com	imon.			
romine OROLO			concentration	ns com	imon.			
romine OROLO Vetland Hy	OGY drology Indicator	s:	concentration		imon.		<u>Seco</u> i	ndary Indicators (2 or more required)
romine /DROLO /etland Hy	OGY drology Indicator	s:	ed; check all that ap Water-S	ply) tained Lea	ves (B9) (except		
romine /DROLO /etland Hy rimary Indi Surface	OGY drology Indicator cators (minimum o	s:	ed; check all that ap Water-S	ply)	ves (B9) (except		
romine /DROLO /etland Hy rimary Indi Surface High Wa Saturati	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3)	s:	ed; check all that ap Water-S MLR . Salt Cru	ply) tained Lea A 1, 2, 4A , st (B11)	ves (B9) (and 4B)	except	v	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rrainage Patterns (B10)
romine /DROLO /etland Hy rimary Indi Surface High Wa Saturati Water M	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3) Marks (B1)	s:	ed; check all that ap Water-S MLR. Salt Cru: Aquatic	ply) tained Lea A 1, 2, 4A , st (B11) Invertebrat	ves (B9) (and 4B) es (B13)	except	W	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2)
romine YDROLO Vetland Hy rimary Indi Surface High Wa Saturati Water M Sedime	rdrology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)	s:	ed; check all that ap Water-S MLR. Salt Cru- Aquatic Hydroge	ply) tained Lea A 1, 2, 4A , st (B11) Invertebrat n Sulfide (ves (B9) (and 4B) es (B13) Odor (C1)	·	V D S	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Trainage Patterns (B10) Try-Season Water Table (C2) aturation Visible on Aerial Imagery (CS
romine /DROLO /etland Hy rimary Indi _ Surface _ High Wa _ Saturati _ Water M _ Sedime _ Drift De	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)	s:	ed; check all that ap Water-S MLR. Salt Cru: Aquatic Hydroge Oxidized	ply) tained Lea A 1, 2, 4A , st (B11) Invertebrat n Sulfide (I Rhizosph	ves (B9) (and 4B) es (B13) Odor (C1) eres alono	J Living Roo	W D S ts (C3) <u>v</u> G	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) aturation Visible on Aerial Imagery (CS) Decomorphic Position (D2)
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romine 'DROLO Vetland Hy rimary Indi Surface High Wa Saturati Water N Sedime Drift De Algal Ma Iron De	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	s:	ed; check all that ap Water-S MLR. Salt Cru: Aquatic Hydroge Oxidized Presenc Recent I	ply) tained Lea A 1, 2, 4A, st (B11) Invertebrat n Sulfide (I Rhizosph e of Reduc	ves (B9) (and 4B) es (B13) Odor (C1) eres along ed Iron (C) tion in Tille	, Living Roo (4) ed Soils (C6	V D S ts (C3) <u>~ S</u> S S	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irrainage Patterns (B10) Irry-Season Water Table (C2) Irraition Visible on Aerial Imagery (C8) Irraition Position (D2) Irraition Aquitard (D3) Irraition Active Table (C9) Irraition Visible on Aerial Imagery (C8) Irraition Visible on Aerial Imagery (C8) Irraition (D2) Irraition Visible (D3) Irraition Visible (D3) Irraition Visible (D3) Irraition Visible (D5)
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YDROLO Vetland Hy Primary Indi Surface High Wa Saturati Water M Sedime Drift De Algal Ma Iron De Surface Inundati Sparsel	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Vis ble on Aeria	s: f one require Il Imagery (I	ed; check all that ap Water-S MLR Salt Cru Aquatic Hydroge Oxidized Presenc Recent I Stunted B7) Other (E	ply) tained Lea A 1, 2, 4A, st (B11) Invertebrat n Sulfide (I Rhizosph e of Reduc ron Reduc or Stresse xplain in R	ves (B9) (and 4B) es (B13) Odor (C1) eres along ed Iron (Cition in Tille d Plants (I	J Living Roo (4) ed Soils (C6 (1) (LRR A)	V D S ts (C3)	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irrainage Patterns (B10) Irry-Season Water Table (C2) Irraition Visible on Aerial Imagery (CS Ideomorphic Position (D2) Irraition Aquitard (D3) Irraition Acc-Neutral Test (D5) Irraition Active (D6) (LRR A)
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romine YDROLO Vetland Hy Primary Indi Surface High Wa Saturati Water M Sedime Drift De Algal Ma Iron De Surface Inundati Sparsel Gurface Water Table Surface Water Table Staturation Pencludes ca	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeric y Vegetated Concarvations: ter Present? Present? Present? Present? Present?	s: If one require It lmagery (I Inve Surface Yes Yes Yes Yes	ed; check all that ap Water-S MLR. Salt Crue Aquatic Hydroge Oxidized Presenc Recent I Stunted B7) (B8) No Poepth (No Poepth (No Poepth (ply) tained Lea A 1, 2, 4A, st (B11) Invertebrai n Sulfide (I Rhizosph e of Reduct ron Reduct or Stresse xplain in F	ves (B9) (and 4B) es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (I	J Living Roo (4) ed Soils (C6 (C1) (LRR A)	W D S tts (C3) <u>✓</u> G S) <u>✓</u> F F	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irrainage Patterns (B10) Irry-Season Water Table (C2) Irraition Visible on Aerial Imagery (C5) Irraition Position (D2) Irraition Aquitard (D3) Irraition Active Test (D5) Irraition Active Test (D5) Irraition (D6) (LRR A)
YDROLO Vetland Hy Primary Indi Surface High Wa Saturati Water M Sedime Drift De Algal Ma Iron De Surface Inundati Sparsel Field Obser Surface Water Table Saturation Pelincludes ca	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeric y Vegetated Concarvations: ter Present? Present? Present? Present? Present?	s: If one require It lmagery (I Inve Surface Yes Yes Yes Yes	ed; check all that ap Water-S MLR. Salt Crue Aquatic Hydroge Oxidized Presenc Recent I Stunted B7) (B8) No Depth (Depth (ply) tained Lea A 1, 2, 4A, st (B11) Invertebrai n Sulfide (I Rhizosph e of Reduct ron Reduct or Stresse xplain in F	ves (B9) (and 4B) es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (I	J Living Roo (4) ed Soils (C6 (C1) (LRR A)	W D S tts (C3) <u>✓</u> G S) <u>✓</u> F F	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irrainage Patterns (B10) Irry-Season Water Table (C2) Inturation Visible on Aerial Imagery (C9 Interest (C9) Interest (C9
YDROLO Vetland Hy Primary Indi Surface High Wa Saturati Water N Sedime Drift De Algal Ma Iron De Surface Inundati Sparsel Field Obser Surface Water Table Saturation P includes ca Describe Re	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeric y Vegetated Concarvations: ter Present? Present? Present? Present? Present?	s: If one require It lmagery (I Inve Surface Yes Yes Yes Yes	ed; check all that ap Water-S MLR. Salt Crue Aquatic Hydroge Oxidized Presenc Recent I Stunted B7) (B8) No Poepth (No Poepth (No Poepth (ply) tained Lea A 1, 2, 4A, st (B11) Invertebrai n Sulfide (I Rhizosph e of Reduct ron Reduct or Stresse xplain in F	ves (B9) (and 4B) es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (I	J Living Roo (4) ed Soils (C6 (C1) (LRR A)	W D S tts (C3) <u>✓</u> G S) <u>✓</u> F F	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irrainage Patterns (B10) Irry-Season Water Table (C2) Inturation Visible on Aerial Imagery (CS Ideomorphic Position (D2) Inturation Aquitard (D3) Inturation Active Test (D5) Inturation Active Test (D5) Inturation Active Test (D6) (LRR A) Irrost-Heave Hummocks (D7)
Promine YDROLO Wetland Hy Primary Indi Surface High Water Management Sedime Drift De Algal Management Iron De Surface Inundati Sparsel Field Obser Surface Water Table Saturation Panicludes ca	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Visible on Aeric y Vegetated Concarvations: ter Present? Present? Present? Present? Present?	s: If one require It lmagery (I Inve Surface Yes Yes Yes Yes	ed; check all that ap Water-S MLR. Salt Crue Aquatic Hydroge Oxidized Presenc Recent I Stunted B7) (B8) No Poepth (No Poepth (No Poepth (ply) tained Lea A 1, 2, 4A, st (B11) Invertebrai n Sulfide (I Rhizosph e of Reduct ron Reduct or Stresse xplain in F	ves (B9) (and 4B) es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (I	J Living Roo (4) ed Soils (C6 (C1) (LRR A)	W D S tts (C3) <u>✓</u> G S) <u>✓</u> F F	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irrainage Patterns (B10) Irry-Season Water Table (C2) Inaturation Visible on Aerial Imagery (CS Ideomorphic Position (D2) Inallow Aquitard (D3) IAC-Neutral Test (D5) Italised Ant Mounds (D6) (LRR A) Irrost-Heave Hummocks (D7)
YDROLO Vetland Hy Primary Indi Surface High Wa Saturati Water M Sedime Drift De Algal Ma Iron De Surface Inundati Sparsel Field Obser Surface Wat Water Table Saturation Princludes ca Describe Re Remarks:	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Vis ble on Aeria y Vegetated Concar vations: ter Present? Present? Present? pillary fringe) coorded Data (streat	s: If one require If one req	ed; check all that ap Water-S MLR. Salt Crue Aquatic Hydroge Oxidized Presenc Recent I Stunted B7) (B8) No Poepth (No Poepth (No Poepth (ply) tained Lea A 1, 2, 4A, st (B11) Invertebrat n Sulfide (I Rhizosph e of Reduc ron Reduc or Stresse xplain in F inches): inches): inches): il photos, p	ves (B9) (and 4B) es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (I emarks)	J Living Roo (4) ed Soils (C6 (C6) (LRR A) (LRR A) Wetla spections),	W D S S S F F	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irrainage Patterns (B10) Irry-Season Water Table (C2) aturation Visible on Aerial Imagery (C8) Eleomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) Laised Ant Mounds (D6) (LRR A) Irrost-Heave Hummocks (D7) Type Present? Yes Vo
YDROLO Vetland Hy Primary Indi Surface High Wa Saturati Water M Sedime Drift De Algal Ma Iron De Surface Inundati Sparsel Field Obser Surface Wat Water Table Saturation Princludes ca Describe Re Remarks:	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Vis ble on Aeria y Vegetated Concar vations: ter Present? Present? Present? pillary fringe) coorded Data (streat	s: If one require If one req	ed; check all that ap Water-S MLR. Salt Cru: Aquatic Hydroge Oxidized Presenc Recent I Stunted B7) Other (E (B8) No Depth (Depth	ply) tained Lea A 1, 2, 4A, st (B11) Invertebrat n Sulfide (I Rhizosph e of Reduc ron Reduc or Stresse xplain in F inches): inches): inches): il photos, p	ves (B9) (and 4B) es (B13) Odor (C1) eres along ed Iron (C tion in Tille d Plants (I emarks)	J Living Roo (4) ed Soils (C6 (C6) (LRR A) (LRR A) (Wetlasspections),	W D S S S F F	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Irrainage Patterns (B10) Irry-Season Water Table (C2) aturation Visible on Aerial Imagery (C8) Eleomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) Laised Ant Mounds (D6) (LRR A) Irrost-Heave Hummocks (D7) Type Present? Yes Value No

Project/Site: Easton Ranch	(Citv/Cour	_{ntv} . Park Cou	unty Sampling Date: 2023-06-20
		-	-	State: Montana Sampling Point: DP10u
Investigator(s): J Trilling				
Landform (hillslope, terrace, etc.): Flat				
				Long: -110.637227 Datum: NAD 83
Soil Map Unit Name: 155A - Meadowcreek, rarely floods	<u> </u>			
Are climatic / hydrologic conditions on the site typical for this				<u> </u>
	-			
Are Vegetation, Soil, or Hydrologys				Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology n SUMMARY OF FINDINGS – Attach site map				eded, explain any answers in Remarks.)
		Janipi	ing point it	boations, transcots, important reatures, etc.
Hydrophytic Vegetation Present? Yes No. Hydric Soil Present? Yes No.	· ·	Is	the Sampled	
Wetland Hydrology Present? Yes No	o	w	ithin a Wetlan	nd? Yes No
Remarks:				
Sample point located two feet higher	r than C)P10w	<i>I</i> .	
Campie point recated the rectinging				
VEGETATION – Use scientific names of plan	ts.			
Tree Stratum (Plot size: 30 ft r	Absolute		int Indicator	Dominance Test worksheet:
1			Status	Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2				Total Number of Dominant
3				Species Across All Strata: 1 (B)
4		= Total (Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft r)				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species 0 $x 1 = 0$
3				FACW species $0 x 2 = 0$
4				FAC species 10 x 3 = 30
5			Cover	FACU species $0 x 4 = 0$
Herb Stratum (Plot size: 5 ft r)		_ Total v	OUVCI	UPL species 75 x 5 = 375
1. Bromus inermis	75		UPL	Column Totals: <u>85</u> (A) <u>405</u> (B)
2. Elymus trachycaulus	10		FAC	Prevalence Index = B/A = 4.76
3				Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 ¹
7				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
8				5 - Wetland Non-Vascular Plants ¹
9				Problematic Hydrophytic Vegetation¹ (Explain)
11.				Indicators of hydric soil and wetland hydrology must
111.	0.50/	= Total C		be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		_ rotar c	JOVCI	
1				Hydrophytic
2	<u> </u>			Vegetation Present? Yes No
0/ Pore Cround in Horb Strature 15		= Total C	Cover	rieseitt! iesNO
% Bare Ground in Herb Stratum 15 Remarks:				
No hydrophytic vegetation present a	ıt samp	ie site	9.	

SOIL Sampling Point: DP10u

Depth	Matrix		Redox Features	
(inches)	Color (moist)	%	Color (moist) % Type ¹ Loc ²	
0 - 16	10YR 3/1	100		Loam
16 - 20	10YR 3/1	85		Sandy Loam
16 - 20	10YR 4/1	15		Sandy Loam
	-			
	-			
	-			
			=Reduced Matrix, CS=Covered or Coated Sand	
•	`	licable to al	LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol	` '		Sandy Redox (S5)	2 cm Muck (A10)
	pipedon (A2)		Stripped Matrix (S6)	Red Parent Material (TF2)
	istic (A3)		Loamy Cloved Metrix (F2)	, <u> </u>
	en Sulfide (A4) d Below Dark Surf	ace (A11)	Loamy Gleyed Matrix (F2)Depleted Matrix (F3)	Other (Explain in Remarks)
	ark Surface (A12)	uoc (/ (/ / /	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
	Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy C	Gleyed Matrix (S4)		Redox Depressions (F8)	unless disturbed or problematic.
Restrictive	Layer (if present)	:		
Type:			<u></u>	
Depth (in	ches):		<u></u>	Hydric Soil Present? Yes No
No bydri	ic coil indic	ators ob	corved	
NO HYUH	ic soil indica	ators on	serveu.	
HYDROLO				
Wetland Hy	drology Indicator		d; check all that apply)	Secondary Indicators (2 or more required)
Wetland Hy	drology Indicator		d; check all that apply) Water-Stained Leaves (B9) (except	Secondary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hy Primary India Surface High Wa	drology Indicator cators (minimum o Water (A1) ater Table (A2)		Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hy Primary India Surface High Wa Saturatio	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3)		Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)Drainage Patterns (B10)
Wetland Hy Primary India Surface High Wa Saturatia Water M	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1)		 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hy Primary India Surface High Wa Saturatia Water M Sedimen	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2)		 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hy Primary India Surface High Wa Saturatia Water M Sedimer Drift Dep	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3)		 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 R 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Roots (C3) Geomorphic Position (D2)
Wetland Hy Primary India Surface High Wa Saturatia Water M Sedimen Drift Dep Algal Ma	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		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 R Presence of Reduced Iron (C4)	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)
Wetland Hy Primary India Surface High Wa Saturatia Water M Sedimer Drift Dep Algal Ma	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		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 R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (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) (C6) FAC-Neutral Test (D5)
Wetland Hy Primary India Surface High Wa Saturatia Water M Sedimer Drift Der Algal Ma Iron Der Surface	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	of one require	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 Represence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRR	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) (C6) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary India Surface High Wa Saturatia Water M Sedimer Drift Der Algal Ma Iron Der Surface Inundati	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Vis ble on Aeric	of one require	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 Represence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRR Other (Explain in Remarks)	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) (C6) FAC-Neutral Test (D5)
Wetland Hy Primary India Surface High Wa Saturatia Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Vis ble on Aeric y Vegetated Conce	of one require	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 Represence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRR Other (Explain in Remarks)	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) (C6) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary India Surface High Wa Saturatia Water M Sedimer Drift Der Algal Ma Iron Der Surface Inundati Sparsely	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Vis ble on Aeric y Vegetated Conceptations:	of one require al Imagery (E ave Surface	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 R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRR Other (Explain in Remarks)	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) (C6) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary India Surface High Wa Saturatia Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Vis ble on Aeric y Vegetated Concervations: arer Present?	al Imagery (Eave Surface	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 R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRR Other (Explain in Remarks) No Depth (inches):	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) (C6) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary India Surface High Wa Saturatia Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Water Table	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Vis ble on Aeric y Vegetated Concervations: er Present? Present?	al Imagery (Eave Surface Yes	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 R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRR Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) (R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hy Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Water Table Saturation P	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Vis ble on Aeric y Vegetated Concervations: er Present? Present?	al Imagery (Eave Surface Yes	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 R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRR Other (Explain in Remarks) No Depth (inches): Depth (inches):	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) (C6) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Wetland Hy Primary India Surface High Wa Saturatia Water M Sedimer Drift Der Algal Ma Iron Der Surface Inundati Sparsely Field Obser Surface Water Table Saturation P (includes car	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Vis ble on Aeric y Vegetated Concervations: arer Present? Present? present?	al Imagery (Eave Surface Yes Yes Yes	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 R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRR Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hy Primary India Surface High Wa Saturatia Water M Sedimer Drift Der Algal Ma Iron Der Surface Inundati Sparsely Field Obser Surface Water Table Saturation P (includes car	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Vis ble on Aeric y Vegetated Concervations: arer Present? Present? present?	al Imagery (Eave Surface Yes Yes Yes	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 R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRR Other (Explain in Remarks) No Depth (inches): No Depth (inches): We	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hy Primary India Surface High Wa Saturatia Water M Sedimer Drift Der Algal Ma Iron Der Surface Inundati Sparsely Field Obser Surface Water Table Saturation P (includes car	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Vis ble on Aeric y Vegetated Concervations: arer Present? Present? present?	al Imagery (Eave Surface Yes Yes Yes	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 R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRR Other (Explain in Remarks) No Depth (inches): No Depth (inches): We	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hy Primary India Surface High Wa Saturation Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Wate Water Table Saturation P (includes cap Describe Re	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Vis ble on Aeric y Vegetated Conce vations: er Present? Present? present? pillary fringe) corded Data (streat	al Imagery (Eave Surface Yes Yes Yes am gauge, m	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 R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRR (B8)) No Other (Explain in Remarks) No Depth (inches): Wo onitoring well, aerial photos, previous inspections	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hy Primary India Surface High Wa Saturation Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Wate Water Table Saturation P (includes cap Describe Re	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Vis ble on Aeric y Vegetated Concervations: arer Present? Present? present?	al Imagery (Eave Surface Yes Yes Yes am gauge, m	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 R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRR (B8)) No Other (Explain in Remarks) No Depth (inches): Wo onitoring well, aerial photos, previous inspections	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Wetland Hy Primary India Surface High Wa Saturation Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundati Sparsely Field Obser Surface Water Table Saturation P (includes cap Describe Re	drology Indicator cators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) on Vis ble on Aeric y Vegetated Conce vations: er Present? Present? present? pillary fringe) corded Data (streat	al Imagery (Eave Surface Yes Yes Yes am gauge, m	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 R Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Stunted or Stressed Plants (D1) (LRR (B8)) No Other (Explain in Remarks) No Depth (inches): Wo onitoring well, aerial photos, previous inspections	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D2) Shallow Aquitard (D3) (C6) FAC-Neutral Test (D5) R A) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

Project/Site: Easton Ranch	(City/Cou	_{ınty:} Park Co	unty Sa	mpling Date: 2023-06-21
Applicant/Owner: MDT			-	State: Montana Sal	· · ·
• •				nge: S32 T4N R9E	
Landform (hillslope, terrace, etc.): Swale					Slope (%)· 1
Subregion (LRR): E 44					
Soil Map Unit Name: 155A - Meadowcreek, rarely floods					· · · · · · · · · · · · · · · · · · ·
•					
Are climatic / hydrologic conditions on the site typical for this	-				
Are Vegetation, Soil, or Hydrologys	ignificantly of	disturbe	d? Are "	'Normal Circumstances" prese	ent? Yes No
Are Vegetation, Soil, or Hydrology n	aturally pro	blematio	c? (If ne	eeded, explain any answers in	Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	samp	ling point l	ocations, transects, in	nportant features, etc.
Hydrophytic Vegetation Present? Yes No.					
Hydric Soil Present? Yes No	0		s the Sampled vithin a Wetlar	./	No
Wetland Hydrology Present? Yes No	0	v	villilli a vvellal	iu? Tes	NO
Remarks:					
Sample point located within wetland	cell.				
VEGETATION – Use scientific names of plan	ts.				
- 30 ft r	Absolute		ant Indicator	Dominance Test workshe	et:
Tree Stratum (Plot size: 30 ft r) 1			es? Status	Number of Dominant Speci That Are OBL, FACW, or Fa	
2.				Total Number of Dominant	
3				Species Across All Strata:	<u>1</u> (B)
4				Percent of Dominant Specie	00
Sapling/Shrub Stratum (Plot size: 15 ft r	0	= Total	Cover	That Are OBL, FACW, or F.	
1				Prevalence Index workship	eet:
2				Total % Cover of:	
3.					_ x 1 = 0
4.					x 2 = 10
5.					_ x 3 = 225
	_	= Total	Cover	FACU species 0	
Herb Stratum (Plot size: 5 ft r)					x 5 = 10
1. Lotus corniculatus			FAC	Column Totals: 82	(A) <u>245</u> (B)
2. Elymus trachycaulus	15		FAC	Prevalence Index = E	3/A = 2.99
3. Equisetum laevigatum	5		FACW	Hydrophytic Vegetation In	ndicators:
4. Brassica napus 5 Sisyrinchium xerophyllum	1 1		UPL UPL	1 - Rapid Test for Hydr	ophytic Vegetation
	· 		UPL	✓ 2 - Dominance Test is:	
6				✓ 3 - Prevalence Index is	
7				4 - Morphological Adap	otations ¹ (Provide supporting on a separate sheet)
8				5 - Wetland Non-Vascu	
9 10				Problematic Hydrophyt	
				¹ Indicators of hydric soil and	
11	00	= Total		be present, unless disturbe	
Woody Vine Stratum (Plot size:)		_ rotar	OOVCI		
1				Hydrophytic	
2				Vegetation Present? Yes	V 11-
W.D	0	= Total	Cover	Present? Yes	No
% Bare Ground in Herb Stratum 18					
Remarks:	_				
Evidence of hydrophytic vegetation i	include	s a p	ositive do	ominance test.	

SOIL Sampling Point: DP10w

(inches) Color (moist) %		ox Feature		. 2		
		%	Type ¹	Loc ²	Texture	Remarks
0 - 4 10YR 2/2 100		- 			Clay Loam	
<u>4 - 16</u> <u>10YR 4/1</u> <u>94</u>	10YR 4/6	5	<u>C</u>	PL / M	Loam	
-						
				-		
		_				
					. 21	
¹ Type: C=Concentration, D=Depletion, Hydric Soil Indicators: (Applicable to				ed Sand Gra		ation: PL=Pore Lining, M=Matrix. 's for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox		·,			Muck (A10)
Histic Epipedon (A2)	Stripped Matri:					Parent Material (TF2)
Black Histic (A3)	Loamy Mucky		1) (excep	t MLRA 1)		Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4)	Loamy Gleyed	Matrix (F2	2)		-	r (Explain in Remarks)
Depleted Below Dark Surface (A11					_	
Thick Dark Surface (A12)	Redox Dark S	, ,				s of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark		7)			nd hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depres	sions (F8)			unless	s disturbed or problematic.
Restrictive Layer (if present):						
Type:						.
Depth (inches):Remarks:					Hydric Soil	Present? Yes No
IYDROLOGY						
Wetland Hydrology Indicators:						
Wetland Hydrology Indicators: Primary Indicators (minimum of one req		•				dary Indicators (2 or more required)
Primary Indicators (minimum of one req Surface Water (A1)	Water-Sta	ained Leav	` , `	except		ater-Stained Leaves (B9) (MLRA 1, 2,
Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2)	Water-Sta	ained Leav	` , `	except	W	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Sta MLRA Salt Crus	ained Leav 1, 2, 4A , a t (B11)	and 4B)	except	W	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10)
Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-St MLRA Salt Crus Aquatic I	ained Leav 1, 2, 4A, a t (B11) nvertebrate	and 4B)	except	W Dr	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2)
Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Standard MLRA Salt Crus Aquatic Iu Hydroger	ained Leav 1, 2, 4A, a t (B11) nvertebrate s Sulfide O	es (B13) dor (C1)	·	W Dr Sa	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9)
Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Standard MLRA Salt Crus Aquatic In Hydroger Oxidized	ained Leav 1, 2, 4A, and the (B11) invertebrate of Sulfide Orange of Rhizosphe	es (B13) dor (C1) eres along	Living Roo	W Dr Dr Sa ts (C3)	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) returnation Visible on Aerial Imagery (C9) recomorphic Position (D2)
Primary Indicators (minimum of one req Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Standard MLRA Salt Crus Aquatic II Hydroger Oxidized Presence	ained Leav 1, 2, 4A, at t (B11) avertebrate Sulfide O Rhizosphe of Reduce	es (B13) dor (C1) res along ed Iron (C	Living Roo 4)	W Dr Dr Sa ts (C3)	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) raturation Visible on Aerial Imagery (C9) recomorphic Position (D2) rallow Aquitard (D3)
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MDT Montana Wetland Assessment Form (revised March 2008)

8. Wetland size:

9. Assessment area (AA):

1. Project Name: Easton Ranch 2. MDT Project #: STPP STWD (813) Control #: 9680000

3. Evaluation Date: 06/20/2023 4. Evaluator(s): J Trilling, S Weyant, M. Hickey 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:

10. Classification of Wetland and Aquatic Habitats in AA

HGM Class	Class	Modifier	Water Regime	% of AA
(Brinson)	(Cowardin)	(Cowardin)		
D	AB	E	SI	1.00
R	EM	Е	SI	69.00
R	SS	Е	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)

12.850 acres (measured)

12.850 acres (measured)

Modifiers: Excavated (E), Impounded (I), Diked (D), Partly Drained (PD), Farmed (F), Artificial (A)

(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)

	Predomin	ant conditions adjacent to (within 500 t	feet of) AA	
Conditions within 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		Is current management existence of additiona		Modified Rating
>= 3 (or 2 if 1 is forested) classes	Н	NA	NA	NA
2 (or 1 if forested) classes	M	NA	NA	NA
1 class, but not a monoculture	М	< 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) 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 2023

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	.9Н	.7M	.6M	.5M	.2L	.1L	0L

Sources for documented use (e.g. observations, records, etc): MTNHP, 2013 and 2019-2023 field observations. Bobolink nesting on site documented by MDT staff. Bald Eagle observed in 2023.

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]):	Minimal (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	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	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	g 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)		Ev	en			Une	even			Ev	en			Une	even			Ev	en	
Duration of surface water in >=10% of AA	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α
Low disturbance at AA (see #12i)	E	E	Е	Н	Е	E	Н	Н	Е	Н	Н	М	E	Н	М	М	Е	Н	М	М
Moderate disturbance at AA (see #12i)	Н	Н	Н	Н	Н	Н	Н	М	Н	Н	М	М	Н	М	М	L	Н	М	L	L
High disturbance at AA (see #12i)	М	М	М	L	М	М	L	L	М	М	L	L	М	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)

Fuidance of wildlife use (i)	Wildlife habitat features rating (ii)								
Evidence of wildlife use (i)	Exceptional	High	Moderate	Moderate					
Substantial	1E	.9H	.8H	.7M					
Moderate	.9Н	.7M	.5M	.3L					
Minimal	.6M	.4M	.2L	.1L					

There is a bald eagle (Haliaeetus leucocephalus) nest directly southwest of the site on the west side of the Shields River. The project Comments: site is within the primary habitat zone for bald eagles. In 2023 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		Permanent / Perennial					Seasonal / Intermittent					Temporary / Ephemeral						
in AA		Pen	naneni	/ Perer	ırııaı			Sea	sonai /	memi	lleni			rem	porary	Epner	nerai	
Aquatic hiding / resting / escape cover	Opt	imal	Adeo	luate	Po	oor	Opt	imal	Adeo	quate	Po	or	Opt	imal	Adeo	quate	Po	oor
Thermal cover optimal / suboptimal	0	Ø	0	Ø	0	S	0	S	0	S	0	Ø	0	S	0	S	0	Ø
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)	0 ,	entrenche stream typ			ely entrend 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	.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



SI	ightly Entrenche ER = >2.2	d	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 fe	et	1.11	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: (12.85 acre wetland) * (1 ft. max depth at high water) = 12.85 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.				developmen nutrients, or t use with po nutrients, o substantially	t for "probable of toxicants or AA otential to delive r compounds so impaired. Majo	waterbodies in r causes" related receives or surrer high levels of uch that other fu or sedimentation ns of eutrophica	to sediment, rounding land sediments, unctions are n, sources of
% cover of wetland vegetation in AA	>= 7	70%	< 7	0%	>= 7	70%	< 7	0%
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 2023. Some of the low-lying areas were saturated during the 2023 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	Duration	Duration of surface water adjacent to rooted vegetation									
shoreline by species with stability ratings of >=6 (see Appendix F).	Permanent / Perennial	Seasonal / Intermittent	Temporary / Ephemeral								
>= 65%	1H	.9Н	.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 2022. Deep-rooted species observed in 2022 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	General V	General Wildlife Habitat Rating (14C.iii.)								
Rating (14D.iii.)	E/H	M	L							
E/H	Н	Н	M							
M	Н	M	M							
L	M	M	L							
N/A	Н	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 (14l.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].)

Α	Vegetated component >5 acres						Vegetated component 1-5 acres							Vegetated component < 1 acre						
В	Hi	gh	Mod	erate	Lo)W	Hi	gh	Mode	erate	Lo)W	Hi	gh	Mode	erate	Lo	w		
С	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.

i. Discharge Indicators				ii	i. Recharge	Indicators			
The AA is a slope wetland					_		ent without u	nderlying imp	eding layer
Springs or seeps are known	or observed			v	Vetland conta	ains inlet but	no outlet		
Vegetation growing during do	ormant seaso	on/drought		S	Stream is a kı	nown 'losing'	stream; disc	harge volume	e decreases
Wetland occurs at the toe of	a natural slo	ре							
AA permanently flooded duri	ng drought p	eriods							
Wetland contains an outlet, b	out no inlet								
X Shallow water table and the	site is satura	ted to the sur	rface						
Other:									
ii. Rating (use the information from i	and ii ahove	and the table	helow to arr	ive at [circle]	the functions	al nointe and	ratina)		
ii. Kating (use the information from the	and ii above					M GROUND		1	
						ECHARGING			
			GI	<u>ROUNDWA1</u>	TER SYSTEM	<u>1</u>			
Criteria		P/P		S/I	T		None	1	
Groundwater Discharge or Rechar	rae	1H		.7M	.4M		.1L	1	
Insufficient Data/Information	-			N/A	A			1	
Comments: Soils saturated or moist	across most	of the consti	ructed wetlan	ds in 2023.				-	
AK Uniqueness									
4K. Uniqueness: Rating (working from top to bottom,	use the mati	riv holow to a	rrive at [circle	al the functio	nal nointe an	d ratina)			
. Kating (working from top to bottom,	use the mati	ix below to a	irrive at [circle	 					
		s fen, bog, w			ot contain pre and structur			ot contain pre	
Replacement potential		e (>80 yr-old		, ,	high or conta	,		es or associat	
.,		plant associ 31" by the MT			on listed as "		structura	I diversity (#1 moderate	13) IS IOW-
	43 0	or by the ivi			MTNHP			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 es Site disturbance is low.	stablishing w	ell across the	AA. Howeve	er, sapiings a	are experienc	ing significan	it nerbivory v	vnich is stunti	ing growth.
4L. Recreation/Education Potentia									
. Is the AA a known or potential rec		ircle) (i	if 'Yes' contin	ue with the e	evaluation; if	'No' then mai	k <u>X</u> NA a	nd proceed to	o the
overall summary and rating pa	• ,								
 Check categories that apply to the 	те AA:	Educational/	scientific stud	dy;Con	sumptive rec	.;Non-c	onsumptive	rec.;	
		Other:							
ii. Rating:									_
Known or Potential Recreation or Ed							Known	Potential	
Public ownership or public easem					required)		.2H	.15H	_
Private ownership with general pu		<u> </u>					.15H	.1M	_
					on for public	access	.1M	.05L	┙
Private or public ownership witho		PASS OF Adults	ational use of	tne site.					
	ow public acc	cos or cauce							
Comments: Landowner does not allo	ow public acc								
					nities have h	een stunted	ov heavy her	hivory	

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	1.29	
B. MT Natural Heritage Program Species Habitat	Н	0.90	1	11.57	*
C. General Wildlife Habitat	Н	0.90	1	11.57	*
D. General Fish Habitat	NA				
E. Flood Attenuation	Н	0.80	1	10.28	
F. Short and Long Term Surface Water Storage	Н	0.80	1	10.28	*
G. Sediment/Nutrient/Toxicant Removal	Н	0.90	1	11.57	*
H. Sediment/Shoreline Stabilization	Н	0.90	1	11.57	
I. Production Export/Food Chain Support	Н	1.00	1	12.85	
J. Groundwater Discharge/Recharge	М	0.70	1	9.00	
K. Uniqueness	М	0.60	1	7.71	
L. Recreation/Education Potential (bonus points)	NA				
Totals:		7.60	10.00	97.69	
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 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 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; andVegetated wetland component 1 acre (do not include upland vegetated buffer); andPercent 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)

8. Wetland size:

Wetland (FO)

9. Assessment area (AA):

1. Project Name: Easton Ranch 2. MDT Project #: STPP STWD (813) Control #: 9680000

3. Evaluation Date: 06/20/2023 4. Evaluator(s): J Trilling, S Weyant, M. Hickey 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:

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

1.100 acres (measured)

1.100 acres (measured)

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)

	Predomin	ant conditions adjacent to (within 500 t	feet of) AA
Conditions within 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 existence of additional		Modified Rating
>= 3 (or 2 if 1 is forested) classes	Н	NA	NA	NA
2 (or 1 if forested) classes	M	NA	NA	NA
1 class, but not a monoculture	М	< NO	YES>	L
1 class, monoculture (1 species comprises >= 90% of total cover)	L	NA	NA	NA

Comments: PEM, PFO 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)

Incidental habitat (list species)
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 2023

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	.9Н	.7M	.6M	.5M	.2L	.1L	0L

Sources for documented use (e.g. observations, records, etc): MTNHP, 2013 and 2019-2022 field observations. Bobolink nesting on site documented by MDT staff. A Bald Eagle was observed onsite in 2023.

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, e	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)				Hi	gh							Mod	erate					Lo)W	
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	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α
Low disturbance at AA (see #12i)	Е	E	Е	Н	Е	E	Н	Н	Е	Н	Н	М	Е	Н	М	М	Е	Н	М	М
Moderate disturbance at AA (see #12i)	Н	Н	Н	Н	Н	Н	Н	М	Н	Н	М	М	Н	М	М	L	Н	М	L	L
High disturbance at AA (see #12i)	М	М	М	L	М	М	L	L	М	М	L	L	М	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)

Fridance of wildlife use (i)	Wildlife habitat features rating (ii)										
Evidence of wildlife use (i)	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.

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	Opt	imal	Adeo	luate	Po	or	Opt	imal	Adec	quate	Po	or	Opt	imal	Adec	luate	Po	oor
Thermal cover optimal / suboptimal	0	S	0	S	0	S	0	S	0	S	0	S	0	S	0	S	0	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)	0 ,	entrenche stream typ			ely entrend tream 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	.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 (ER)



SI	ightly Entrenche ER = >2.2	d	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 fe	et	1.11	to 5 acre	feet	\ \	1 acre fo	oot
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	potential to or compour are n sedimentat	deliver levels nds at levels ot substantia ion, sources	unding land of sof sediment such that oth lly impaired. of nutrients othication pres	s, nutrients, er functions Minor or toxicants,	developmen nutrients, or t use with po nutrients, o substantially	t for "probable of coxicants or AA otential to delive or compounds su or impaired. Majo	waterbodies in r causes" related receives or surrer high levels of uch that other fu or sedimentation ns of eutrophica	to sediment, rounding land sediments, unctions are n, sources of
% cover of wetland vegetation in AA	>= 7	70%	< 7	0%	>= 7	70%	< 7	0%
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	.9H .7M .6M .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 14l.)

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

		1 0/							
% Cover of wetland streambank or	Duration of surface water adjacent to rooted vegetation								
shoreline by species with stability ratings of >=6 (see Appendix F).	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	General V	General Wildlife Habitat Rating (14C.iii.)								
Rating (14D.iii.)	E/H	M	L							
E/H	Н	Н	M							
M	Н	M	M							
L	M	M	L							
N/A	Н	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 (14!.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].)

Α		Vegetat	ed com	onent >	5 acres		Vegetated compone				-5 acres	;	Vegetated component < 1 acre					
В	Hi	gh	Mod	erate	Lo	W	Hi	gh	Mod	erate	Lo	W	Hi	gh	Mode	erate	Lo	W
С	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

iv. Final Score and Rating: 0.70M Comments: A restricted surface water outlet is present to the south.

i. Discharge Indicators				i	i. Recharge	Indicators			
The AA is a slope wetland					Permeable su		ent without ur	nderlying imp	eding layer
Springs or seeps are known	or observed				Wetland conta				
Vegetation growing during do		on/drought			Stream is a kr	nown 'losing'	stream; disc	harge volume	decreases
Wetland occurs at the toe of		_			Other:	_			
AA permanently flooded duri	ng drought p	eriods							
Wetland contains an outlet, b	out no inlet								
X Shallow water table and the	site is satura	ited to the sur	face						
Other:									
ii. Rating (use the information from i	and ii above					-		7	
					tlands <i>FROI</i> R <i>THAT IS RI</i>				
		<u>DISCH</u>			TER SYSTEM		INE		
0 "									
Criteria									
Groundwater Discharge or Rechai	rge	ПП		N/			.1L	4	
Insufficient Data/Information Comments: Shallow groundwater tal	blo dogumer	atad in the law	vor alayation			and the eve	avatad shan		
Comments. Shallow groundwater tal	bie documei	ited in the lov	vei elevations	s oi depiessi	orial wellarius	s and the ext	avaleu chan	iriei.	
4K. Uniqueness:									
. Rating (working from top to bottom,	use the mat	rix below to a	rrive at [circle	e] the function	nal points an	d rating)			
	A A contain	o for hos w	arm anringa	AA does no	ot contain pre	viously cited	^ ^ dooo no	t contain prev	dayah aita
		is fen, bog, w e (>80 yr-old			and structur			es or associat	
Replacement potential		r plant associ			high or conta			l diversity (#1	
	as "S	S1" by the MT	NHP	associali	on listed as " MTNHP	52 by the		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 structura	al diversity is	high.		•			•	
4L. Recreation/Education Potentia									
. Is the AA a known or potential rec		circle) (i	f 'Yes' contin	ue with the	evaluation; if '	No' then mar	k X NA a	nd proceed to	the
overall summary and rating pa	• ,								
 Check categories that apply to the 	ne AA:	-	scientific stud	dy;Con	sumptive rec	;Non-c	onsumptive	rec.;	
		Other :							
ii. Rating:								_	_
Known or Potential Recreation or Ed	lucation Area	Э					Known	Potential	
Public ownership or public easem	ent with ge	neral public	access (no _l	permission	required)		.2H	.15H	_
Private ownership with general pu							.15H	.1M	_
Private or public ownership witho					on for public	access	.1M	.05L	╛
Comments: Landowner does not allo	ow public ac	cess or educa	ational use of	the site.					
0 10" N 1									
General Site Notes AA contains a diversity of habitats ar	ad wildlifa								

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	Н	0.90	1	0.99	*
C. General Wildlife Habitat	М	0.70	1	0.77	*
D. General Fish Habitat	NA				
E. Flood Attenuation	Н	0.90	1	0.99	*
F. Short and Long Term Surface Water Storage	М	0.60	1	0.66	
G. Sediment/Nutrient/Toxicant Removal	Н	1.00	1	1.10	*
H. Sediment/Shoreline Stabilization	NA				
I. Production Export/Food Chain Support	М	0.70	1	0.77	
J. Groundwater Discharge/Recharge	М	0.70	1	0.77	
K. Uniqueness	М	0.60	1	0.66	
L. Recreation/Education Potential (bonus points)	NA				
Totals:		6.20	9.00	6.82	
Percent of Possible Score			69%		

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: 07/19/2022 4. Evaluator(s): J Trilling, S Weyant, M. Hickey 5. Wetlands/Site #(s): Restoration

6. Wetland Location(s): i. Legal: T4N,R9E,32 Latitude/Longitude: 46.059745, -110.638674: Center of AA

% of AA

93.00

7.00

ii. Approx. Stationing or Mileposts: NA

iii. Watershed: 13

Watershed Name, County: Upper Yellowstone, Park

Modifier

(Cowardin)

Ε

Ε

Water Regime

SI

SI

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

Class

(Cowardin)

ΕM

SS

4. Other:

HGM Class

(Brinson)

R

10. Classification of Wetland and Aquatic Habitats in AA

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

1.640 acres (measured)

1.640 acres (measured)

Wetland (FO)

8. Wetland size:

9. Assessment area (AA):

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)

	Predomin	ant conditions adjacent to (within 500 t	feet of) AA
Conditions within 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 existence of additional		Modified Rating
>= 3 (or 2 if 1 is forested) classes	Н	NA	NA	NA
2 (or 1 if forested) classes	M	NA	NA	NA
1 class, but not a monoculture	М	< 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)

Incidental habitat (list species)
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 2023

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	.9Н	.7M	.6M	.5M	.2L	.1L	0L

Sources for documented use (e.g. observations, records, etc): MTNHP, 2013 and 2019-2022 field observations. Bobolink nesting on site documented by MDT staff. Bald Eagle observed onsite in 2023.

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, e	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)		Ev	en			Une	even			Ev	en			Une	even			Εν	en	
Duration of surface water in >=10% of AA	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α
Low disturbance at AA (see #12i)	Е	E	Е	Н	Е	E	Н	Н	Е	Н	Н	М	E	Н	М	М	Е	Н	М	М
Moderate disturbance at AA (see #12i)	Н	Н	Н	Н	Н	Н	Н	М	Н	Н	М	М	Н	М	М	L	Н	М	L	L
High disturbance at AA (see #12i)	М	М	М	L	М	М	L	L	М	М	L	L	М	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)

Fuidance of wildlife use (i)	Wildlife habitat features rating (ii)									
Evidence of wildlife use (i)	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 a Bald Eagle was observed soaring above the site in 2023.

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	Opt	imal	Adeo	luate	Po	or	Opt	imal	Adeo	quate	Po	or	Opt	imal	Adeo	quate	Po	oor
Thermal cover optimal / suboptimal	0	S	0	S	0	S	0	S	0	S	0	Ø	0	S	0	S	0	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.

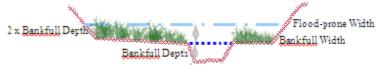
14E. Flood Attenuation: (Applies only to wetlands subject to flooding via in-channel or overbank flow. If wetlands in AA are not flooded from in-channel or overbank flow, mark **NA** and proceed to 14F.)

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)	, ,	entrenche stream typ	, ,		ely entrend 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	.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)
WIGHT	WIGHT	(<i>ER</i>)



SI	ightly Entrenche ER = >2.2	d	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			1.11	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	potential to or compour are no sedimentat	deliver levels nds at levels ot substantia ion, sources	ounding land of sof sediment such that oth ally impaired. of nutrients contication pres	s, nutrients, er functions Minor or toxicants,	developmen nutrients, or t use with po nutrients, o substantially	t for "probable of toxicants or AA otential to delive r compounds so impaired. Majo	waterbodies in r causes" related receives or surrer high levels of uch that other fu or sedimentation ns of eutrophica	to sediment, rounding land sediments, unctions are n, sources of
% cover of wetland vegetation in AA	>= 7	70%	< 7	0%	>=	70%	< 7	0%
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 <u>wetland</u> streambank or	Duration of surface water adjacent to rooted vegetation								
shoreline by species with stability ratings of >=6 (see Appendix F).	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	General Wildlife Habitat Rating (14C.iii.)							
Rating (14D.iii.)	E/H	M	L					
E/H	Н	Н	M					
M	Н	M	M					
L	M	M	L					
N/A	Н	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 (14!.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].)

Α	Vegetated component >5 acres					Vegetated component 1-5 acres						Vegetated component < 1 acre						
В	B High		Mod	erate	Low		High		Moderate		Low		High		Moderate		Low	
С	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:									
iii. Rating (use the information from i	and ii above					al points and		1	
			ARGE OR W	ITH WATER		CHARGING			
Criteria		P/P		S/I	Т		None		
Groundwater Discharge or Rechar	rge	1H		.7M	.4M		.1L		
Insufficient Data/Information			-	N/A		•			
Comments: Channel is intermittently 14K. Uniqueness: i. Rating (working from top to bottom,				e] the functio	nal points an	d rating)			
Replacement potential	or matu wetland c	contains fen, bog, warm springs mature (>80 yr-old) forested land or plant association listed as "S1" by the MTNHP AA does not contain previousl rare types and structural div. (#13) is high or contains plant association listed as "S2" by MTNHP		al diversity ains plant	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 Ed	lucation Are	a a					Known	Potential	7
			access (no i	permission	required)		.2H	.15H	┪
Public ownership or public easement with general public access (no permission required) 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			access	.1M	.05L	7			
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	Н	0.90	1	1.48	*
C. General Wildlife Habitat	М	0.70	1	1.15	*
D. General Fish Habitat	NA				
E. Flood Attenuation	М	0.60	1	0.98	
F. Short and Long Term Surface Water Storage	М	0.60	1	0.98	
G. Sediment/Nutrient/Toxicant Removal	Н	1.00	1	1.64	*
H. Sediment/Shoreline Stabilization	Н	0.90	1	1.48	*
I. Production Export/Food Chain Support	М	0.70	1	1.15	
J. Groundwater Discharge/Recharge	М	0.70	1	1.15	
K. Uniqueness	М	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
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.

Table B-1. Easton Ranch Wetland Mitigation Site. Comprehensive Vegetation Species List 2010 – 2023

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
<i>Arctium</i> 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
<i>Dracocephalum</i> sp.	Dragonhead	UPL
Eleocharis palustris	Common Spike-Rush	OBL
<i>Elodea</i> sp.	Waterweed	NA
Elymus repens	Creeping Wild Rye	FAC
<i>Elymus</i> 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
Scientific Number		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 2023 are **bolded.**

APPENDIX C PROJECT AREA PHOTOGRAPHS

MDT Wetland Mitigation Monitoring Easton Ranch Park County, Montana

Easton Ranch: Photo Point Photos



Photo Point: 1 Bearing: 250 degrees

Location: East Boundary Year: 2010



Photo Point: 1 Bearing: 250 degrees

Location: East Boundary Year: 2023



Photo Point: 2 Bearing: 200 degrees

Location: Northeast Corner Year: 2010



Photo Point: 2 Bearing: 200 degrees

Location: Northeast Corner Year: 2023



Photo Point: 3 Bearing: 100 degrees

Location: Northwest Corner Year: 2010



Photo Point: 3 Bearing: 100 degrees

Location: Northwest Corner Year: 2023

Easton Ranch: Photo Point Photos



Photo Point: 4A Bearing: 170 degrees





Photo Point: 4A Bearing: 170 degrees

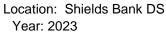




Photo Point: 4B Bearing: 20 degrees



Year: 2010

Location: Shields Bank US Year: 2010



Photo Point: 4B Bearing: 20 degrees

Location: Shields Bank US Year: 2023 - 2021 location*



Photo Point: 5 Bearing: 90 degrees

Location: West Boundary Year: 2010



Photo Point: 5 Bearing: 90 degrees

Location: West Boundary Year: 2023

^{*} new (2021) photo point location due to bank loss during high flows in 2018.

Easton Ranch: Photo Point Photos



Photo Point: 6 Bearing: 0 degrees

Location: Southwest Corner Year: 2010



Photo Point: 6 Bearing: 0 degrees

Location: Southwest Corner Year: 2023



Photo Point: 7 Bearing: 340 degrees

Location: Southeast Corner Year: 2010



Photo Point: 7 Bearing: 340 degrees

Location: Southeast Corner Year: 2023

1001. 2020

Easton Ranch: Transect Photos



Transect 1: Start Bearing: 5 degrees

Location: Veg Com 8 foreground Year: 2010



Transect 1: Start Bearing: 5 degrees

Location: Veg Com 21 foreground Year: 2023



Transect 1: End Bearing: 185 degrees

Location: Veg Com 8 foreground Year: 2010



Transect 1: End Bearing: 185 degrees

Location: Veg Com 10 foreground Year: 2023



Transect 2: Start Bearing: 185 degrees

Location: Veg Com 1 foreground Year: 2010



Transect 2: Start Bearing: 185 degrees

Location: Veg Com 3 foreground Year: 2023

Easton Ranch: Transect Photos



Transect 2: End Bearing: 0 degrees

Location: Veg Com 1 foreground Year: 2010



Transect 2: End Bearing: 0 degrees

Location: Veg Com 13 foreground Year: 2023



Transect 3: Start Bearing: 95 degrees

Location: Veg Com 1 foreground Year: 2010



Transect 3: Start Bearing: 95 degrees

Location: Veg Com 13 foreground Year: 2023



Transect 3: End Bearing: 265 degrees

Location: Veg Com 1 foreground Year: 2010



Transect 3: End Bearing: 265 degrees

Location: Veg Com 1 foreground Year: 2023



Data Point: DP01w Year: 2023



Data Point: DP01u Year: 2023

Location: Veg Com 18



Data Point: DP02w Year: 2023



Location: Veg Com 11



Data Point: DP02u Year: 2023

Location: Veg Com 1



Data Point: DP03w Year: 2023





Data Point: DP03u Year: 2023

Location: Veg Com 1



Data Point: DP04w Year: 2023

Location: Veg Com 5



Data Point: DP04u Year: 2023

Location: Veg Com 1



Data Point: DP05w Year: 2023

Location: Veg Com 14



Data Point: DP05u Year: 2023

Location: Veg Com 13



Data Point: DP06w Year: 2023

Location: Veg Com 14



Data Point: DP06u Year: 2023

Location: Veg Com 13



Data Point: DP07w Year: 2023

Location: Veg Com 11



Data Point: DP07u Year: 2023

Location: Veg Com 16



Data Point: DP08w Year: 2023

Location: Veg Com 14



Data Point: DP08u Year: 2023

Location: Veg Com 18



Data Point: DP09w Year: 2023

Location: Veg Com 21



Data Point: DP09u Year: 2023

Location: Veg Com 1



Data Point: DP10w Year: 2023

Location: Veg Com 20



Data Point: DP10u Year: 2023 Location: Veg Com 1