Montana Department of Transportation Wetland Mitigation Monitoring Report

EASTON RANCH MITIGATION SITE

Project Overview

Watershed: Watershed #13 – Upper Yellowstone River Basin

Monitoring Year: 2022

Years Monitored: 13th year of monitoring

Corps Permit Number: NWO-2006-90370-MTB

Monitoring Conducted By: Confluence Consulting Inc

Dates Monitoring Was Conducted: July 19, 2022

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 mitigation site of 34.31 acres, more or less 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 11

Mitigation Site Construction Started: 2009 Construction Ended: 2009

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

Activity: No weed spraying was conducted in 2022

Specific recommendations for any additional corrective actions: The MDT has an ongoing weed-control program and will assess the need for additional weed treatments in 2023. Soil lifts and riprap installed along the bank of the Shields River are still eroding in the northwestern corner of the site. This bank area is generally dominated by shallow-rooting pasture grasses. MDT will assess this bank erosion and potential need for corrective actions.

Anticipated Wetland Credit Acres: 27.41

Wetland Credit Acres Generated to Date: 15.44

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

Requirements (from approved mitigation plan, banking instrument, or Department of Army (DA) permit conditions)

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 2022 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 vegetating, which reflects wetlands are saturated for 12.5 percent of the growing season.
Wetland Hydrology	Groundwater wells will be left undisturbed within the site for the purpose of monitoring groundwater elevations during the growing season.	N	No groundwater wells remain on site. Because of construction activities, the original monitoring wells were removed from the site.
	Groundwater is filling the depressional wetlands excavated into the upland areas of the site.	Y	Hydrologic indicators observed within the excavated wetlands include surface water, high water table, saturation, oxidized rhizospheres on living roots, hydrogen sulfide odor, geomorphic position, and a positive FAC-Neutral test.
	Constructed stream channel is stable.	Y	The constructed floodplain channel is stable with minimal bank erosion identified throughout the mitigation area.
	Hydric soil conditions present or appear to be forming.	Y	All constructed wetlands exhibit hydric soil development (e.g., hydrogen sulfide, depleted matrix, redox dark surface).
Hydric Soil	Soil is sufficiently stable to prevent erosion.	Υ	Disturbed soil is stable and does not exhibit signs of erosion.
	Soil is able to support plant cover.	Y	Plant cover has continued to develop across disturbed soils.
Hydrophytic Vegetation	Achieved when wetlands delineated as hydrophytic using technical guidelines.	Υ	Areas identified as wetland habitat within the mitigation site support a prevalence of hydrophytic vegetation (OBL, FACW, and FAC).
Woody Plants	Trees and shrubs will be installed and survival assessed.	Υ	Trees and shrubs have been planted throughout the mitigation site and are assessed during each yearly monitoring visit.

Performance Standards	Success Criteria	Criteria Achieved (Y/N)	Discussion
	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 progression toward that goal at the end of the defined monitoring period.	Υ	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 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 15.44 net wetland credit acres has been generated for the mitigation site and includes 13.24 acres of established wetland, 1.64 acres of restored wetland, 0.28 acres of preserved wetland, and 0.95 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 71% of total wetland areas delineated in 2022.
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 2022, exceeding the success criteria of 15-20%.
Development	Open water will be < 5% of wetland area.	Y	Open water comprised less than .003% of total wetland areas delineated in 2022. 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.	Y	Vegetation transect across the floodplain has been monitored yearly and supports a prevalence of species with a root-stability index greater than 6.
Bank Stabilization	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.
(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 2022, soil lifts and the riprap installed along the bank continue to erode near

Performance Standards	Success Criteria	Criteria Achieved (Y/N)	Discussion
			the northwestern corner of the site. Installed willow cuttings did not establish along this bank.
	Noxious weeds do not exceed 10 percent cover within upland buffer area.	Υ	Noxious weed cover is estimated at less than 5 percent within the upland buffer.
Upland Buffer	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.	Υ	Absolute cover of state-listed noxious weed species is estimated at 2 percent across the site in 2022.
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, except for one small section of fencing along the northeastern boundary that was damaged from a falling cottonwood tree in 2021 and was not repaired in 2022.
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 13 years since the completion of construction activities in 2009.

Summary Data

Wetland Delineation – The total wetland acreage delineated in 2022, including pre-existing wetland areas, was 15.98 acres, which is a decrease of 0.01 acres since 2021 (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 2022. 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 15.98 acres delineated in 2022.

Overall, the wetland acreage remained nearly identical to the 2021 acreage in 2022. The slight 0.01-acre net loss was due to a small reduction in size of the wetland cell along the southern boundary of the project area. In 2021, wetlands expanded in the northeast portion of the project area, and it was anticipated they may expand further in 2022. However, the 2022 delineation found the boundaries did not change, which could be a result of dry conditions in the latter part of 2021 and continuing into 2022. From July 2021 to June 2022 Park County, MT was rated as D2 (-3 to -4) or D3 (-4 to -5) on the Palmer Drought Severity Index (PSDI), or severe to extreme drought conditions (NMDC, 2022) which may have contributed to the cessation of the wetland expansion observed in 2021.

Table 2. Upland, Wetland & Aquatic Habitat Acreage Delineated in 2022 at the Easton Ranch Site

Habitat Type	2022 Acreage
Uplands	18.33
Wetlands &	
Aquatic Habitat	
Emergent	11.45
Scrub-Shrub	4.48
Open Water	0.05
Subtotal	15.98
Project Area	34.31

Vegetation – A total of 178 plant species were identified on the site from 2010 through 2022. Vegetation communities were identified by species composition and dominance. The following six upland and 12 wetland vegetation community types were identified and mapped in 2022:

- Upland Type 1 Phleum pratense/Poa pratensis
- Upland Type 10 Bromus inermis/Populus tremuloides
- Upland Type 13 Bromus inermis/Phleum pratense
- Upland Type 16 Elymus repens/Poa pratensis
- Upland Type 17 Phleum pratense/Elymus repens
- Upland Type 18 Lotus corniculatus/Phleum pratense
- Wetland Type 3 Carex spp.
- 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 22 Phleum pratense/Elymus repens
- Wetland Type 23 Lotus corniculatus/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). In 2021 in the northeastern portion of the project area, portions of upland community types were split along the expanded wetland boundary into new Wetland Types 22 and 23. Considering the increase in wetland acreage in this area, it was thought the wetland may expand further into Upland Types 17 and 18 converting them into communities dominated by hydrophytic species. In addition, it was thought Wetland Types 22 and 23 might become more dominated by hydrophytic species, warranting a new community type designation. However, the 2022 delineation revealed the wetlands did not expand, nor did the vegetation communities in the northeast portion of the project area

transition to plant communities more dominated by hydrophytic plant species. This area seems to be a marginal wetland area, highly influenced by the year-to-year hydrology of the site, and particular attention should be paid to this area in future monitoring.

Vegetation cover was measured along three transects in 2022 (Figure A-2, Appendix A) and was largely unchanged from 2021. Details of each transect are provided in the site monitoring form in Appendix B. Photographs of the transect end points 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) 1, 10, 16, 17, and 18 and Wetland Types (WT) 7, 11, 14, 15, 21, 22, and 23. Sixty-two percent of the transect crossed wetland habitat, and 38 percent crossed upland habitat, which is unchanged since 2021. Wetland Types 22 and 23 are still dominated by facultative (FAC) species and have not yet shifted to a dominance of more FACW and OBL species. Total vegetative species increased by eight, with six of those species being upland and two hydrophytic. Total vegetative cover has remained relatively constant at 85–91 percent from 2017 to 2022.

Table 3. Data Summary for T-1 From 2017 Through 2022 at the Easton Ranch Site

Monitoring Year	2010	2018	2019	2020	2021	2022
Transect Length (feet)	1,376	1,376	1,376	1,376	1,376	1,376
Vegetation Community Transitions Along Transect	11	12	12	13	17	17
Vegetation Communities Along Transect	3	8	10	9	12	12
Hydrophytic Vegetation Communities Along Transect	1	4	4	5	7	7
Total Vegetative Species	33	50	52	54	53	62
Total Hydrophytic Species	15	32	32	38	40	42
Total Upland Species	18	18	20	16	13	19
Estimated % Total Vegetative Cover	65	89	89	90	91	91
Estimated % Unvegetated	35	11	11	10	9	9
% Transect Length Comprising Hydrophytic Vegetation Communities	28	19.1	19.3	42.2	61.7	61.7
% Transect Length Comprising Upland Vegetation Communities	70	80.9	80.7	57.8	38.3	38.3
% 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 transect remained relatively unchanged from 2021. T-2 is 1,333 feet long, runs north to south across the west side of the site, and intersects Upland Types 1, 13, and 18 and Wetland Types 3, 7, 11, 14, 15, and 21. Hydrophytic vegetation communities comprised 61.7 percent of the transect in 2022. Total vegetative species increased by one with a net loss of two hydrophytic species and a gain of three upland species. Total vegetative cover has remained relatively constant at 85–91 percent from 2017 to 2022.

Table 4. Data Summary for T-2 From 2017 Through 2021 at the Easton Ranch Site

Monitoring Year	2010	2018	2019	2020	2021	2022
Transect Length (feet)	1,333	1,333	1,333	1,333	1,333	1,333

Vegetation Community Transitions Along Transect	11	14	14	13	11	11
Vegetation Communities Along Transect	4	8	9	9	9	9
Hydrophytic Vegetation Communities Along Transect	2	5	6	6	6	6
Total Vegetative Species	35	54	59	61	60	61
Total Hydrophytic Species	17	44	46	46	47	45
Total Upland Species	18	10	13	15	13	17
Estimated % Total Vegetative Cover	65	87	90	90	91	91
Estimated % Unvegetated	35	13	10	10	9	9
% Transect Length Comprising Hydrophytic Vegetation Communities	38.7	40.9	46.1	46.5	61.7	61.7
% Transect Length Comprising Upland Vegetation Communities	61.3	59.1	53.9	53.5	38.3	38.3
% Transect Length Comprising Unvegetated Open Water	0.0	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	0.0

Data collected on T-3 (Wetland Mitigation Site Monitoring form, Appendix B) are summarized in Table 5. This transect remained relatively unchanged since 2021. T-3 is 732 feet long, runs west to east across the south end of the site, and intersects vegetation communities, Upland Types 1 and 13 and Wetland Types 11 and 14. Approximately 55 percent of the transect crossed wetland habitat in 2022. The total number of species (both hydrophytic and upland) were similar in number to that observed in 2021. Total vegetative cover has remained relatively constant at 85–91 percent from 2017 to 2022.

Table 5. Data Summary for T-3 From 2017 Through 2021 at the Easton Ranch Site

Monitoring Year	2010	2018	2019	2020	2021	2022
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	4
Hydrophytic Vegetation Communities Along Transect	1	2	2	2	2	2
Total Vegetative Species	24	42	40	29	27	27
Total Hydrophytic Species	11	30	27	19	19	19
Total Upland Species	13	12	13	10	8	8
Estimated % Total Vegetative Cover	65	90	91	90	91	91
Estimated % Unvegetated	35	10	9	10	9	9
% Transect Length Comprising Hydrophytic Vegetation Communities	45	51.1	51.5	54.8	54.5	54.5
% Transect Length Comprising Upland Vegetation Communities	55	48.9	48.5	45.2	45.5	45.5
% Transect Length Comprising Unvegetated Open Water	0.0	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	0.0

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 was attempted in 2022 but 13 years after construction it was 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*), 51

sandbar willow (*Salix exigua*), 99 speckled alder (*Alnus incana*), and 85 willow cuttings were identified as surviving. During the 2022 monitoring event, only healthy trees and shrubs were observed so it can be assumed all the woody species counted in 2021 were surviving in 2022.

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, sandbar willow, and black cottonwood (*Populus balsamifera*) were noted along the channel, are establishing well, and have slightly increased in abundance and cover since 2021. Volunteer sandbar 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. Wetland Type 15 absorbed a portion of WT11 at the east-central portion of the site due to an increase of willows and black cottonwood cover. Young cottonwoods were also observed within WT1, 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.

During the July 2022 monitoring, five small new infestations of Canada thistle (*Cirsium arvense*), a Priority 2B noxious weed in Montana, were identified (Figure A-3, Appendix A). In addition, six of the seven Canada thistle infestations found in 2021 were also identified in 2022 for a combined total of 10 populations. All the Canada thistle infestations were less than 0.1-acre in size. Six of the population's cover class was rated as trace (< 1 percent), three populations were rated low (1–5 percent), and one population was rated moderate (6-25 percent). Canada thistle infestations were found in both upland and wetland habitats. Canada thistle was observed in WT's 4, 5, 11, 14, 15, and 20; TWT 23, and UT 10.

Two infestations of gypsy-flower (*Cynoglossum officinale*) was observed during 2022 (Figure A-3, Appendix A). Both gypsy-flower populations were rated as cover class trace and located in UTs 13 and 14. Overall, annual weed management efforts have effectively reduced infestation size and cover of noxious weed populations across the site. However, a slight increase in weed cover was observed in 2022 compared to 2021. MDT has an ongoing weed-control program, which has successfully kept weed populations low.

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 two surface-water diversions in the northern portion of the site. The surface-water diversions at the site, a ditch along the northcentral boundary, and an irrigation canal located at the northeastern corner of the mitigation site were not flowing during the July 2022 site visit. Approximately one percent of the site was inundated during the 2022 monitoring event, which is a significant decrease from the 10 percent observed in 2021. The reduction in inundation is likely the result of the monitoring occurring nearly a month later in 2022 than in 2021. Only the deepest depressional areas within the channel in and around the open water at the east-central portion of the site and the large wetland cell located at the southwestern portion of the site were inundated during the 2022 site visit. Inundation within these areas ranged from 0.5 to 18 inches in depth. The open water area observed in 2021 at the west-central portion of the site did not contain open water in 2022 but was saturated. Saturation within the lower elevations of the wetland cells was common, but not as prevalent as in 2021, which is likely due to the monitoring event occurring nearly a month later in the year in 2022. As in 2021, there is no 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 area mapped as Meadowcreek soil series by the Natural Resources Conservation Service (NRCS), which is not classified as a hydric soil (Figure A-2, Appendix A). Soil textures within wetland soil pits ranged from sandy loam to silty clay. Hydric soil indicators were observed within all wetland soil pits and included depleted matrix, redox dark surface, and hydrogen sulfide.

Soil textures within upland soil pits ranged from sandy loam to silty clay. 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 2022 and the first year of monitoring. Please refer to previous years' monitoring reports for all previous annual photographs. https://www.mdt.mt.gov/publications/brochures/wetland-mitigation.aspx

Functional Assessment — The 2022 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 General Wildlife Habitat, MT Natural Heritage Program Species Habitat, Flood Attenuation, Short- and Long-Term Surface-Water Storage, and Sediment/Nutrient/Toxicant Removal.

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

Function and Value Parameters From the	2022	2022	2022
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 (0.9)	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 (0.8)
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	6.60 / 9	7.40 / 10
% of Possible Score Achieved	66%	73%	74%
Overall Category	II	II	II

Wildlife — Fifteen bird species were identified at the site in 2022, including a Bald Eagle and an immature Golden Eagle (Site Monitoring Form Appendix B). Bird boxes installed in 2017 were checked, and all but three appeared stable and in good condition. In addition to the bird species, chorus frogs were noted in wetlands across the site, and white-tailed deer 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 2022, 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 2022 functional units summary is summarized in Table 7. A total of 109.51 functional units were generated at the Easton site after applying the appropriate mitigation ratios to the 2022 wetland acreage and multiplying that value by the points generated from the assessment area.

Table 7. Functional unit's summary for Easton wetland mitigation site

Mitigation Type	2022 Delineated Acreage	Ratio	2022 Mitigation Credit Acres	MWAM Actual Points	Functional Units
Restoration (Re-establishment)	1.64	1:1	1.64	6.60	10.82
Preservation	0.43ª	4:1	0.28	6.60	0.71
Establishment (Creation)	13.24	1:1	13.24	7.40	97.98
Functional Units (Mitigation Credit Acres × Actual Points)					109.51

^a0.64 acres of project impacts were subtracted from the total preservation acreage of 1.10

Credit Summary — Table 8 summarizes the estimated wetland credits based on the USACE-approved credit ratios and the wetland delineation completed in July 2022. 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 2022 totaled 15.44 credit acres, which is slightly less than 2021. The site is still approximately 11.97 acres short of the original goal of 27.41 credit acres. Anticipated wetland acreage has not developed as planned in the eastern, west-central, and southwest portions of the site, and is the cause behind this shortfall.

Table 8. Wetland Mitigation Credits Estimated for the Easton Ranch Site (2019–2022)

Proposed Mitigation Features	Compensatory Mitigation Type	USACE Mitigation Ratios	Anticipated Final Credit Acreages	Proposed Final Wetland Credits (Acres)	2019 Wetland Acreages	2019 Credit Estimated (Acres)	2020 Wetland Acreages	2020 Credit Estimated (Acres)	2021 Wetland Acreages	2021 Credit Estimated (Acres)	2022 Wetland Acreages	2022 Credit Estimated (Acres)
Creation of palustrine emergent wetland via shallow excavation	Establishment (Creation)	1:1	24.95	24.95	9.63	9.63	11.15	11.15	13.25	13.25	13.24	13.24
Reestablishment of relic flood channel	Restoration (Reestablishment)	1:1	1.56	1.56	1.56	1.56	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	Upland Buffer	5:1	6.43	1.29	11.5 ^a	2.3	14.28 ^b	2.86	5.07 ^c	1.01	4.77 ^d	0.95
Project impacts			-0.67	-0.67	-0.67	-0.67	-0.67	-0.67	-0.67	-0.67	-0.67	-0.67
-	Total Mitigation Cred	dit Acres:	-	27.41	-	13.10		15.26	-	15.51	-	15.44

^a50-foot upland buffer calculated in GIS and carried forward by RESPEC through 2019. Upland buffer established around mapped wetland boundaries, not the perimeter of the site.

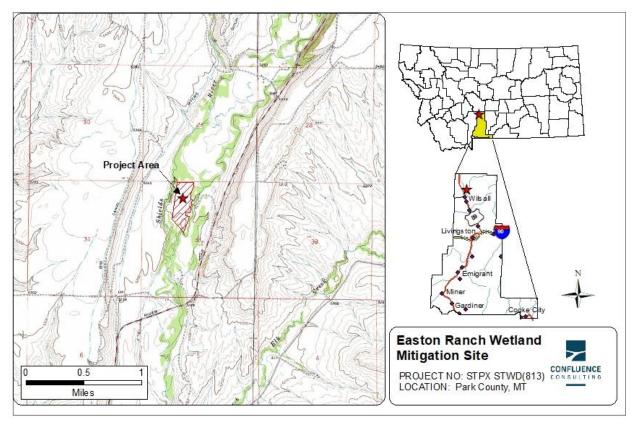
^b50-foot upland buffer calculated in GIS in 2020 by Confluence. Upland buffer established around 2020 mapped wetland boundaries, not the perimeter of the site.

^c50-foot upland buffer calculated in GIS in 2021 by Confluence. Upland buffer established around perimeter of site in areas visually identified as upland during the 2021 monitoring event

d50-foot upland buffer calculated in GIS in 2022 by Confluence. Upland buffer established around perimeter of site and does not include wetlands within the buffer.

Maps, Plans, Photos

Figure 1. Site Location Map



Project Area Maps/Figures: See Appendix A (Figure A-2 – 2022 Monitoring Activity Locations; Figure A-3 – 2022 Mapped Site Features; and Figure A-4 – 2022 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

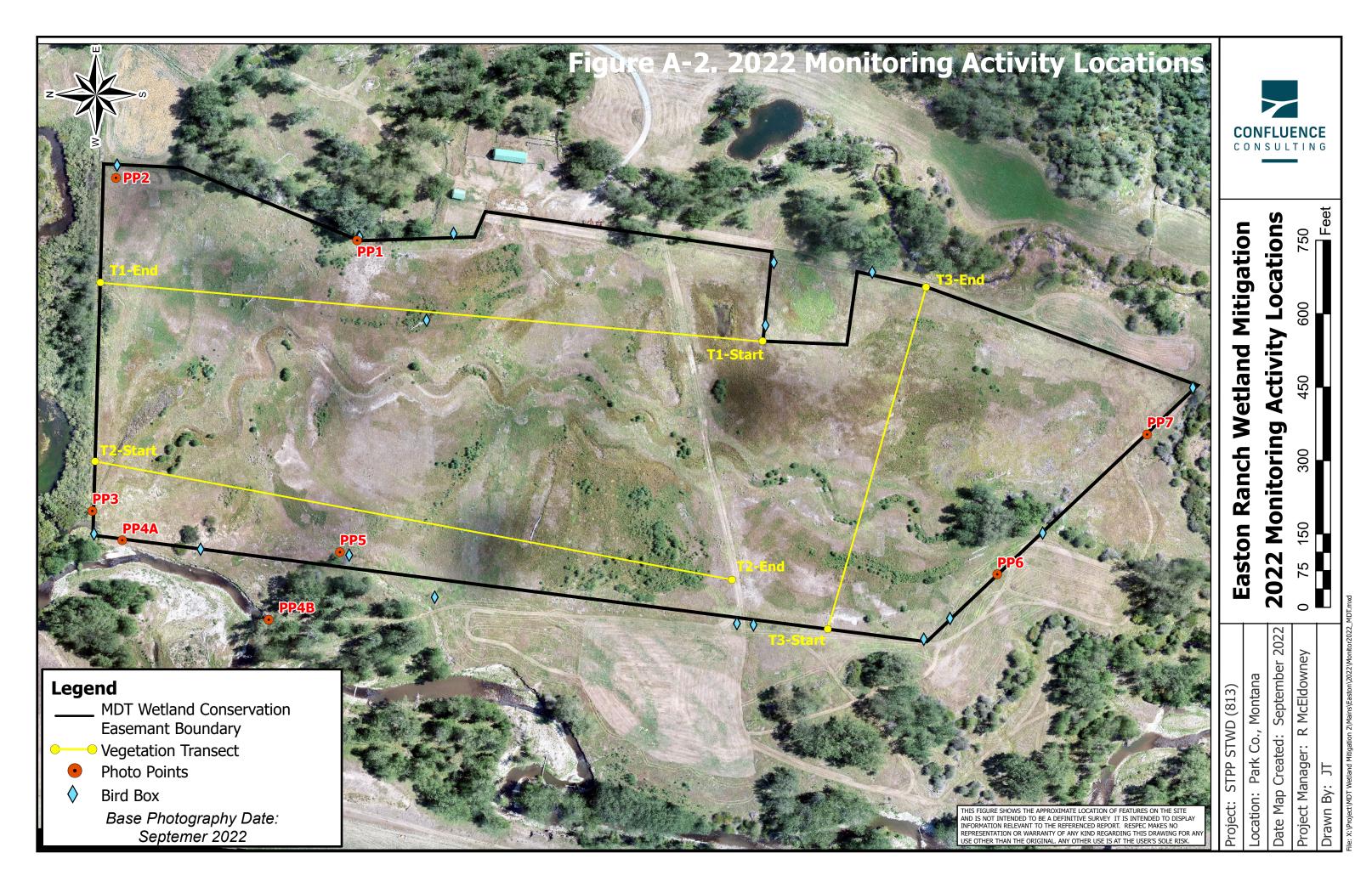
Based on the results of the thirteenth year of monitoring, the mitigation site is continuing an upward trend toward a diverse wetland ecosystem. The site is meeting all performance standards except for wetland hydrology (groundwater wells), wetland acreage development, and bank stabilization (deeprooting riparian vegetation establishment). MDT will discuss the difficulties in meeting these performance standards and potential remedial actions.

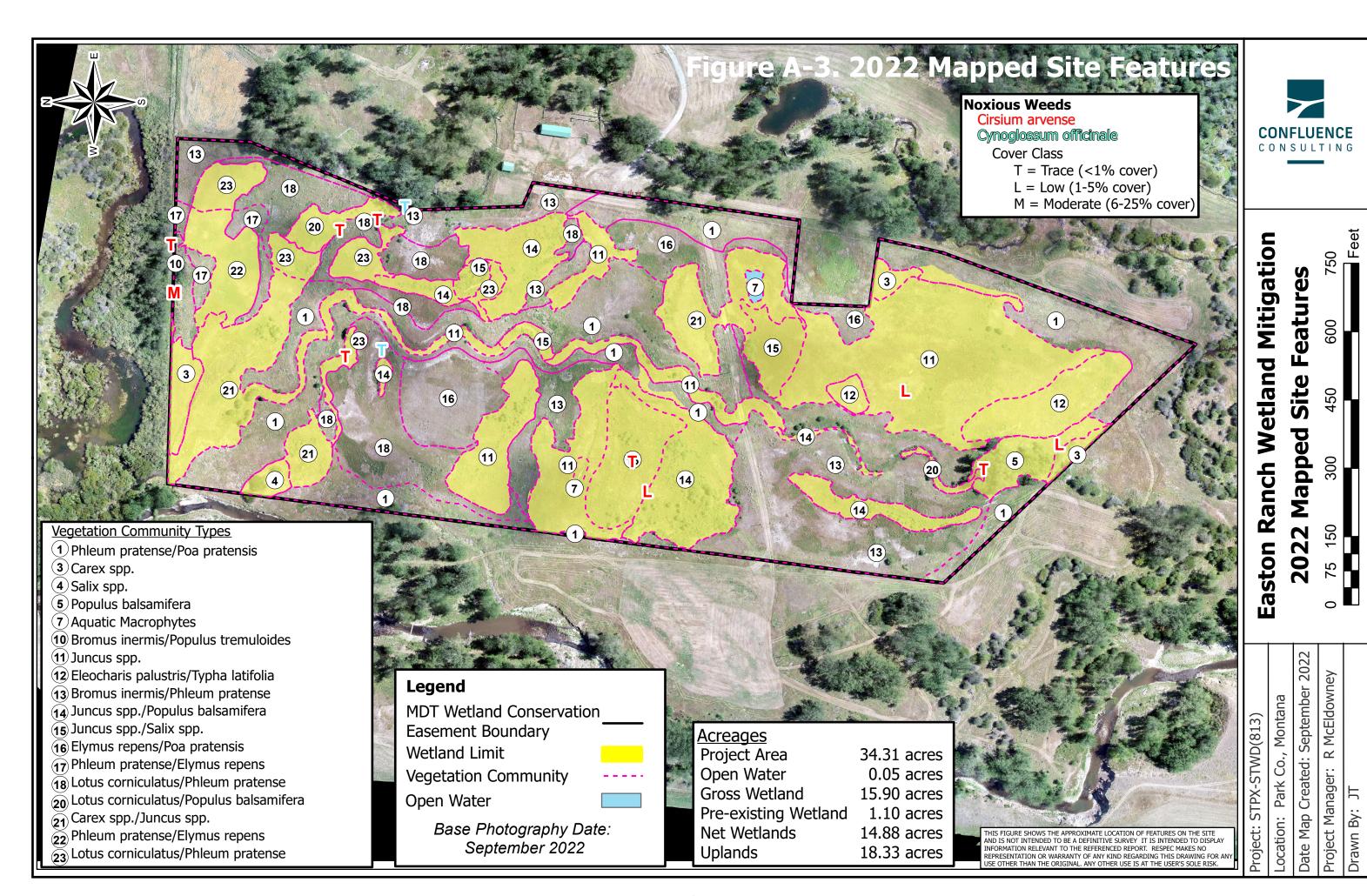
References

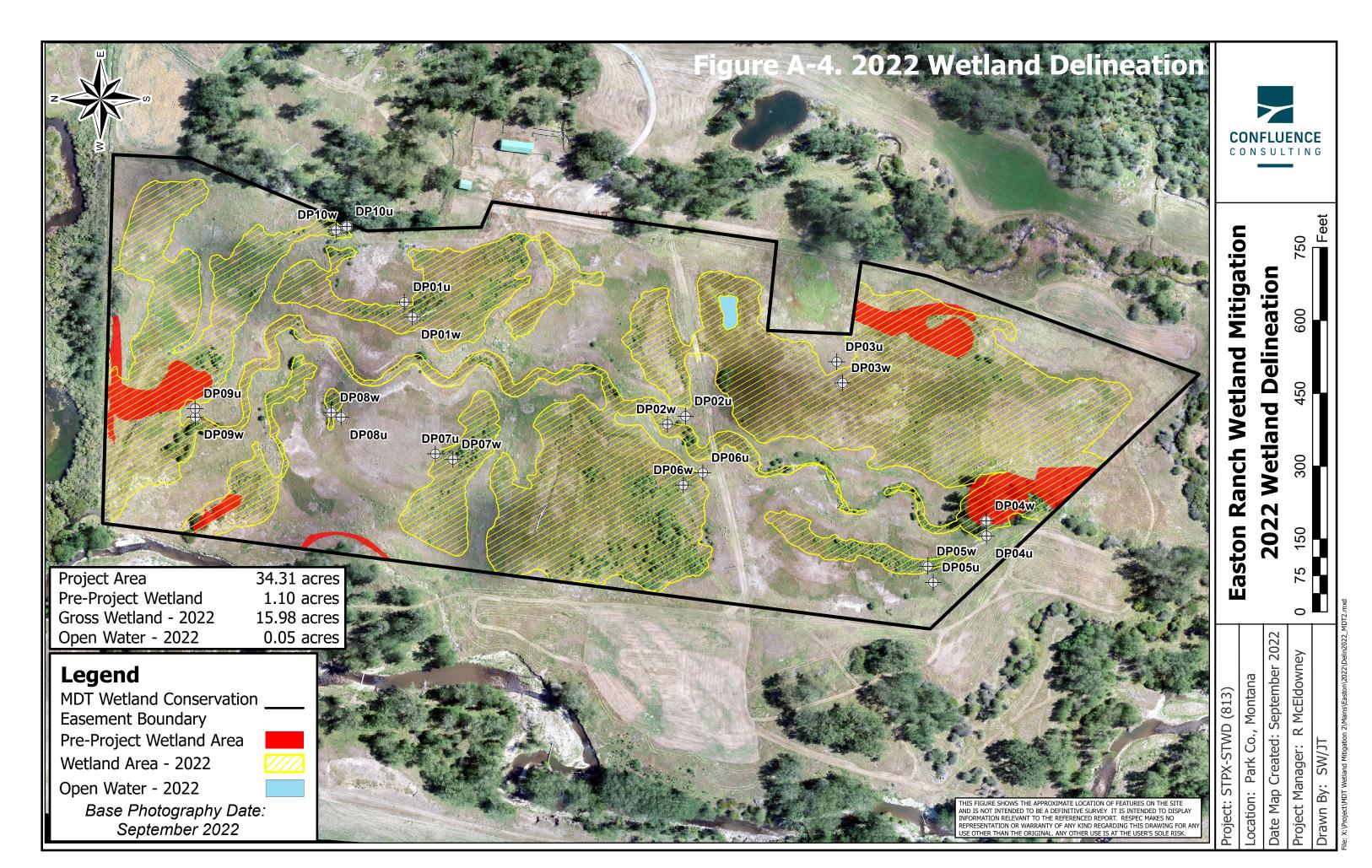
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APPENDIX A PROJECT AREA MAPS

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	7/19/2022
Person(s) conducting the assessme	ent: S Weyant, J Trilling, M Hickey, W Fouts	
	rLocation: Northeast of Wilsall	
MDT District:_Butte	Milepost: NA	
Legal Description: T <u>4N</u> R <u>9E</u>	Section(s) 32 NW 1/4	
Initial Evaluation Date: 8/25/2010	Monitoring Year: <u>12</u> #Visits in Year: <u>1</u>	
Size of Evaluation Area: 34.31 (a	acres)	
Land use surrounding wetland: Agriculture, Shields River, Scrub/	Shrub and Forested Riparian corridors.	
	HYDROLOGY	
Surface Water Source: High groundwa	ater, periodic overbank flow from the Shields River, irri	gation
	Depth: 0.2 (ft) Range of Depths: 0.1-1.5 (ft)	
Percent of assessment area under inun		
Depth at emergent vegetation-open wat		
	n are the soils saturated within 12 inches of surface:	Yes
	(ex. – drift lines, erosion, stained vegetation, etc:	
Drainage pattern, surface water, high	water table, saturation, and sulfidic odor, drainage pat geomorphic position, FAC-Neutral, and surface soil cr	
Crown dynator Monitoring Walls	<u> </u>	
Groundwater Monitoring Wells		
Record depth of water surface below	w ground surface, in feet.	
Additional Activities Checklist:		
Map emergent vegetation-open water bound	dary on aerial photograph.	
	n site visit and look for evidence of past surface water	
elevations (drift lines, erosion, vegetation staining,	etc.)	
Use GPS to survey groundwater monitoring	well locations, if present.	
lydrology Notes:		
compared to 2021. Less saturation ac	uch less prevalent during the 2022 monitoring event cross the site is likely a result of the monitoring being an 2021. Surface water levels were also lower across t	the site

VEGETATION COMMUNITIES

Site Easton

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

Community # 1 Community Type: Phleum pratense / Poa pratensis Acres: 6.4

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

Comments:

This upland community was thought to be in transition to a wetland community in 2020 and 2021. But in 2022, the community composition and acreage changed little. This community largely occupies the tansition zone between wetlands and uplands and contains a variety of hydrophytic and upland species. Less than 0.1-acre of this community was delineated as wetland in 2022.

Community # 3 Community Type: Carex spp. / Acres: 0.48

Species	Cover class	Species	Cover class
Bare Ground	0	Calamagrostis canadensis	1
Carex atherodes	4	Carex nebrascensis	2
Carex pellita	2	Carex utriculata	3
Cirsium arvense	1	Equisetum arvense	1
Juncus balticus	2	Juncus longistylis	1
Mentha arvensis	1	Open Water	1
Poa palustris	1	Poa pratensis	0
Salix exigua	1	Scirpus microcarpus	2
Stachys pilosa	1		

Comments:

This CT exhibits a diversity of hydrophytic species.

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 2021.

Community # 5 Community Type: Populus balsamifera / Acres: 0.46

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: 0.05

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:

In 2021 this CT consisted of two cells. In 2022 the western most cell no longer contained open water and was absorbed by CT 15. As a result, the acreage of this CT was reduced by approximately two thirds.

Community #	10	Community Type:	Bromus inermis / Populus tremuloides	Acres:	0.23
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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		
•			

Small CT along the northern project boundary.

Community # 11 Community Type: Juncus spp. / Acres: 5.59

Species	Cover class	Species	Cover class
Agrostis stolonifera	1	Alopecurus arundinaceus	1
Alopecurus pratensis	1	Bare Ground	1
Carex aquatilis	1	Carex bebbii	1
Carex nebrascensis	1	Carex pachystachya	1
Carex utriculata	2	Carum carvi	0
irsium arvense	1	Deschampsia caespitosa	1
quisetum arvense	1	Juncus balticus	4
ncus effusus	2	Juncus ensifolius	1
ncus longistylis	1	Juncus tenuis	1
us corniculatus	2	Lysimachia ciliata	0
entha arvensis	1	Phalaris arundinacea	0
leum pratense	1	Poa palustris	2
oa pratensis	1	Populus balsamifera	1
alix bebbiana	1	Salix lutea	1
chedonorus pratensis	0	Scirpus microcarpus	1
olidago gigantea	0	Stachys pilosa	1

Comments:

In 2022 this CT was reduced by 0.09 acres because a portion of the community south of the access road was absorbed by CT 15 as the result of increased willow coverage.

Community #	12	Community Type	Eleocharis palustris / Typha latifolia	Acres:	0.9
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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 Eleocharis palustris in this CT was significantly less in 2022 than in 2021.

Community # 13 Community Type: Bromus inermis / Phleum pratense Acres: 5.43

Species	Cover class	Species	Cover class
Agrostis stolonifera	1	Alopecurus pratensis	0
Alyssum alyssoides	0	Bare Ground	1
Bromus arvensis	0	Bromus inermis	3
Camelina microcarpa	1	Carum carvi	1
Cirsium arvense	1	Dactylis glomerata	1
Elymus repens	2	Equisetum arvense	0
Juncus balticus	1	Leymus cinereus	1
Lotus corniculatus	3	Phleum pratense	3
Poa palustris	1	Poa pratensis	2
Populus balsamifera	1	Salix exigua	1
Schedonorus pratensis	0	Taraxacum officinale	1
Thlaspi arvense	0	Trifolium hybridum	1
Trifolium pratense	1		

Comments:

In 2018, several areas previously mapped as CT 13 transitioned to CT 16 or 18 due to the increase of Elymus repens or Lotus corniculatus and the reduction of Bromus inermis. Elymus repens increased in cover slightly in this CT in 2022.

Community #	14	Community T	ype:	Juncus spp. / Populus balsamifera	Acres:	2.43
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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
0			

No open water was observed in this CT in 2022. Populus balsamifera was observed as saplings and appear to be increasing in size despite some herbivory.

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		

Comments:

In 2022 this CT increased by .41 acres by absorbing a portion of CT 11 that had a significant increase in Salix spp. Cover by willow species within this CT represent greater than 30 percent of the total cover.

Community # 16 Community Type: Elymus repens / Poa pratensis Acres: 1.7

Species	Cover class	Species	Cover class
Agrostis stolonifera	1	Bare Ground	1
Bromus ciliatus	0	Bromus inermis	2
Carex nebrascensis	0	Carum carvi	2
Cirsium arvense	1	Dactylis glomerata	0
Elymus cinereus	1	Elymus repens	3
Leymus cinereus	1	Lotus corniculatus	2
Phleum pratense	2	Poa palustris	1
Poa pratensis	3	Populus balsamifera	0
Ranunculus macounii	0	Taraxacum officinale	2
Thlaspi arvense	0	Trifolium pratense	1

Comments:

Community type created in 2018. No changes were observed during the 2022 monitoring event.

Community #	17	Community	Type:	Phleum pratense / Elymus repens	Acres:	0.35
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Species	Cover class	Species	Cover class
Bare Ground	1	Bromus inermis	2
Carum carvi	2	Cirsium arvense	1
Elymus repens	3	Equisetum arvense	1
uncus balticus	1	Leymus cinereus	1
otus corniculatus	3	Phleum pratense	4
oa palustris	1	Poa pratensis	2
Taraxacum officinale	1	Trifolium pratense	1
'ammanta.			

A small upland community along the northern end of transect 1, formerly CT 1. Lotus corniculatus cover remained similar to 2021.

Community # 18 Community Type: Lotus corniculatus / Phleum pratense Acres: 2.74

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:

Upland CT first identified in 2018, mainly across the northeastern portion of project site. Cover of Lotus corniculatus did not increase in this CT as it did in 2021. In 2021 it was thought much of this CT was in transition to wetland, however during the 2022 monitoring event, wetlands in this area did not increase. Total acreage of this CT decreased by 0.17 acres due to a small portion converting to CT 13 in the east central portion of the project area.

Community #	20	Community Type:	Lotus corniculatus / Populus balsamifera	Acres:	0.27

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		

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 2021.

Community # 21 Community Type: Carex spp. / Juncus spp. Acres: 2.56

Cover class	Species	Cover class
2	Alopecurus arundinaceus	1
3	Carex aquatilis	1
1	Carex bebbii	1
1	Carex nebrascensis	1
3	Carex pellita	3
1	Carum carvi	0
0	Dactylis glomerata	0
1	Eleocharis palustris	0
1	Epilobium ciliatum	1
1	Glyceria grandis	1
4	Juncus effusus	1
0	Juncus longistylis	1
1	Lotus corniculatus	1
0	Mentha arvensis	1
1	Phalaris arundinacea	0
1	Poa palustris	0
1	Populus balsamifera	1
0	Salix bebbiana	1
1	Salix lasiandra	0
1	Scirpus microcarpus	1
1	Taraxacum officinale	0
0		
	2 3 1 1 3 1 0 1 1 4 0 1 0 1 1 1 1 1 1	Alopecurus arundinaceus Carex aquatilis Carex bebbii Carex nebrascensis Carex pellita Carum carvi Dactylis glomerata Eleocharis palustris Epilobium ciliatum Glyceria grandis Juncus effusus Juncus longistylis Lotus corniculatus Mentha arvensis Phalaris arundinacea Poa palustris Populus balsamifera Salix lasiandra Scirpus microcarpus Taraxacum officinale

Comments:

A new CT mapped in 2019, within transects 1 and 2. This CT was reduced in size by 0.9 acres due to a portion of CT 21 cell at the east central portion of the site converting to CT 15 because an increase in shrub cover.

Community # 22 Community Type: Phleum pratense / Elymus repens Ac	cres:	0.63
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Species	Cover class	Species	Cover class
Bare Ground	1	Bromus inermis	2
Carum carvi	2	Cirsium arvense	1
Elymus repens	3	Equisetum arvense	1
Juncus balticus	1	Leymus cinereus	1
Lotus corniculatus	2	Open Water	0
Phleum pratense	4	Poa palustris	1
Poa pratensis	2	Taraxacum officinale	1
Trifolium pratense	1		

Transitional wetland CT created in 2021. In 2021, areas within upland CT 17 that were delineated as wetland were separated into this wetland CT. This CT remained static in 2022 and did not expand further into CT 17.

Community # 23 Community Type: Lotus corniculatus / Phleum pratense Acres: 0.92

Species	Cover class	Species	Cover class
Agrostis stolonifera	1	Alnus incana	1
Alopecurus arundinaceus	2	Bare Ground	1
Bromus carinatus	0	Bromus inermis	0
Camelina microcarpa	1	Carex pachystachya	1
Carex pellita	1	Carum carvi	2
Elymus repens	1	Equisetum arvense	1
Juncus balticus	2	Leymus cinereus	1
Lotus corniculatus	4	Medicago lupulina	1
Melilotus officinalis	0	Open Water	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	Trifolium hybridum	2
Trifolium pratense	1		

Comments:

Transitional wetland CT primarily along the northern end of Transect 1 created in 2021. In 2021, areas within upland CT 18 that were delineated as wetland were separated into this new wetland CT. This CT remained static in 2022 and did not expand further into CT 18.

Total Vegetation Community Acreage

32.73

VEGETATION TRANSECTS

Easton	Da	ate:	7/19/2022	
Transect Numbe	r: <u>1</u> Compas	ss Direction from St	art: <u>5</u>	
Interval Data: Ending Station	65 Community Type:	Carex spp. / Juncus spp.		
Species	Cover class	Species	Cover class	
Agrostis stolonifera	1	Carex nebrascensis	1	
Carex pachystachya	1	Carex pellita	3	
Carex utriculata	1	Elymus repens	1	
Equisetum arvense	1	Juncus balticus	4	
Juncus longistylis	1	Juncus tenuis	1	
Poa pratensis	1	Stachys pilosa	1	
Ending Station	93 Community Type:	Aquatic macrophytes /		
Species	Cover class	Species	Cover class	
Algae, green	3	Beckmannia syzigachne	0	
Carex nebrascensis	0	Carex pellita	1	
Carex utriculata	2	Eleocharis palustris	1	
Glyceria grandis	1	Hippuris vulgaris	0	
Juncus balticus	2	Juncus effusus	1	
Juncus ensifolius	1	Mentha arvensis	1	
Open Water	2	Ranunculus aquatilis	1	
Ranunculus gmelinii	1	Salix lutea	1	
Typha latifolia	2			
Ending Station	137 Community Type:	Carex spp. / Juncus spp.		
Species	Cover class	Species	Cover class	
Agrostis stolonifera	0	Carex aquatilis	2	
Carex nebrascensis	1	Carex utriculata	2	
Epilobium ciliatum	1	Juncus balticus	4	
Juncus effusus	4	Juncus ensifolius	0	
Mentha arvensis	0	Open Water	1	
Phleum pratense	0	Poa palustris	C	
Poa pratensis	0	Salix bebbiana	1	
Salix lutea	1			

Ending Station	193	Community Type:	Elymus repens / Poa pratens	sis
Species		Cover class	Species	Cover class
Agrostis stolonifera		2	Bare Ground	1
Carex nebrascensis		1	Cirsium arvense	0
Dactylis glomerata		1	Elymus repens	4
Leymus cinereus		0	Lotus corniculatus	1
Phleum pratense		2	Poa palustris	0
Poa pratensis		3	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	3
Carex aquatilis		2	Carex utriculata	2
Carum carvi		0	Equisetum arvense	0
Juncus balticus		4	Juncus effusus	2
Lotus corniculatus		1	Open Water	0
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:	Phleum pratense / Poa prate	ensis
Ending Station Species	468	Community Type: Cover class	Species Poa prate Species	Cover class
_	468			
Species	468	Cover class	Species	Cover class
Species Achillea millefolium	468	Cover class	Species Agrostis stolonifera	Cover class
Species Achillea millefolium Alopecurus arundinaceus	468	Cover class 0 1	Species Agrostis stolonifera Bromus inermis	Cover class 2 3
Species Achillea millefolium Alopecurus arundinaceus Carex nebrascensis	468	Cover class 0 1 2	Species Agrostis stolonifera Bromus inermis Carum carvi	Cover class 2 3 2
Species Achillea millefolium Alopecurus arundinaceus Carex nebrascensis Cirsium arvense	468	0 1 2 1	Species Agrostis stolonifera Bromus inermis Carum carvi Elymus repens	Cover class 2 3 2
Species Achillea millefolium Alopecurus arundinaceus Carex nebrascensis Cirsium arvense Equisetum arvense	468	0 1 2 1 3	Species Agrostis stolonifera Bromus inermis Carum carvi Elymus repens Juncus balticus	2 3 2 1 1 1
Species Achillea millefolium Alopecurus arundinaceus Carex nebrascensis Cirsium arvense Equisetum arvense Leymus cinereus	468	0 1 2 1 3	Species Agrostis stolonifera Bromus inermis Carum carvi Elymus repens Juncus balticus Lotus corniculatus	Cover class 2 3 2 1 1 1
Species Achillea millefolium Alopecurus arundinaceus Carex nebrascensis Cirsium arvense Equisetum arvense Leymus cinereus Melilotus officinalis	468	0 1 2 1 3 1	Species Agrostis stolonifera Bromus inermis Carum carvi Elymus repens Juncus balticus Lotus corniculatus Phleum pratense	Cover class 2 3 2 1 1 1
Species Achillea millefolium Alopecurus arundinaceus Carex nebrascensis Cirsium arvense Equisetum arvense Leymus cinereus Melilotus officinalis Poa pratensis	468	0 1 2 1 3 1 0	Species Agrostis stolonifera Bromus inermis Carum carvi Elymus repens Juncus balticus Lotus corniculatus Phleum pratense Populus balsamifera	Cover class 2 3 2 1 1 1
Species Achillea millefolium Alopecurus arundinaceus Carex nebrascensis Cirsium arvense Equisetum arvense Leymus cinereus Melilotus officinalis Poa pratensis Taraxacum officinale Trifolium pratense		0 1 2 1 3 1 0	Species Agrostis stolonifera Bromus inermis Carum carvi Elymus repens Juncus balticus Lotus corniculatus Phleum pratense Populus balsamifera Trifolium hybridum	Cover class 2 3 2 1 1 1
Species Achillea millefolium Alopecurus arundinaceus Carex nebrascensis Cirsium arvense Equisetum arvense Leymus cinereus Melilotus officinalis Poa pratensis Taraxacum officinale Trifolium pratense		0 1 2 1 3 1 0 3 0	Species Agrostis stolonifera Bromus inermis Carum carvi Elymus repens Juncus balticus Lotus corniculatus Phleum pratense Populus balsamifera Trifolium hybridum	Cover class 2 3 2 1 1 1
Species Achillea millefolium Alopecurus arundinaceus Carex nebrascensis Cirsium arvense Equisetum arvense Leymus cinereus Melilotus officinalis Poa pratensis Taraxacum officinale Trifolium pratense Ending Station		0 1 2 1 3 1 0 3 1 0 1 Community Type:	Species Agrostis stolonifera Bromus inermis Carum carvi Elymus repens Juncus balticus Lotus corniculatus Phleum pratense Populus balsamifera Trifolium hybridum Juncus spp. /	Cover class 2 3 2 1 1 3 1 1 3 1
Species Achillea millefolium Alopecurus arundinaceus Carex nebrascensis Cirsium arvense Equisetum arvense Leymus cinereus Melilotus officinalis Poa pratensis Taraxacum officinale Trifolium pratense Ending Station Species		0 1 2 1 3 1 0 3 1 0 1 Community Type:	Species Agrostis stolonifera Bromus inermis Carum carvi Elymus repens Juncus balticus Lotus corniculatus Phleum pratense Populus balsamifera Trifolium hybridum Juncus spp. / Species	Cover class 2 3 2 1 1 3 1 1 3 1
Species Achillea millefolium Alopecurus arundinaceus Carex nebrascensis Cirsium arvense Equisetum arvense Leymus cinereus Melilotus officinalis Poa pratensis Taraxacum officinale Trifolium pratense Ending Station Species Alopecurus arundinaceus		Cover class 0 1 2 1 3 1 0 3 0 1 Community Type: Cover class	Species Agrostis stolonifera Bromus inermis Carum carvi Elymus repens Juncus balticus Lotus corniculatus Phleum pratense Populus balsamifera Trifolium hybridum Juncus spp. / Species Alopecurus pratensis	Cover class 2 3 2 1 1 1 1 1 3 1 1 1
Species Achillea millefolium Alopecurus arundinaceus Carex nebrascensis Cirsium arvense Equisetum arvense Leymus cinereus Melilotus officinalis Poa pratensis Taraxacum officinale Trifolium pratense Ending Station Species Alopecurus arundinaceus Bare Ground		0 1 2 1 3 1 0 3 1 0 1 Community Type: Cover class	Species Agrostis stolonifera Bromus inermis Carum carvi Elymus repens Juncus balticus Lotus corniculatus Phleum pratense Populus balsamifera Trifolium hybridum Juncus spp. / Species Alopecurus pratensis Carex pachystachya	Cover class 2 3 2 1 1 1 3 1 1 Cover class
Species Achillea millefolium Alopecurus arundinaceus Carex nebrascensis Cirsium arvense Equisetum arvense Leymus cinereus Melilotus officinalis Poa pratensis Taraxacum officinale Trifolium pratense Ending Station Species Alopecurus arundinaceus Bare Ground Cirsium arvense		Cover class 0 1 2 1 3 1 0 3 0 1 Community Type: Cover class 1 1 0	Agrostis stolonifera Bromus inermis Carum carvi Elymus repens Juncus balticus Lotus corniculatus Phleum pratense Populus balsamifera Trifolium hybridum Juncus spp. / Species Alopecurus pratensis Carex pachystachya Cirsium arvense	Cover class 2 3 2 1 1 1 1 1 3 1 1 1 1 1 0
Species Achillea millefolium Alopecurus arundinaceus Carex nebrascensis Cirsium arvense Equisetum arvense Leymus cinereus Melilotus officinalis Poa pratensis Taraxacum officinale Trifolium pratense Ending Station Species Alopecurus arundinaceus Bare Ground Cirsium arvense Juncus balticus		Cover class 0 1 2 1 3 1 0 3 0 1 Community Type: Cover class 1 1 0 4	Species Agrostis stolonifera Bromus inermis Carum carvi Elymus repens Juncus balticus Lotus corniculatus Phleum pratense Populus balsamifera Trifolium hybridum Juncus spp. / Species Alopecurus pratensis Carex pachystachya Cirsium arvense Juncus effusus	Cover class 2 3 2 1 1 1 3 1 1 1 Cover class 1 1 0 2

Ending Station	562	Community Type:	Lotus corniculatus / Phleum	pratense
Species		Cover class	Species	Cover class
Agrostis stolonifera		1	Alopecurus arundinaceus	4
Carex pachystachya		1	Carum carvi	1
Elymus repens		1	Equisetum arvense	1
Lotus corniculatus		2	Phleum pratense	3
Poa palustris		1	Poa pratensis	3
Populus balsamifera		1	Rumex salicifolius	1
Stachys pilosa		1	Thlaspi arvense	1
Trifolium hybridum		1		
Ending Station	635	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
Elymus repens		1	Equisetum arvense	1
Juncus balticus		1	Juncus effusus	1
Lotus corniculatus		3	Phleum pratense	1
Poa palustris		1	Poa pratensis	1
Populus balsamifera		2	Potentilla gracilis	0
Salix lutea		1		
Ending Station	667	Community Type:	Lotus corniculatus / Phleum	pratense
Species		Cover class	Species	Cover class
Alopecurus arundinaceus		2	Bare Ground	2
Carex pellita		1	Carum carvi	1
Elymus repens		1	Juncus balticus	3
Lotus corniculatus		4	Taraxacum officinale	1
Trifolium pratense		1		
Ending Station	740	Community Type:	Juncus spp. / Salix spp.	
Species		Cover class	Species	Cover class
Alnus incana		1	Carex pachystachya	1
Carex pellita		1	Carum carvi	1
Juncus balticus		4	Lotus corniculatus	2
Phalaris arundinacea		1	Populus balsamifera	3
Salix bebbiana		2	Salix boothii	2
Salix exigua		2	Stachys pilosa	0
Taraxacum officinale		0		

Ending Station	899	Community Type:	Lotus corniculatus / Phleum	pratense
Species		Cover class	Species	Cover class
Achillea millefolium		0	Alnus incana	1
Bare Ground		1	Bromus tectorum	0
Carum carvi		2	Elymus trachycaulus	0
Equisetum arvense		1	Juncus balticus	2
Leymus cinereus		1	Lotus corniculatus	5
Medicago lupulina		1	Open Water	1
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	1013	Community Type:	Lotus corniculatus / Phleum	pratense
Species		Cover class	Species	Cover class
Alnus incana		1	Bare Ground	1
Camelina microcarpa		0	Carum carvi	2
Elymus repens		0	Equisetum arvense	1
Juncus balticus		2	Leymus cinereus	1
Lotus corniculatus		4	Medicago lupulina	1
Open Water		0	Phleum pratense	3
Poa pratensis		2	Populus balsamifera	1
Rumex salicifolius		1	Taraxacum officinale	1
Trifolium hybridum		1	Trifolium pratense	2
Ending Station	1038	Community Type:	Lotus corniculatus / Phleum	pratense
Species		Cover class	Species	Cover class
Alnus incana		1	Bare Ground	1
Bromus inermis		1	Carum carvi	2
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	Taraxacum officinale	1
Trifolium hybridum		1	Trifolium pratense	2

Ending Station	1152 Community Type:	Lotus corniculatus / Phleu	m pratense
Species	Cover class	Species	Cover class
Alnus incana	1	Bare Ground	1
Carum carvi	2	Equisetum arvense	1
Juncus balticus	1	Leymus cinereus	1
Lotus corniculatus	3	Medicago lupulina	1
Phleum pratense	3	Poa pratensis	2
Populus balsamifera	1	Taraxacum officinale	1
Trifolium hybridum	1	Trifolium pratense	2
Ending Station	1172 Community Type:	Phleum pratense / Elymus	s repens
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	4
Phleum pratense	3	Poa pratensis	2
Taraxacum officinale	1		
Ending Station	1335 Community Type:	Phleum pratense / Elymus	s repens
=mamig otation	Toninianity Typo:		
Species	Cover class	Species	Cover class
Species	Cover class	Species	
Species Bare Ground	Cover class	Species Bromus inermis	
Species Bare Ground Carum carvi	Cover class 1 2	Species Bromus inermis Cirsium arvense	Cover class 1
Species Bare Ground Carum carvi Elymus repens	Cover class 1 2 4	Species Bromus inermis Cirsium arvense Equisetum arvense	Cover class 1 1 2
Species Bare Ground Carum carvi Elymus repens Leymus cinereus	Cover class 1 2 4 1	Species Bromus inermis Cirsium arvense Equisetum arvense Lotus corniculatus	Cover class 1 1 2 2
Species Bare Ground Carum carvi Elymus repens Leymus cinereus Open Water	Cover class 1 2 4 1 1	Species Bromus inermis Cirsium arvense Equisetum arvense Lotus corniculatus Phleum pratense Taraxacum officinale	Cover class 1 1 2 2 3 1
Species Bare Ground Carum carvi Elymus repens Leymus cinereus Open Water Poa pratensis	Cover class 1 2 4 1 1 2	Species Bromus inermis Cirsium arvense Equisetum arvense Lotus corniculatus Phleum pratense Taraxacum officinale	Cover class 1 1 2 2 3 1
Species Bare Ground Carum carvi Elymus repens Leymus cinereus Open Water Poa pratensis Ending Station	Cover class 1 2 4 1 1 2 1 376 Community Type:	Species Bromus inermis Cirsium arvense Equisetum arvense Lotus corniculatus Phleum pratense Taraxacum officinale Bromus inermis / Populus	Cover class 1 1 2 2 3 1 tremuloides
Species Bare Ground Carum carvi Elymus repens Leymus cinereus Open Water Poa pratensis Ending Station Species	Cover class 1 2 4 1 1 2 1 2 Community Type:	Species Bromus inermis Cirsium arvense Equisetum arvense Lotus corniculatus Phleum pratense Taraxacum officinale Bromus inermis / Populus Species	Cover class 1 1 2 2 3 1 tremuloides Cover class
Species Bare Ground Carum carvi Elymus repens Leymus cinereus Open Water Poa pratensis Ending Station Species Agrostis stolonifera	Cover class 1 2 4 1 1 2 1376 Community Type: Cover class 1	Species Bromus inermis Cirsium arvense Equisetum arvense Lotus corniculatus Phleum pratense Taraxacum officinale Bromus inermis / Populus Species Bromus inermis	Cover class 1 1 2 2 3 1 tremuloides Cover class 4
Species Bare Ground Carum carvi Elymus repens Leymus cinereus Open Water Poa pratensis Ending Station Species Agrostis stolonifera Carum carvi	Cover class 1 2 4 1 1 2 1376 Community Type: Cover class 1 2	Species Bromus inermis Cirsium arvense Equisetum arvense Lotus corniculatus Phleum pratense Taraxacum officinale Bromus inermis / Populus Species Bromus inermis Dactylis glomerata	Cover class 1 1 2 2 3 1 tremuloides Cover class 4 2
Species Bare Ground Carum carvi Elymus repens Leymus cinereus Open Water Poa pratensis Ending Station Species Agrostis stolonifera Carum carvi Elymus repens	Cover class 1 2 4 1 1 2 1376 Community Type: Cover class 1 2 1	Species Bromus inermis Cirsium arvense Equisetum arvense Lotus corniculatus Phleum pratense Taraxacum officinale Bromus inermis / Populus Species Bromus inermis Dactylis glomerata Leymus cinereus	Cover class 1 1 2 2 3 1 tremuloides Cover class 4 2 1

Transect Notes:

As in 2021, no ponded water was observed within this transect in 2022. This transect remained largely unchanged from 2021. The vegetation community types 17 and 18 at the northern end of this transect were thought to be in transition to wetlands in 2021. However, no increase in wetland acerage was identified in this area during the 2022 monitoring event.

Transect Number: 2	Compass Direction from Start: _	185
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Interval Data:

Ending Station	31	Community '	Type:	Carex spp. /
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Species	Cover class	Species	Cover class
Bare Ground	1	Carex atherodes	2
Carex nebrascensis	2	Carex pellita	2
Carex utriculata	4	Cirsium arvense	1
Equisetum arvense	1	Juncus balticus	1
Juncus longistylis	1	Poa palustris	1
Poa pratensis	1	Salix exigua	0
Stachys pilosa	0		

Ending Station 152 Community Type: Carex spp. / Juncus spp.

	Community Typor	'''	
Species	Cover class	Species	Cover class
Alopecurus arundinaceus	1	Bare Ground	1
Carex atherodes	1	Carex bebbii	1
Carex nebrascensis	2	Carex pellita	2
Carex utriculata	3	Cirsium arvense	1
Dactylis glomerata	1	Deschampsia caespitosa	1
Eleocharis palustris	1	Elymus repens	3
Equisetum arvense	1	Glyceria grandis	0
Juncus balticus	3	Lotus corniculatus	1
Lysimachia ciliata	0	Open Water	0
Phalaris arundinacea	1	Phleum pratense	2
Poa palustris	1	Poa pratensis	1
Salix bebbiana	1	Salix lasiandra	1
Salix lutea	1	Scirpus microcarpus	2
Stachys pilosa	0	Taraxacum officinale	1
Typha latifolia	0		

Ending Station 260 **Community Type:** Phleum pratense / Poa pratensis

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

Ending Station	358	Community Type:	Carex spp. / Juncus spp.	
Species		Cover class	Species	Cover class
Agrostis stolonifera		0	Bare Ground	1
Carex microptera		1	Carex pellita	1
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	633	Community Type:	Lotus corniculatus / Phleum	pratense
Species		Cover class	Species	Cover class
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	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
Carex bebbii		1	Carex pachystachya	1
Juncus balticus		3	Juncus effusus	1
Juncus tenuis		1	Lotus corniculatus	4
Lysimachia ciliata		1	Mentha arvensis	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 pra	atense
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	3
Poa pratensis	2	Populus balsamifera	0
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	Glyceria grandis	2
Juncus balticus	0	Juncus ensifolius	0
Open Water	0	Schoenoplectus pungens	2
Scirpus microcarpus	1		
Ending Station	1055 Community Type:	Juncus spp. / Salix spp.	
Species	Cover class	Species	Cover class
Agrostis stolonifera	1	Alnus incana	1
Bare Ground	1	Carex nebrascensis	1
Carex utriculata	2	Cirsium arvense	0
Juncus balticus	4	Juncus effusus	1
Juncus tenuis	1	Mentha arvensis	1
Poa palustris	1	Populus balsamifera	2
Potentilla anserina	0	Salix bebbiana	3
Salix drummondiana	2	Salix exigua	1
	2	Salix Exigua	
Salix lutea	3	Scirpus microcarpus	0

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

Species	Cover class	Species	Cover class
Agrostis stolonifera	2	Alnus incana	0
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
Symphyotrichum subspicatu	0		

Ending Station 1333 Community Type: Bromus inermis / Phleum pratense

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

Transect Notes:

The open water reported along this transect in 2021 was observed to be an emergent wetland in 2022, however the vegetation community did not change. The vegetation communities and wetland boundaries across this transect remained relatively unchanged since the 2021 monitoring event.

Interval Data: Ending Station 120 Community Type: Bromus inermis / Phleum pratense Species Cover class Species Cover class Bromus arvensis 0 Bromus inermis 3 Camm carvi 2 2 Elymus repens 1 Leymus cinereus 1 Lotus corniculatus 3 Phleum pratense 3 Poa pratensis 2 Populus balsamifera 1 Taraxacum officinale 1 Trifolium hybridum 1 Trifolium pratense 2 Populus balsamifera 1 Species Cover class Species Cover class Agrostis stolonifera 0 Carum carvi 1 Equisetum arvense 1 Juncus balticus 4 Lotus corniculatus 4 Phleum pratense 1 Lotus corniculatus 4 Phleum pratense 1 Lotus corniculatus 4 Phleum pratense 1 Salix lutea 1 Trifolium pratense 1 Trifolium	Transect Numbe	r: <u>3</u> Compas	ss Direction from S	tart: ⁹⁵
Species Cover class Species Cover class Bromus arvensis 0 Bromus inermis 3 Camelina microcarpa 0 Carum carvi 2 Elymus repens 1 Leymus cinereus 1 Lotus corniculatus 3 Phleum pratense 1 Poa pratensis 2 Populus balsamifera 1 Trifolium pratense 2 Populus balsamifera 1 Trifolium pratense 2 Trifolium hybridum 1 Species Cover class Species Cover class Agrostis stolonifera 0 Carum carvi 1 Equisetum arvense 1 Juncus balticus 4 Lotus corniculatus 4 Phleum pratense 1 Salix lutea 1 Taraxacum officinale 1 Trifolium hybridum 1 Trifolium pratense 1 Ending Station 215 Community Type: Bromus inermis / Phleum pratense Bromus inermis 3 Carum carvi 1				
Bromus arvensis 0 Bromus inermis 3 Camelina microcarpa 0 Carum carvi 2 Elymus repens 1 Leymus cinereus 1 Lotus corniculatus 3 Phleum pratense 3 Phopulus balsamifera 1 Trifolium pratense 2 Populus balsamifera 1 Juncus spp. / Populus balsamifera 3 Salix belbiana 2 Populus balsamifera 3 Salix belbiana 2 Populus balsamifera 1 Trifolium pratense 1 Juncus balticus 4 Phleum pratense 1 Trifolium pratense 2 Populus balsamifera 2 Populus balticus 1 Populus cinereus 1 Lotus corniculatus 1 Lotus corniculatus 1 Populus pratense 2 Populus pratense 3 Populus pratense 4 Populus pratense 4 Populus pratense 4 Populus pratense 4 Populus	Ending Station	120 Community Type:	Bromus inermis / Phleum	pratense
Carum carvi 2	Species	Cover class	Species	Cover class
Elymus repens	Bromus arvensis	0	Bromus inermis	3
Cotus corniculatus	Camelina microcarpa	0	Carum carvi	2
Populus balsamifera	Elymus repens	1	Leymus cinereus	1
Taraxacum officinale Trifolium pratense 2 Ending Station 160 Community Type: Juncus spp. / Populus balsamifera	Lotus corniculatus	3	Phleum pratense	3
Trifolium pratense 2 Ending Station 160 Community Type: Juncus spp. / Populus balsamifera Species Cover class Species Cover class Cover class Cover class Agrostis stolonifera 0 Carum carvi 1 Equisetum arvense 1 Juncus balticus 4 Phleum pratense 1 Populus balsamifera 3 Salix bebbiana 2 Salix lutea 1 Taraxacum officinale 1 Trifolium hybridum 1 Trifolium pratense 1 Trifolium pratense 1 Phleum pratense Phleum P	Poa pratensis	2	Populus balsamifera	1
Ending Station 160 Community Type: Juncus spp. / Populus balsamifera Species Cover class Species Cover class Agrostis stolonifera 0 Carum carvi 1 Equisetum arvense 1 Juncus balticus 4 Lotus corniculatus 4 Phleum pratense 1 Populus balsamifera 3 Salix bebbiana 2 Salix lutea 1 Taraxacum officinale 1 Trifolium hybridum 1 Trifolium pratense 1 Ending Station 215 Community Type: Bromus inermis / Phleum pratense 1 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 balsamifera <td>Taraxacum officinale</td> <td>1</td> <td>Trifolium hybridum</td> <td>1</td>	Taraxacum officinale	1	Trifolium hybridum	1
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 Trifolium pratense 1 Ending Station 215 Community Type: Bromus inermis / Phleum pratense 1 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 balsamifera	Trifolium pratense	2		
Agrostis stolonifera Q Carum carvi 1 Equisetum arvense 1 Lotus corniculatus 4 Phleum pratense 1 Populus balsamifera 3 Salix bebbiana 2 Salix lutea 1 Trifolium hybridum 1 Trifolium pratense 1 Ending Station Z15 Community Type: Bromus inermis / Phleum pratense Fromus inermis 3 Carum carvi 1 Dactylis glomerata 0 Elymus repens 2 Equisetum arvense 1 Leymus cinereus 1 Leymus cinereus 1 Leymus cinereus 1 Leymus cinereus 1 Thlaspi arvense 0 Ending Station Z27 Community Type: Dactylis glomerata 2 Equisetum arvense 2 Foa pratensis 2 Taraxacum officinale 1 Thlaspi arvense 0 Ending Station Z27 Community Type: Juncus sp. / Populus balsamifera Carum carvi 2 Carum carvi 2 Carum carvi 2 Carum carvi 2 Cirsium arvense 2 Equisetum arvense 2 Lotus corniculatus 1 Carex utriculata 2 Carum carvi 2 Cirsium arvense 2 Equisetum arvense 2 Juncus balticus 1 Lotus corniculatus 1 Poa palustris 1 Poa pratensis 1 Poa pratensis 1 Poa pratensis 1 Poa palustris Poa palustris 1 Poa palustris Poa palustris 1 Poa palustris Poa palus	Ending Station	160 Community Type:	Juncus spp. / Populus bal	samifera
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Lotus corniculatus 4 Phleum pratense 1 Populus balsamifera 3 Salix bebbiana 2 Salix lutea 1 Taraxacum officinale 1 Trifolium hybridum 1 Trifolium pratense 1 Ending Station 215 Community Type: Bromus inermis / Phleum pratense Ending Station 215 Community Type: Bromus inermis / Phleum pratense Ending Station 215 Community Type: Bromus inermis / Phleum pratense Ending Station 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 balsamifera Species Cover class Species Cover class Bare Ground 1 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 Poa palustris 1 Poa pratensis 1	Agrostis stolonifera	0	Carum carvi	1
Populus balsamifera3Salix bebbiana2Salix lutea1Taraxacum officinale1Trifolium hybridum1Trifolium pratense1Ending Station215 Community Type:Bromus inermis / Phleum pratenseSpeciesCover classSpeciesCover classBromus inermis3Carum carvi1Dactylis glomerata0Elymus repens2Equisetum arvense1Juncus balticus1Leymus cinereus1Lotus corniculatus1Phleum pratense2Poa pratensis2Taraxacum officinale1Thlaspi arvense0Ending Station227 Community Type:Juncus sp. / Populus balsamiferaSpeciesCover classSpeciesCover classBare Ground1Carex utriculata2Carum carvi2Cirsium arvense2Equisetum arvense2Juncus balticus1Lotus corniculatus3Phleum pratense1Poa palustris1Poa pratensis1Populus balsamifera4Salix drummondiana1	Equisetum arvense	1	Juncus balticus	4
Salix lutea 1 Taraxacum officinale 1 Trifolium hybridum 1 Trifolium pratense 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 balsamifera Species Cover class Species Cover class Bare Ground 1 Carex utriculata 2 Carum carvi 2 Cirsium arvense 2 Equisetum arvense 2 Juncus balticus 1 Lotus corniculatus 3 Phleum pratense 1 Lotus corniculatus 3 Phleum pratense 1 Poa palustris 1 Poa pratensis 1 Populus balsamifera 4 Salix drummondiana 1	Lotus corniculatus	4	Phleum pratense	1
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Ending Station215 Community Type:Bromus inermis / Phleum pratenseSpeciesCover classSpeciesCover classBromus inermis3Carum carvi1Dactylis glomerata0Elymus repens2Equisetum arvense1Juncus balticus1Leymus cinereus1Lotus corniculatus1Phleum pratense2Poa pratensis2Taraxacum officinale1Thlaspi arvense0Ending Station227 Community Type:Juncus sp. / Popullus balsamiferaSpeciesCover classSpeciesCover classBare Ground1Carex utriculata2Carum carvi2Cirsium arvense2Equisetum arvense2Juncus balticus1Lotus corniculatus3Phleum pratense1Poa palustris1Poa pratensis1Populus balsamifera4Salix drummondiana1	Salix lutea	1	Taraxacum officinale	1
SpeciesCover classSpeciesCover classBromus inermis3Carum carvi1Dactylis glomerata0Elymus repens2Equisetum arvense1Juncus balticus1Leymus cinereus1Lotus corniculatus1Phleum pratense2Poa pratensis2Taraxacum officinale1Thlaspi arvense0Ending Station227 Community Type:Juncus sp. / Populus balsamiferaSpeciesCover classSpeciesCover classBare Ground1Carex utriculata2Carum carvi2Cirsium arvense2Equisetum arvense2Juncus balticus1Lotus corniculatus3Phleum pratense1Poa palustris1Poa pratensis1Populus balsamifera4Salix drummondiana1	Trifolium hybridum	1	Trifolium pratense	1
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 balsamifera Species Cover class Species Cover class Bare Ground 1 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 drummondiana 1	Ending Station	215 Community Type:	Bromus inermis / Phleum	pratense
Dactylis glomerata0Elymus repens2Equisetum arvense1Juncus balticus1Leymus cinereus1Lotus corniculatus1Phleum pratense2Poa pratensis2Taraxacum officinale1Thlaspi arvense0Ending Station227 Community Type: Juncus sp. / Populus balsamiferaSpeciesCover classSpeciesCover classBare Ground1Carex utriculata2Carum carvi2Cirsium arvense2Equisetum arvense2Juncus balticus1Lotus corniculatus3Phleum pratense1Poa palustris1Poa pratensis1Populus balsamifera4Salix drummondiana1	Species	Cover class	Species	Cover class
Equisetum arvense 1 Juncus balticus 1 Leymus cinereus 1 Lotus corniculatus 1 Phleum pratense 2 Poa pratensis 2 Taraxacum officinale 1 Thlaspi arvense 0 Ending Station 227 Community Type: Juncus sp. / Populus balsamifera Species Cover class Species Cover class Bare Ground 1 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 drummondiana 1	Bromus inermis	3	Carum carvi	1
Leymus cinereus Phleum pratense 2 Poa pratensis 2 Taraxacum officinale 1 Thlaspi arvense 0 Ending Station 227 Community Type: Juncus sp. / Populus balsamifera Species Cover class Bare Ground 1 Carex utriculata 2 Carum carvi 2 Cirsium arvense 2 Juncus balticus 1 Lotus corniculatus 3 Phleum pratense 1 Poa palustris 1 Poa pratensis 1 Salix drummondiana 1	Dactylis glomerata	0	Elymus repens	2
Phleum pratense2Poa pratensis2Taraxacum officinale1Thlaspi arvense0Ending Station227 Community Type:Juncus sp. / Populus balsamiferaSpeciesCover classSpeciesCover classBare Ground1Carex utriculata2Carum carvi2Cirsium arvense2Equisetum arvense2Juncus balticus1Lotus corniculatus3Phleum pratense1Poa palustris1Poa pratensis1Populus balsamifera4Salix drummondiana1	Equisetum arvense	1	Juncus balticus	1
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Ending Station227 Community Type:Juncus sp. / Populus balsamiferaSpeciesCover classSpeciesCover classBare Ground1Carex utriculata2Carum carvi2Cirsium arvense2Equisetum arvense2Juncus balticus1Lotus corniculatus3Phleum pratense1Poa palustris1Poa pratensis1Populus balsamifera4Salix drummondiana1	Phleum pratense	2	Poa pratensis	2
SpeciesCover classSpeciesCover classBare Ground1Carex utriculata2Carum carvi2Cirsium arvense2Equisetum arvense2Juncus balticus1Lotus corniculatus3Phleum pratense1Poa palustris1Poa pratensis1Populus balsamifera4Salix drummondiana1	Taraxacum officinale	1	Thlaspi arvense	0
Bare Ground 1 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 drummondiana 1	Ending Station	227 Community Type:	Juncus sp. / Populus bals	amifera
Carum carvi2Cirsium arvense2Equisetum arvense2Juncus balticus1Lotus corniculatus3Phleum pratense1Poa palustris1Poa pratensis1Populus balsamifera4Salix drummondiana1	Species	Cover class	Species	Cover class
Equisetum arvense2Juncus balticus1Lotus corniculatus3Phleum pratense1Poa palustris1Poa pratensis1Populus balsamifera4Salix drummondiana1	Bare Ground	1	Carex utriculata	2
Lotus corniculatus 3 Phleum pratense 1 Poa palustris 1 Poa pratensis 1 Populus balsamifera 4 Salix drummondiana 1	Carum carvi	2	Cirsium arvense	2
Poa palustris 1 Poa pratensis 1 Populus balsamifera 4 Salix drummondiana 1	Equisetum arvense	2	Juncus balticus	1
Poa palustris1Poa pratensis1Populus balsamifera4Salix drummondiana1	Lotus corniculatus	3	Phleum pratense	1
Populus balsamifera 4 Salix drummondiana 1	Poa palustris	1	•	1
Salix lutea 1 Taraxacum officinale 1	•	4	· · · · · · · · · · · · · · · · · · ·	1
	Salix lutea	1	Taraxacum officinale	1

Ending Station	309 Community Type:	Bromus inermis / Phleum	oratense
Species	Cover class	Species	Cover class
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
Trifolium pratense	1		
Ending Station	656 Community Type:	Juncus spp. /	
Species	Cover class	Species	Cover class
Carex pachystachya	1	Carex utriculata	2
Carum carvi	1	Cirsium arvense	1
Equisetum arvense	1	Juncus balticus	4
Juncus longistylis	1	Lotus corniculatus	1
Poa pratensis	1	Populus balsamifera	1
Salix bebbiana	2	Salix lutea	1
Solidago gigantea	1		
Ending Station	732 Community Type:	Phleum pratense / Poa pra	atensis
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 2021. This transect has remained relatively stable since 2017.

PLANTED WOODY VEGETATION SURVIVAL

Easton

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

Comments

Woody shrubs were counted along and adjacent to the floodplain channel. After 13 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.

Easton

WILDLIFE

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 by tree swallows 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.

Species	#Observed	Behavior	Habitat	
American Robin	2			
Bald Eagle	1			
Eastern Kingbird	1			
Eastern Kingbird	1			
Golden Eagle	1			
Killdeer	1			
Mourning Dove	3			
Red-naped Sapsucker	1			
Red-winged Blackbird	24			
Sandhill Crane	2			
Starling	3			
Tree Swallow	10			
Wilson's Phalarope	1			
Wilson's Snipe	2			
Yellow-headed Blackbir	d 4			
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 breeding pair BD = Breeding display F = Foraging FO = Flyover L = Loafing N = Nesting

HABITAT CODES

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

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

Mammals and Herptiles

Species # Observed Tracks Scat Burrows Comments

Raccoon		Yes	No	No
Tadpoles	15	No	No	No
White-tailed Deer		Yes	Yes	No

Wildlife Comments:

Site utilized by diversity of bird and wildlife species.

Easton

PHOTOGRAPHS

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

Photograph Checklist:

- One photograph for each of the four cardinal directions surrounding the wetland.
- \checkmark At least one photograph showing upland use surrounding the wetland. If more than one upland exists then take additional photographs.
- \checkmark At least one photograph showing the buffer surrounding the wetland.
- \checkmark One photograph from each end of the vegetation transect, showing the transect.

Photo #	Latitude	Longitude	Bearing	Description	
DP01u	46.059463	-110.638193			
DP01w	46.059416	-110.638313			
DP02u	46.057866	-110.639085			
DP02w	46.057967	-110.639152			
DP03u	46.057017	-110.638626			
DP03w	46.056983	-110.638796			
DP04u	46.056157	-110.64002			
DP04w	46.05616	-110.639898			
DP05u	46.056454	-110.640404			
DP05w	46.056486	-110.640273			
DP06u	46.057764	-110.639542			
DP06w	46.057872	-110.639644			
DP07u	46.059275	-110.63942			
DP07w	46.059175	-110.639464			
DP08u	46.05981	-110.639133			
DP08w	46.059866	-110.639097			
DP09u	46.060635	-110.639081			
DP09w	46.060633	-110.63915			
DP10u	46.059793	-110.637586			
DP10w	46.059854	-110.637616			
PP1	46.059727	-110.637505		East boundary	
PP2	46.061028	-110.637207		Northeast corner	
PP3	46.061188	-100.639848		Northeast corner	
PP4	46.050705	-110.640434		Shields bank	
PP4	46.060993	-110.640121		Shields bank	
PP5	46.059883	-110.640404		West boundary	
PP6	46.056175	-110.64048		Southwest corner	
			B-25		

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:

Easton

ADDITIONAL ITEMS CHECKLIST

	Hydrology
✓ ✓ lines	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
✓ M	ap vegetation community boundaries
✓ C	omplete Vegetation Transects
	Soils
✓ A	ssess soils
	Wetland Delineations
V	Delineate wetlands according to applicable USACE protocol (1987 form or
oupµ ✓	olement) Delineate wetland – upland boundary onto aerial photograph.
Wetl	and Delineation Comments
th	otal wetland acreage in 2022 remained nearly the same (a 0.01 acre decrease) since 2021. Many of the areas that were thought to be in transition to wetlands, especially in the northeast corner of the site, temained the same unchanged in 2022.
	Functional Assessments
✓ form	Complete and attach full MDT Montana Wetland Assessment Method field s.
Func	ctional Assessment Comments:
F	unctional units remained the same in 2022.

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. In the northeast corner of the site, fencing is still in need of repair from 2021. A few bird boxes (see wildlife section) need repair.

Project/Site: Easton Ranch		Cit	ty/County: Park		Sampling Daf	te:7/19/2022
Applicant/Owner MDT				State: Montana		
Investigator(s): S Weyant			ection, Township, Rang			
- " " -						-
Landform (hillslope, terrace, etc.): Low T						Slope (76)
	Lat			Long:110.6		
Soil Map Unit Name: 155A: Meadowcre	ek, rarely floodedNe	esda co	omplex, 0 to 2 perce	nt slopNWI classific	ation:Not mar	pped
Are climatic / hydrologic conditions on the	site typical for this time	of year	? Yes 🗹 No 🚨	(If no, explain in R	emarks.)	
Are Vegetation, Soil, or H	ydrology signific	antly dis	sturbed? Are "N	ormal Circumstances" p	resent? Yes	✓ No □
Are Vegetation, Soil, or H				ded, explain any answe	rs in Remarks.	.)
SUMMARY OF FINDINGS - Att			•			•
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes No No Yes No		Is the Sampled A		No ✓	
Wetland Hydrology Present?	Yes No	<u>'</u>	within a vvetiand	r res	<u> </u>	
Remarks:						
This point located about 1 foot higher	er in elevation than DF	'01w.				
VEGETATION - Use scientific						
<u>Tree Stratum</u> Plot size (30 Foot R	adiua\	miant ecies?	Indicator Status	Dominance Test wor	ksheet	
	70 GGVGI. GP	301001	Ciaias	Number of Dominant that are OBL, FACW		2 (A)
				Total Number of Domi Species Across All St		2 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)			Percent of Dominant S That Are OBL, FACW		100 % (A/B)
	,			Prevalence Index wo		
				Total % Cover o		Multiply by:
				OBL species	0 X1	0
				FACW species FAC species	0 X2 87 X3	261
				FACU species	10 X 4	40
Herbaceous Stratum Plot size (5 Foot Radius)			UPL species	3 X 5	15
Agrostis stolonifera	5 Г	ا ٦	FAC	Column Totals 1	00 (A)	316 (B)
Bromus inermis	3 [UPL	Column Totals	00 (A)	316 (B)
Carum carvi	10 [FACU	Prevalence Index	κ = B/A =	3.16
Elymus repens	7		FAC	Hydrophytic Vegetat		
Lotus corniculatus	50	_ 	FAC	☐ 1 - Rapid Te	st for Hydroph	ytic Vegetation
Phleum pratense	20	<u>/</u>	FAC	✓ 2 - Dominan	ce Test is >50°	%
Poa pratensis	5 [FAC	3 - Prevalen	ce Index is <=	3.0
					ogical Adaptatio ata in remarks	ons (Provide or on separate
				5 - Wetland I	Non-Vascular f	Plants
				☐ Problematic	Hydrophytic Vo	egetation (Explain)
Woody Vine Stratum Plot size (30 Foot Radius)			Indicators of hydric sil a present, unless disturb		
Percent Bare Ground 0				Hydrophytic Vegetation Y Present?	es 🗹 NO	
Remarks: Although marginal hydrophytic vege supported by wetland hydrology (19			n Manual).	nce of hydric soil dev		

B-29

SOIL									Sampling Point: DP	01u
Profile Desc	ription: (Describ	e to the depth	needed to docu	ment the	indicator	or con	firm the absen			
Depth	Matrix			x Feature		,				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc			Remarks	
0-07	7.5YR 3/2	100					Sandy Loa	am Grave	ls throughout	
07+							Gravel/Cob	ble Rock	bottom	
								_		
	ncentration, D=D					ed San			=Pore Lining, M=Ma	
_	ndicators: (Appl	licable to all LF	7		ed.)				blematic Hydric S	oils":
Histosol	• •	F	≟ Sandy Redox (cm Muck (A		
	ipedon (A2)	L	Stripped Matrix	. ,			=		aterial (TF2)	
Black His		Ļ	Loamy Mucky i			t MLRA	_	•	Dark Surface (TF12)
	n Sulfide (A4)		Loamy Gleyed		2)		0	ther (Explair	in Remarks)	
	Below Dark Surfark Surface (A12)	ace (ATT)	☑ Depleted Matrix ☑ Redox Dark Su				3India:	atore of hydr	ophytic vegetation a	nd
	ucky Mineral (S1)	, <u>–</u>	Depleted Dark					-	oprrytic vegetation a ogy must be present	
	leyed Matrix (S4)	·	Redox Depress		')				d or problematic.	•,
	ayer (if present)	_		()					р	
Type:	,									
• • • • • • • • • • • • • • • • • • • •	:hes):		_				Hydric S	nil Present?	Yes 🔲 N	o 🗸
Remarks:										
HYDROLOG	GY									
_	lrology Indicator		-llII (l(0	I P.	(0	· N
	ators (minimum of	r one requirea; o		•			<u>Sec</u>	-	ators (2 or more red	
	Water (A1)		Water-Sta			except			ned Leaves (B9) (ML	_RA 1, 2,
	ter Table (A2)			1, 2, 4A, a	and 4B)			4A, and	•	
Saturatio			Salt Crust	` '			<u> </u>	-	atterns (B10)	
Water Ma			Aquatic In				<u> </u>	-	Water Table (C2)	
	t Deposits (B2)		Hydrogen				_		/isible on Aerial Ima	igery (C9
_	osits (B3)			•	_	-	Roots (C3)		c Position (D2)	
	t or Crust (B4)		Presence				<u> </u>	Shallow Aq		
Iron Depo			Recent Iro				• • =	FAC-Neutra	` '	
	Soil Cracks (B6)	(57)	Stunted or		•)1) (LR I	R A)		Mounds (D6) (LRR	A)
_	n Visible on Aeria	, ,	Other (Exp	plain in Re	emarks)			Frost-Heav	e Hummocks (D7)	
	Vegetated Conca	ive Surface (B8)							
Field Observ										
Surface Wate		Yes No				- 1				
Water Table I	Present?	Yes No	Depth (in	ches):						
Saturation Pro (includes cap		Yes No	Depth (in	ches):		_ ^	Vetland Hydrolo	gy Present	? Yes LL N	lo 🔽
	orded Data (strea	ım gauge, moni	toring well, aerial	photos, pr	evious ins	spection	ns), if available:			
Remarks:										
	orofile were obs	erved to be dr	y, and no evide	nce of we	etland hy	drolog	y was found.			

Project/Site: Easton Ranch			City/Co	ounty: Park			Sa	mpling Da	ate:	7/19/2022
Applicant/Owner: MDT						State: Montai				
Investigator(s): S Weyant			Sectio	n, Township,			T 4N			
Landform (hillslope, terrace, etc.): Floodplain/depress Subregion (LRR): LRR E	sion	Lat:	Local	relief (concav 6.05941572	ve, convex, 214_ Long:	none): conca	0.6383	13312	Datum:	
Soil Map Unit Name: 155A: Meadowcreek, rarely flo									appeu	
Are climatic / hydrologic conditions on the site typical fo		•						,		
Are Vegetation, Soil, or Hydrology	sigr	nificantly	disturk disturk	oed? A	re "Normal	Circumstance	es" prese	ent? Yes	s <u> </u>	No
Are Vegetation, Soil, or Hydrology	nati	urally pr	oblema	tic? (I	f needed, e	xplain any an	swers in	Remarks	s.)	
SUMMARY OF FINDINGS - Attach site m	ap sh	owing	g sam	pling poin	nt locatio	ns, transe	cts, in	nportan	nt feat	ures, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks:	_ No _ _ No _ _ No _			Is the Samp within a We		Yes _	<u> </u>	No]	
This point is located in a depressional area at the	e NE p	ortion	of the s	site.						
VEGETATION - Use scientific names of p	olants	3								
Tree Stratum Plot size (30 Foot Radius) Abso		Domian Species		dicator tatus	Don	ninance Test	worksh	eet		
70 00	SVCI.	Орсско	3: O	latus		nber of Domin are OBL, FA0			4	(A)
						al Number of Dicies Across A			4	(B)
Sapling/Shrub Stratum Plot size (15 Foot Rad	ius)					cent of Domin t Are OBL, FA			100	% (A/B)
Salix drummondiana	8	~	FΔ	CW	Prev	valence Index		heet		
Salix exigua	15	<u> </u>	FA			Total % Cov				oly by:
Salix lutea	12	V	OB			species		X 1 X 2		23
		<u> </u>				CW species S species		X 3		36 30
						U species		X 4		0
Herbaceous Stratum Plot size (5 Foot Rad	ius)				UPL	. species	0	X 5		0
Carex bebbii	2		OBL		Colu	ımn Totals	101	(A)	1	89 (B)
Carex nebrascensis	5		OBL	<u>-</u>		Prevalence I		2/4 - 4	07400	``
Carex pellita	3		OBL							,
Juncus balticus	45	✓	FAC		Пнуа	rophytic Veg 1 - Rapid				egetation
Lotus corniculatus	5		FAC					est is >50	•	gotation
Phleum pratense	5		FAC					ndex is <=		
Scirpus microcarpus	1		OBL	-		4 - Morp supporting sheet.	hologica ng data i	ıl Adaptat	ions (P s or on	rovide separate
						Problem	atic Hvd	rophytic \	/enetat	ion (Explain)
Woody Vine Stratum Plot size (30 Foot Rad	ius)					ators of hydricent, unless dis	sil and	wetland h	nydrolog	gy must be
Percent Bare Ground 34					Hyd Veg	rophytic etation sent?	Yes			, ,
Remarks: A positive dominance test and a prevalence inde	ex belo	ow three	e indic	ate the pres		hydrophytic	_		_	

SOIL									Sampling Point: DP01w		
Profile Descripti	on: (Describe	to the depth	needed to d	locument the i	ndicato	r or confir	m the abs	ence			
Depth	Matrix			Redox Feature		0	-				
	Color (moist)	%	Color (mois		Type ¹	Loc ²	Textu		Remarks		
0-06 10	YR 4/2	95 10	YR 5/0	5 5	С	M	Silt Lo	am			
06+							Cobb	les	Rock bottom		
						-					
Type: C=Conce	ntration. D=Dec	letion. RM=R	educed Matr	ix. CS=Covered	or Coa	ed Sand G	- ———— Brains.	² Loc	ation: PL=Pore Lining, M=Matrix.		
Hydric Soil India									rs for Problematic Hydric Soils ³ :		
Histosol (A1)			Sandy Re	dox (S5)				2 cm	n Muck (A10)		
Histic Epiped	lon (A2)		Stripped N	latrix (S6)				,	Parent Material (TF2)		
Black Histic (L	_	icky Mineral (F		ot MLRA 1)	, .	Shallow Dark Surface (TF12)		
Hydrogen Su	, ,		7	eyed Matrix (F2)			Othe	er (Explain in Remarks)		
_ `	ow Dark Surfac	e (A11) 💆	Depleted i				3.				
Thick Dark S	, ,		7	rk Surface (F6)	.7\				rs of hydrophytic vegetation and		
Sandy Mucky Sandy Gleye	/ Mineral (S1)	_	- ·	Dark Surface (F pressions (F8)	7)				nd hydrology must be present, s disturbed or problematic.		
Restrictive Laye			1 Nedox De	pressions (i o)				unica	s disturbed or problematic.		
Type:	(
Depth (inches)) :		_				Hydric	Soil I	Present? Yes 🔽 No 🔲		
Remarks:											
HYDROLOGY											
Wetland Hydrolo	gy Indicators:										
Primary Indicators	s (minimum of c	ne required; o	check all that	apply)				Secon	dary Indicators (2 or more required)		
Surface Wate			Wate	r-Stained Leave	es (B9) (except	-	w	ater-Stained Leaves (B9) (MLRA 1, 2,		
High Water T			M	LRA 1, 2, 4A, a	nd 4B)				4A, and 4B)		
Saturation (A				Crust (B11)			Drainage Patterns (B10)				
Water Marks				tic Invertebrate			-		y-Season Water Table (C2)		
Sediment De				ogen Sulfide O			-		aturation Visible on Aerial Imagery (C9)		
Drift Deposits				zed Rhizosphe		_	ots (C3) _		eomorphic Position (D2)		
Algal Mat or				ence of Reduce		-	_		nallow Aquitard (D3)		
Iron Deposits				nt Iron Reducti		,			AC-Neutral Test (D5)		
Surface Soil		(57)		ed or Stressed		ر1) (LRR A	4) _		aised Ant Mounds (D6) (LRR A)		
	sible on Aerial I			(Explain in Re	marks)		-	Fr	ost-Heave Hummocks (D7)		
	etated Concave	e Surrace (Bo)								
Field Observatio		Na	✓ Dep	th (in ab a a).							
Surface Water Pr		es <u> </u>		th (inches):							
Water Table Pres		es U No		th (inches):		 0 Wet					
Saturation Preser (includes capillary		es 🔽 No	Dер	th (inches):		<u> </u>	lland Hydr	ology	Present? Yes <u>V</u> No <u> </u>		
Describe Recorde		gauge, moni	toring well, a	erial photos, pr	evious ir	spections)	, if availabl	le:			
Remarks:		aturation to t	ho o=!! -···· (ois#-		io no siti -		note method by dealers, at their day		
A positive FAC-i point.	neutral test, sa	aturation to t	ne son surfa	ace, and the p	ooint's g	eomorphi	c position	ı ındıc	cate wetland hydrology at this data		
point.											

Project/Site: Easton Ranch		City/C	_{County:} Park	Sampling Date: 7/19/2022
Applicant/Owner: MDT		,		State: Montana Sampling Point: DP02u
• •		Section	on, Township, Ran	
Landform (hillslope, terrace, etc.): Flat/berm				
Subregion (LRR): LRR E	_ Lat:		46.057865509	Long:110.639084843 Datum: NAD 83
Soil Map Unit Name: 155A: Meadowcreek, rarely floode	dNesda	com	plex, 0 to 2 perce	ent slop NWI classification:Not mapped
Are climatic / hydrologic conditions on the site typical for this	time of ye	ar? Y	∕es <u></u> No _	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology s	ignificantly	distur	bed? Are "N	ormal Circumstances" present? Yes 🔽 No 🗌
Are Vegetation, Soil, or Hydrology n				ded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	ı san	npling point lo	cations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	<u> </u>			
			Is the Sampled within a Wetland	
Wetland Hydrology Present? Yes No				·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ··
This point is located on a berm between excavated of	ells and a	an ove	erflow channel.	
VEGETATION - Use scientific names of plan	its			
<u>Tree Stratum</u> Plot size (30 Foot Radius) Absolute % Cover:	Domian Species		ndicator Status	Dominance Test worksheet
// COVEL	Species	· · · ·	otatus	Number of Dominant Species that are OBL, FACW or FAC: 1 (A)
				Total Number of Dominant Species Across All Strata: 2 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)				Percent of Dominant Species That Are OBL, FACW, or FAC: 50 % (A/B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)				Prevalence Index worksheet
				Total % Cover of: Multiply by:
				OBL species 0 X 1 0
				FACV species 0 X2 0 165
				FACU species 0 X 4 0
Herbaceous Stratum Plot size (5 Foot Radius)				UPL species 25 X 5 <u>125</u>
Bromus inermis 25	<u> </u>	UP		Column Totals 80 (A) 290 (B)
Elymus repens 15 Phleum pratense 30		FA		Prevalence Index = B/A = 3.625
Poa pratensis 10		FA		Hydrophytic Vegetation Indicators
				1 - Rapid Test for Hydrophytic Vegetation
				2 - Dominance Test is >50%
				3 - Prevalence Index is <= 3.0
				 4 - Morphological Adaptations (Provide supporting data in remarks or on separate sheet.
				5 - Wetland Non-Vascular Plants
				Problematic Hydrophytic Vegetation (Explain)
Woody Vine Stratum Plot size (30 Foot Radius)				Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5.
Percent Bare Ground 20				Hydrophytic Vegetation Present? Ves □ NO ✓
Remarks:				
An upland vegetation community is present at this da	ata point.			
US Army Corps of Engineers				Western Mountains, Valleys, and Coasts - Version 2.0
1 00 Airily Corps of Elighteets				rrestori iviouritairis, valicys, ariu 60asts - versiori 2.0

SOIL										Sampling Point: DP02u
Profile Des	cription: (Describe	to the dep	th neede	d to docui	ment the	indicator	or confir	m the absence	of indicators.)
Depth		Matrix				x Feature		2	_	
(inches)		(moist)	%	Color	(moist)	%	Type ¹	Loc ²	Texture	Remarks
0-05	2.5Y	3/2	100						Clay Loam	Fine roots
05-16	2.5Y	3/2	100						Clay Loam	Bottom of pit
			 pletion, RM=					ed Sand (cation: PL=Pore Lining, M=Matrix.
_		: (Appli	cable to all				ted.)			ors for Problematic Hydric Soils ³ :
Black H	ol (A1) Epipedon (A Histic (A3) en Sulfide (ed Below Da	(A4)	ce (A11)	Strip Loan Loan	dy Redox (ped Matrix ny Mucky I ny Gleyed eted Matrix	(S6) Mineral (F Matrix (F2		t MLRA 1	Red Ver	m Muck (A10) d Parent Material (TF2) y Shallow Dark Surface (TF12) er (Explain in Remarks)
Thick D	ark Surface	e (A12)	,	Redo	ox Dark Su	rface (F6)				ors of hydrophytic vegetation and
	Mucky Mine Gleyed Mat	` '		_ :	eted Dark ox Depress	•	,			and hydrology must be present, ss disturbed or problematic.
Restrictive	-	. ,		Neuc	DX Depress	510115 (1 0)			unies	as disturbed of problematic.
Type:	, (-	,.								
	nches):								Hydric Soil	l Present? Yes 🔲 No 🗹
	201/									
HYDROLO Wetland Hy		dicators	•							
-			• one required	l check a	ll that appl	v)			Seco	ndary Indicators (2 or more required)
	Water (A1		ono roquiroc		Water-Sta		es (B9) (e	except		Vater-Stained Leaves (B9) (MLRA 1, 2,
	/ater Table (1, 2, 4A,		жосрі	,	4A, and 4B)
	ion (A3)	(* '-)			Salt Crust					Orainage Patterns (B10)
$\overline{}$	Marks (B1)				Aquatic In	. ,	es (B13)			Ory-Season Water Table (C2)
Sedime	nt Deposits	s (B2)			Hydrogen	Sulfide O	dor (C1)		s	Saturation Visible on Aerial Imagery (C9
Drift De	posits (B3)				Oxidized F	Rhizosphe	eres along	Living Ro	oots (C3) 🔲 G	Geomorphic Position (D2)
Algal M	lat or Crust	(B4)			Presence	of Reduce	ed Iron (C	4)	s	Shallow Aquitard (D3)
	posits (B5)				Recent Iro					AC-Neutral Test (D5)
	Soil Crack				Stunted or		•	01) (LRR	_	Raised Ant Mounds (D6) (LRR A)
_			Imagery (B7 e Surface (E	· —	Other (Exp	olain in Re	emarks)		F	rost-Heave Hummocks (D7)
Field Obse	• •	u Concav	/e Surface (E	00)						
Surface Wa		? ,	Yes 🗆 1	اه ا	Depth (in	ches):				
Water Table					Depth (in			I .		
Saturation F	Present?				Depth (in				tland Hydrolog	y Present? Yes 🔲 No 🔽
(includes ca Describe Re			m gauge, mo	nitoring w	vell, aerial	photos, pi	revious ins	spections)), if available:	
Remarks:										
Soils were	dry at time	of obse	ervation, an	d no evi	dence of	wetland l	hydrology	y was pre	esent.	

Project/Site: Easton Ranch		City/C	County: Park	Sampling Date:	22
Applicant/Owner: MDT				State: Montana Sampling Point: DP02w	
		Soction	on, Township, Ranç		
		_ 36011	on, rownship, Kan	90	5
Landform (hillslope, terrace, etc.): Overflow channel		_ Loca	I relief (concave, co	onvex, none): Slope (%):	<u> </u>
Subregion (LRR): LRR E	_ Lat:			Long:110.639152488 Datum: NAD 83	
Soil Map Unit Name: 155A: Meadowcreek, rarely floode	dNesd	a com	plex, 0 to 2 perce	ent slop NWI classification:PEM	
Are climatic / hydrologic conditions on the site typical for this	time of y	ear? Y	′es 🔽 No 🔃	(If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology s	ignificantl	y distur	bed? Are "N	ormal Circumstances" present? Yes 🗹 No 🗌	
Are Vegetation, Soil, or Hydrology n				ded, explain any answers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map	showin	g san			tc.
Hydrophytic Vegetation Present? Yes N		_			
	• <u> </u>	-	Is the Sampled A		
7 07 ===	<u> </u>	-	within a vvetiant	11: 165 140	
Remarks:	the ever	flour ok	annal that rung t	hough the center of the cite	
This point is located north of the access road within	tne over	ilow cr	nannei inai runs i	nough the center of the site.	
VEGETATION - Use scientific names of plan					
Tree Stratum Plot size (30 Foot Radius) Absolute % Cover:	Domia Specie		ndicator Status	Dominance Test worksheet	
, dovoi.	Оробіо	.0. 0	riatas	Number of Dominant Species that are OBL, FACW or FAC: 3 (A)	
				Total Number of Dominant Species Across All Strata: 3 (B)	
Sapling/Shrub Stratum Plot size (15 Foot Radius)				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 % (A/B)	١
Sapining-Stratum 1 for size (15 1 out reading)				Prevalence Index worksheet	
				Total % Cover of: Multiply by:	_
				OBL species 81 X 1 <u>81</u>	
				FACW species 12 X 2 24	
				FAC species 6 X 3 18	
Herbaceous Stratum Plot size (5 Foot Radius)				FACU species 0 X 4 0 UPL species 1 X 5 5	
,		0.0			
Carex atherodes 15		OB		Column Totals 100 (A) 128 ((B)
Carex nebrascensis 1 Carex pellita 15		OB OB		Prevalence Index = B/A = 1.28	
		OB		Hydrophytic Vegetation Indicators	
				✓ 1 - Rapid Test for Hydrophytic Vegetation	
Juncus balticus 10 Poa pratensis 6		FA	CW	✓ 2 - Dominance Test is >50%	
Poa pratensis 6 Scirpus microcarpus 40		OB		✓ 3 - Prevalence Index is <= 3.0	
Stachys pilosa 2	✓		CW		
Unidentified forb 1		FA		 4 - Morphological Adaptations (Provide supporting data in remarks or on separate sheet. 	
				5 - Wetland Non-Vascular Plants	
				☐ Problematic Hydrophytic Vegetation (Expla	ın)
Woody Vine Stratum Plot size (30 Foot Radius)				Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5.	
Percent Bare Ground 0				Hydrophytic Vegetation Yes ✓ NO ☐ Present?	
Remarks: A positive dominance test and a prevalence index be	elow thre	e indid		vegetation at this data point.	

SOIL									S	ampling Point:	DP02w
Profile Desc	ription: (Desci	ibe to the de	pth need	led to docun	nent the i	ndicato	r or confi	rm the abser			
Depth	Matr			Redox	x Feature			_			
(inches)	Color (moist) %	Cold	or (moist)	%	Type		Texture		Remarks	
0-16	2.5Y 2.5	/1 95	10YR	4/6	4	С	M, PL	Silty Cla	ау		
0-16			N	2.5/0	1	С	М	Silty Cla	ay Botton	n of pit	
			-					_			
					-	-	_	_	_		
			-				_				
			-			-	_	_	_		
			-					_			
¹ Type: C=Co	oncentration, D=	Depletion, RI	∕I=Reduce	ed Matrix, CS	=Covere	d or Coa	 ited Sand (– ———— Grains. ²	 ² Location: PL=	Pore Lining, N	1=Matrix.
Hydric Soil I	ndicators: (Ap	plicable to a	II LRRs,	unless other	wise not	ed.)				olematic Hydr	
Histosol	, ,			ndy Redox (S					2 cm Muck (A1		
	ipedon (A2)		=	ipped Matrix	` '				Red Parent Ma	, ,	
Black His				amy Mucky M			pt MLRA	_	-	ark Surface (T	F12)
	n Sulfide (A4) I Below Dark Su	rfoos (A11)	_	amy Gleyed I pleted Matrix)		(Other (Explain	in Remarks)	
	irk Surface (A12		_	dox Dark Sur	. ,			3India	cators of hydro	phytic vegetati	on and
_	lucky Mineral (S	•		pleted Dark S					•	gy must be pre	
	leyed Matrix (S	•	_	dox Depressi		• ,				or problemation	
	ayer (if presen				. ,						
Туре:											
Depth (inc	ches):							Hydric S	Soil Present?	Yes 🔽	. No <u> </u>
layer.											
HYDROLO	GY										
	Irology Indicate	ors:									
Primary Indic	ators (minimum	of one requir	ed; check	all that apply	/)			<u>S</u> e	condary Indica	ators (2 or more	e required)
Surface \	Water (A1)			☐ Water-Stai	ned Leav	es (B9)	(except		☐ Water-Staine	ed Leaves (B9)	(MLRA 1, 2
High Wa	ter Table (A2)			MLRA 1	I, 2, 4A, a	ınd 4B)			4A, and	1 B)	
✓ Saturatio	n (A3)			Salt Crust	(B11)				Drainage Pa	tterns (B10)	
Water Ma	arks (B1)			Aquatic Inv	ertebrate	s (B13)				Water Table (0	
Sedimen	t Deposits (B2)			Hydrogen	Sulfide O	dor (C1)			Saturation V	isible on Aerial	Imagery (C9
Drift Dep	osits (B3)		<u>_</u>	Oxidized R	hizosphe	res alon	g Living Ro	oots (C3) 👱	🙎 Geomorphic		
	t or Crust (B4)			Presence o	of Reduce	d Iron (C4)		Shallow Aqu	itard (D3)	
Iron Dep	osits (B5)			Recent Iron				_	FAC-Neutral	Test (D5)	
=	Soil Cracks (B6)			Stunted or	Stressed	Plants ((D1) (LRR	A)		Nounds (D6) (L	-
_	on Visible on Ae		· —	_l Other (Exp	lain in Re	marks)			_l Frost-Heave	Hummocks (D)7)
· _ ·	Vegetated Con	cave Surface	(B8)								
Field Observ		\Box		7							
Surface Water		Yes		Depth (inc							
Water Table				✓ Depth (inc							\Box
Saturation Pr (includes cap	illary fringe)		No	Depth (inc			_ '''			Yes <u></u>	No
Describe Rec	corded Data (str	zam gauge, r	ionitoring	weii, aerial p	motos, pr	evious II	ispections), ii avallable:			
Remarks:											
	AC-neutral tes	t, saturation	to the so	oil surface, a	and the p	oint's (geomorph	nic position i	ndicate wetla	nd hydrology	' .

Project/Site: Easton Ranch	City/County: Park	Sampling Date:7/19/2022
Applicant/Owner: MDT		State: Montana Sampling Point: DP03u
	Section, Township, Ran	
Landform (hillslope, terrace, etc.): Valley bottom		90
		Long: -110.638625882 Datum: NAD 83
Subregion (LRR): LRR E Lat: Lat:		
Soil Map Unit Name: 155A: Meadowcreek, rarely floodedNesd		
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes 🔽 No 👢	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significant	y disturbed? Are "N	Normal Circumstances" present? Yes 🗹 No
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If nee	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showin	g sampling point lo	cations, transects, important features, etc
Hydrophytic Vegetation Present? Yes No		
Hydric Soil Present? Yes No	Is the Sampled A	
Wetland Hydrology Present? Yes No	- Within a Welland	1: 163 <u> </u>
Remarks:	tland call at the CE nor	tion of the project area
This point is located in an upland protrusion into the large we	tiand cell at the SE por	tion of the project area.
VEGETATION - Use scientific names of plants Absolute Domia	nt Indicator	T
Tree Stratum Plot size (30 Foot Radius) Absolute Domia % Cover: Specie		Dominance Test worksheet
		Number of Dominant Species that are OBL, FACW or FAC:
		Total Number of Dominant Species Across All Strata: 1 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)		Percent of Dominant Species That Are OBL, FACW, or FAC: 100 % (A/B)
,		Prevalence Index worksheet
		Total % Cover of: Multiply by:
		OBL species 0 X 1 0
		FACW species 0 X 2 0 FAC species 77 X 3 231
		FACU species 3 X 4 12
Herbaceous Stratum Plot size (5 Foot Radius)		UPL species 0 X 5 0
Agrostis stolonifera 3	FAC	Column Totals 80 (A) 243 (B
Dactylis glomerata 3	FACU	(*)
Elymus repens 10	FAC	Prevalence Index = B/A = 3.0375
Phleum pratense 54	FAC	Hydrophytic Vegetation Indicators
Poa pratensis 10	FAC	1 - Rapid Test for Hydrophytic Vegetation
		✓ 2 - Dominance Test is >50%
		☐ 3 - Prevalence Index is <= 3.0
		 4 - Morphological Adaptations (Provide supporting data in remarks or on separate sheet.
		5 - Wetland Non-Vascular Plants
		Problematic Hydrophytic Vegetation (Explain
Woody Vine Stratum Plot size (30 Foot Radius)		Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5.
Percent Bare Ground 20		Hydrophytic Vegetation Yes ✔ NO □ Present?
Remarks: Although hydrophytic vegetation was observed, the data point wetland hydrology (1987 COE Wetland Delineation Manual).		ydric soil development and is not supported by

SOIL							Sampling Point: DP03u
Profile Description	: (Describe	to the dept	h needed to docu	ment the indicator o	or confirm the	absence of indica	
Depth	Matrix		Redo	ox Features			
(inches) Co	lor (moist)	%	Color (moist)	% Type ¹	Loc ² T	Texture	Remarks
0-16 10YI	R 3/2	100			Silty	Clay Loam Botto	om of pit
				- —— —— ·			
				·			
Type: C=Concentr	ation, D=Dej	letion, RM=	Reduced Matrix, C	S=Covered or Coated	d Sand Grains.	. ² Location: Pl	L=Pore Lining, M=Matrix.
Hydric Soil Indicat	ors: (Applic	able to all L	RRs, unless othe	rwise noted.)		Indicators for Pr	oblematic Hydric Soils ³ :
Histosol (A1)		<u>[</u>	📃 Sandy Redox (S5)		2 cm Muck (A	
Histic Epipedon	(A2)	<u>[</u>	Stripped Matrix	(S6)		Red Parent N	` '
Black Histic (A3		<u> </u>	Loamy Mucky I	Mineral (F1) (except	MLRA 1)		Dark Surface (TF12)
Hydrogen Sulfic		<u> </u>	Loamy Gleyed	Matrix (F2)		U Other (Explai	n in Remarks)
Depleted Below		e (A11)	Depleted Matri			•	
Thick Dark Surf		<u> </u>	📃 Redox Dark Sເ			-	rophytic vegetation and
Sandy Mucky M		<u> </u>	Depleted Dark	• •			logy must be present,
Sandy Gleyed I			Redox Depress	sions (F8)		unless disturbe	ed or problematic.
Restrictive Layer (if present):						
Туре:							
Depth (inches): _					Hy	ydric Soil Present	? Yes 🔲 No 🔽
HYDROLOGY							
Wetland Hydrology Primary Indicators (i			check all that appl	lv)		Secondary Indi	icators (2 or more required)
Surface Water (ined Leaves (B9) (ex	cept		ned Leaves (B9) (MLRA 1,
High Water Tab				1, 2, 4A, and 4B)	ССР	4A, and	
Saturation (A3)	nc (A2)		☐ Salt Crust	-			Patterns (B10)
_ ` '	4)			, ,			
Water Marks (B				vertebrates (B13)			n Water Table (C2)
Sediment Depo				Sulfide Odor (C1)	· · · · · · · · · · · · · · · · · · ·	_	Visible on Aerial Imagery (
Drift Deposits (E	-			Rhizospheres along L	• ,	· —	ic Position (D2)
Algal Mat or Cru			_	of Reduced Iron (C4)			quitard (D3)
Iron Deposits (E	*		_	on Reduction in Tilled			al Test (D5)
Surface Soil Cra			_	r Stressed Plants (D1) (LRR A)		t Mounds (D6) (LRR A)
Inundation Visib	ole on Aerial	Imagery (B7)) Other (Ex	plain in Remarks)		Frost-Hea\	ve Hummocks (D7)
Sparsely Veget	ated Concav	e Surface (B	8)				
Field Observations	: :						
Surface Water Pres	ent? \	′es <u> </u>	lo <u> </u>	ches):	_		
Water Table Presen	t? \	′es 🔲 N	lo <u> </u>	ches):	_		
Saturation Present? (includes capillary fr		es N	o Depth (in	ches):	_ Wetland I	Hydrology Presen	t? Yes 🔲 No 🔽
		n gauge, mor	nitoring well, aerial	photos, previous insp	pections), if ava	ailable:	
Remarks:							
No evidence of we	tland hydro	logy observ	/ed.				

Applicant/Owner MDT	Project/Site: Easton Ranch	City/Coun	_{ty:} Park		Sampling Date	e: 7/19/2022
Investigator(s): W Fouls	Applicant/Owner: MDT					
Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): COTIVEX Slope (%): Subregion (LRR): LRR E Lat: 46.056982668 Long: -110.638796163 Datum: NAD Soil Map Unit Name: 155A: Meadowcreek, rarely floodedNesda complex, 0 to 2 percent slop Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.) Are Vegetation	···	Section T	ownship Pane			
Subregion (LRR): LRR E	•			go		4
Soil Map Unit Name: 155A: Meadowcreek, rarely floodedNesda complex, 0 to 2 percent slop NWi classification. PEM Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No No (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features Hydrophytic Vegetation Present? Yes No site hydrology Present? Yes No within a Wetland? Yes No No No No No No No No No N						Slope (76)
Are climatic / hydrologic conditions on the site typical for this time of year? Yes Are "Normal Circumstances" present? Yes No Are Vegetation				-		atum: NAD 63
Are Vegetation	Soil Map Unit Name: 155A: Meadowcreek, rarely floodedNes	sda complex	, 0 to 2 perce	nt slop NWI classifica	tion:PEM	
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features Hydrophytic Vegetation Present?	Are climatic / hydrologic conditions on the site typical for this time of	f year? Yes _	✓ No _	$\overline{\underline{}}$ (If no, explain in Re	marks.)	
Summary OF FINDINGS - Attach site map showing sampling point locations, transects, important features Hydrophytic Vegetation Present?	Are Vegetation, Soil, or Hydrology significa	ntly disturbed?	? Are "N	ormal Circumstances" pr	esent? Yes_	✓ No
Summary OF FINDINGS - Attach site map showing sampling point locations, transects, important features Hydrophytic Vegetation Present?	Are Vegetation . Soil . , or Hydrology . naturally	problematic?	(If nee	ded, explain any answers	s in Remarks.))
Hydric Soil Present? Wetland Hydrology Present? Wetland Hydrology Present? Remarks: This point is located near the SE corner of the site, at the end of transect 3. VEGETATION - Use scientific names of plants Tree Stratum	SUMMARY OF FINDINGS – Attach site map show	ing sampli	ng point lo	cations, transects,	important	features, etc.
Wetland Hydrology Present? Wetland Hydrology Present? Yes		_	the Commissi (
Remarks: This point is located near the SE corner of the site, at the end of transect 3. VEGETATION - Use scientific names of plants				rea I? V△s ✓	No 🗆	
This point is located near the SE corner of the site, at the end of transect 3. VEGETATION - Use scientific names of plants Tree Stratum			a vvetiane			
VEGETATION - Use scientific names of plants Tree Stratum Plot size (30 Foot Radius) Absolute % Cover: Domiant Species? Indicator Status Sapling/Shrub Stratum Plot size (15 Foot Radius) Foot Radius) Percent of Dominant Species that are OBL, FACW or FAC: 1 (A) Total Number of Dominant Species Total Number of Dominant Species Across All Stratas: 1 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100 % (A) Prevalence Index worksheet Total % Cover of: Multiply by. OBL species 15 X 1 15 FAC species 15 X 3 45 FAC species 10 X 5 0 UPL species 0 X 5 0 Column Totals 70 (A) 140 Prevalence Index = B/A = 2 Herbaceous Stratum 40 FAC FAC Phleum pratense 10 FAC FAC Phace the province of Dominant Species that are OBL, FAC Column Totals Total Mumber of Domina		and of transo	ct 2			
Tree Stratum Plot size (30 Foot Radius) Absolute % Cover: Species? Status Sapling/Shrub Stratum Plot size (15 Foot Radius) Absolute % Cover: Species? Status Indicator Species that are OBL, FACW or FAC: 1 (A) Total Number of Dominant Species that are OBL, FACW or FAC: 1 (B) Percent of Dominant Species Across All Strata: 1 (B) Percent of Dominant Species Across All Strata: 1 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (D) % (A) Prevalence Index worksheet Total % Cover of: Multiply by (COVERN Species 15 X 1 15 (D) FACW Species 15 X 3 15 (D) FACW Spe	This point is located hear the SE comer of the site, at the e	ind of transe	Ct 3.			
Tree Stratum Plot size (30 Foot Radius) % Cover: Species? Status Sapling/Shrub Stratum Plot size (15 Foot Radius) Species? Status Dominant Species that are OBL, FACW or FAC: 1 (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: 1 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100 % (A) Prevalence Index worksheet Total % Cover of: Multiply by OBL species 15 X 1 15 FAC species 15 X 3 45 FAC species 15 X 3 45 FAC species 15 X 3 45 FACU species 0 X 4 0 UPL species 0 X 5 0 Column Totals 70 (A) 140 Prevalence Index = B/A = 2 Hydrophytic Vegetation Indicators V 1 - Rapid Test for Hydrophytic Vegetat V 2 - Dominance Test is >50%	-	siont Indias	ator .			
that are OBL, FACW or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 1 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species That Are OBL, FACW, or FAC: 1 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet Total % Cover of: Multiply by. OBL species 15 X 1 15 FACW species 40 X 2 80 FAC species 15 X 3 45 FACU species 0 X 4 0 UPL species 0 X 4 0 UPL species 0 X 5 0 Column Totals 70 (A) 140 Prevalence Index = B/A = 2 Hydrophytic Vegetation Indicators V 1 - Rapid Test for Hydrophytic Vegetat V 2 - Dominance Test is >50%	Trace Ctreatures Districts (OO Foot Doding)			Dominance Test work	sheet	
Sapling/Shrub Stratum Plot size (15 Foot Radius) Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet Total % Cover of: Multiply by: OBL species 15 X 1 15 FACW species 40 X 2 80 FAC species 15 X 3 45 FACU species 15 X 3 45 FACU species 0 X 4 0 UPL species 0 X 4 0 UPL species 0 X 5 0 Column Totals 70 (A) 140 Prevalence Index = B/A = 2 Hydrophytic Vegetation Indicators ✓ 1 - Rapid Test for Hydrophytic Vegetati ✓ 2 - Dominance Test is >50%						1 (A)
That Are OBL, FACW, or FAC: Prevalence Index worksheet Total % Cover of: Multiply by: OBL species 15						1 (B)
Prevalence Index worksheet Total % Cover of: Multiply by: OBL species 15 X 1 15 FACW species 40 X 2 80 FAC species 15 X 3 45 FACU species 15 X 3 45 FACU species 0 X 4 0 UPL species 0 X 5 0 Carex nebrascensis 10 OBL Carex utriculata 5 OBL Juncus balticus 40 ✓ FACW Phleum pratense 10 GAC Poa pratensis 5 FAC Poa pratensis 5 FAC Prevalence Index worksheet Total % Cover of: Multiply by: OBL 5 Column Total 70 X 4 0 UPL species 0 X 5 0 Column Totals 70 (A) 140 Prevalence Index = B/A = 2 Hydrophytic Vegetation Indicators ✓ 1 - Rapid Test for Hydrophytic Vegetat ✓ 2 - Dominance Test is >50%	Sapling/Shrub Stratum Plot size (15 Foot Radius)					100 % (A/B)
OBL species 15 X 1 15 FACW species 40 X 2 80 FAC species 15 X 3 45 FACU species 0 X 4 0 UPL species 0 X 5	<u></u>			Prevalence Index wor	ksheet	
Herbaceous Stratum Plot size (5 Foot Radius) Carex nebrascensis 10 □ OBL Carex utriculata Juncus balticus Phleum pratense Poa pratensis FACW species 40 X 2 80 FAC species 15 X 3 45 FACU species 0 X 4 0 UPL species 0 X 5 0 Column Totals 70 (A) 140 Prevalence Index = B/A = 2 Hydrophytic Vegetation Indicators ✓ 1 - Rapid Test for Hydrophytic Vegetat ✓ 2 - Dominance Test is >50%					_	Multiply by:
Herbaceous Stratum Plot size (5 Foot Radius) Carex nebrascensis 10 □ OBL Carex utriculata Juncus balticus Phleum pratense Poa pratensis FAC species 15 X 3 45 FACU species 0 X 4 0 UPL species 0 X 5 0 Column Totals 70 (A) 140 Prevalence Index = B/A = 2 Hydrophytic Vegetation Indicators ✓ 1 - Rapid Test for Hydrophytic Vegetat ✓ 2 - Dominance Test is >50%				*	=	
Herbaceous Stratum Plot size (5 Foot Radius) Carex nebrascensis 10 OBL Carex utriculata 5 OBL Juncus balticus 40 ✓ FACW Phleum pratense 10 FAC Poa pratensis 5 FAC FACU species 0 X 4 0 UPL species 0 X 5 0 Column Totals 70 (A) 140 Prevalence Index = B/A = 2 Hydrophytic Vegetation Indicators ✓ 1 - Rapid Test for Hydrophytic Vegetat ✓ 2 - Dominance Test is >50%				•		
Herbaceous Stratum Plot size (5 Foot Radius) Carex nebrascensis 10 OBL Carex utriculata 5 OBL Juncus balticus 40 FAC Phleum pratense 10 FAC Poa pratensis 5 FAC FAC I - Rapid Test for Hydrophytic Vegetat ✓ 2 - Dominance Test is >50%				•	=	
Carex nebrascensis 10 OBL Carex utriculata 5 OBL Juncus balticus 40 ✓ FACW Phleum pratense 10 FAC Poa pratensis 5 FAC ✓ 1 - Rapid Test for Hydrophytic Vegetat ✓ 2 - Dominance Test is >50%	Herbaceous Stratum Plot size (5 Foot Radius)			·	_	
Carex utriculata 5 OBL Juncus balticus 40 ✓ FACW Phleum pratense 10 FAC Poa pratensis 5 FAC ✓ 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is >50%		1 ORI	1			-
Juncus balticus 40 ✓ FACW Phleum pratense 10 FAC Poa pratensis 5 FAC ✓ 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is >50%		_		Column Lotals 7() (A)	140 (B)
Phleum pratense Poa pratensis 10	-			Prevalence Index	= B/A =	2
Poa pratensis 5 ☐ FAC ✓ 1 - Rapid Test for Hydrophytic Vegetat ✓ 2 - Dominance Test is >50%				Hydrophytic Vegetation	on Indicators	
✓ 2 - Dominance Test is >50%	<u> </u>	1		✓ 1 - Rapid Test	t for Hydrophy	tic Vegetation
				2 - Dominance	e Test is >50%	%
✓ 3 - Prevalence Index is <= 3.0				3 - Prevalence	e Index is <= 3	3.0
4 - Morphological Adaptations (Provide supporting data in remarks or on separasheet.				supporting da		
☐ 5 - Wetland Non-Vascular Plants				5 - Wetland N	on-Vascular F	Plants
Problematic Hydrophytic Vegetation (E				Droblomatic H	lydrophytic \/c	actation (Evalain)
						,
Woody Vine Stratum Plot size (30 Foot Radius) Indicators of hydric sil and wetland hydrology mu present, unless disturbed or problematic for #3, 4	Woody Vine Stratum Plot size (30 Foot Radius)					
Hydrophytic Vegetation Yes ✓ NO Percent Bare Ground 30 Present?				Vegetation Ye	s 🗹 NO	
Remarks: A positive dominance test and a prevalence index below three indicate the presence of a hydrohpytic vegetation community at the data point.	A positive dominance test and a prevalence index below the	nree indicate	the presence	of a hydrohpytic vege	tation comm	nunity at this

SOIL								Sampling Point: DP03w
Profile Des	cription: (Describe	to the depth	needed to doo	ument the ind	dicator or	confir	n the absence of indica	
Depth	Matrix			dox Features	Type ¹	Loc ²	Tanduna	Demonto
(inches)	Color (moist)	%	Color (moist)				Texture	Remarks
0-16	10YR 4/2	85 7.5	5YR 4/6	15 (C M,	PL	Silty Clay Loam Botto	m of pit
		· —— —						
	Concentration, D=Dep					Sand G		_=Pore Lining, M=Matrix.
	Indicators: (Applic	apie to ali Lh	_		.)			oblematic Hydric Soils ³ :
☐ Black F ☐ Hydrog	Epipedon (A2) Histic (A3) en Sulfide (A4)		Loamy Gleye	rix (S6) y Mineral (F1) (ed Matrix (F2)	(except M	LRA 1		
☐ Thick D☐ Sandy I	ed Below Dark Surfac Dark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4)	e (ATT)	Depleted Ma Redox Dark Depleted Dar Redox Depre	Surface (F6) rk Surface (F7)	ı		wetland hydrol	rophytic vegetation and ogy must be present, ed or problematic.
Restrictive	Layer (if present):							
Туре:			_					
Depth (ir	nches):		_				Hydric Soil Present	? Yes <u> </u>
YDROLO	DGY							
	drology Indicators:							
Primary Indi	icators (minimum of o	ne required; o	check all that ap	oply)			Secondary Indi	cators (2 or more required)
Surface	e Water (A1)		Water-S	Stained Leaves	(B9) (exc	ept	Water-Stai	ned Leaves (B9) (MLRA 1 ,
	ater Table (A2)			A 1, 2, 4A, and	d 4B)		4A, and	•
	ion (A3)		=	ıst (B11)				atterns (B10)
	Marks (B1)			Invertebrates (n Water Table (C2)
	ent Deposits (B2)			en Sulfide Odor				Visible on Aerial Imagery (
	eposits (B3)			d Rhizospheres	_	ing Ro		
	lat or Crust (B4)		_	ce of Reduced I	, ,	aila (C	Shallow Aq 6)	
	posits (B5) Soil Cracks (B6)			Iron Reduction or Stressed Pl		•		, ,
_	, ,	(D7)				(LKK /		: Mounds (D6) (LRR A) re Hummocks (D7)
	tion Visible on Aerial I ly Vegetated Concave			Explain in Rema	aiks)		Flost-Heav	e Hullillocks (D1)
Field Obse								
Surface Wa	ter Present? Y	es <u> </u>		(inches):				
Water Table	Present? Y	es <u> </u>	Depth	(inches):				
Saturation F		es No	Depth	(inches):		Wet	and Hydrology Present	t? Yes <u> 【</u> No <u> </u>
	pillary fringe) ecorded Data (stream	gauge, monit	oring well, aeri	al photos, previ	ious inspe	 ctions)	if available:	
Remarks:								
Evidence o				ive FAC-neut	ral test a	nd the	point's geomorphic po	sition. Additionally, soils
	ved to be moist at t							-

Applicant/Owner: MDT State: Montana Sampling Point: DP04u Investigator(s): W Fouts Section, Township, Range: S 32 T 4N R 9E	Project/Site: Easton Ranch	City/County: Park	Sampling Date	7/19/2022
Investigator(s): W Fouts			State: Montana Sampling Poin	 _{t:} DP04u
Landsmy (hillslope, terrace, etc.). Yalley bottom Local relate (concaver, convex, none); flat Slope (%): 0 Subregion (LRR), LRR E Lat 40,0561671113 Long: -110,840019983 patum NAD 83 Subregion (LRR), LRR E Lat 40,0561671113 Long: -110,840019983 patum NAD 83 Solid Apu Link Hame; 155A: Meadowcreek, rarely flooded—Nesda complex, 0 to 2 percent slop. Noth classification Rp183 Are Vegoration Soil Soi		Section, Township, Range:		
Subminary Definition Present? Ves No Vestand Hydrology	Landform (hillslope, terrace, etc.): Valley bottom	Local relief (concave, conv	rex, none): flat S	Slope (%):0
Soil Map Unit Name: 155A: Meadowcreek, rarely flooded-Nesda complex. 0 to 2 percent slop. NVM classification.Ro1SS Are climatic: hydrologic conditions on the site typical for this time of year? Yes No (fine, explain in Remarks.) Are Vegetation Soil or Hydrology apatrally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No (fineded, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No (fineded, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No (fineded, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation and supplies of the sampled Area within a Wetland? Yes No (fineded, explain in any answers in Remarks.) The Summary of Finding Present? Yes No (fineded, explain in Wetland? Yes No (fineded, explain in Remarks.) Tree Stratum Plot size (30 Foot Radius) No (fineded, explain in Remarks.) No (fineded, explain in Remarks.) No (fineded, explain in Remarks.) Is the Sampled Area within a Wetland? Yes No (fineded, explain in Remarks. This point is located approximately 4 inches in elevation above and 30 feet away from DPO4w. Vegetation of Power FAC. (a) Total Number of Dominant Species That Are OBL, FACW of FAC. (b) Total Number of Dominant Species That Are OBL, FACW of FAC. (c) (a) Total Number of Dominant Species That Are OBL, FACW of FAC. (d) Total Number of Dominant Species That Are OBL, FACW of FAC. (d) Total Number of Dominant Species That Are OBL, FACW of FAC. (d) Total Number of Dominant Species That Are OBL, FACW of FAC. (e) Total Number of Dominant Species That Are	Subregion (LRR): LRR E Lat:	46.0561571113 Lo	ng:110.640019863 _{Da}	
Are Vegetation	Soil Map Unit Name: 155A: Meadowcreek, rarely floodedNes	sda complex, 0 to 2 percent	slop NWI classification:Rp1SS	
Are Vegetation	Are climatic / hydrologic conditions on the site typical for this time o	f year? Yes 🗹 No 🔲	_ (If no, explain in Remarks.)	
SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present?	Are Vegetation, Soil, or Hydrology significal	ntly disturbed? Are "Norr	mal Circumstances" present? Yes _	✓ No
Hydrophytic Vegetation Present?	Are Vegetation, Soil, or Hydrology naturally	problematic? (If neede	d, explain any answers in Remarks.)	
Hydric Soil Present? Yes	SUMMARY OF FINDINGS – Attach site map showi	ng sampling point loca	tions, transects, important	features, etc.
Wetland Hydrology Present? Yes				
Tree Stratum				
This point is located approximately 4 inches in elevation above and 30 feet away from DP04w. VEGETATION - Use scientific names of plants	710 <u></u> 110 <u></u>	_		<u> </u>
Sapling/Shrub Stratum Plot size (30 Foot Radius) Absolute % Cover: Species? Status Species? Status Species? Status Species? Status Species? Status Summaria Species & Cover		ove and 30 feet away from I	DP04w.	
Sapling/Shrub Stratum Plot size (30 Foot Radius) Absolute % Cover: Species? Status Species? Status Species? Status Species? Status Species? Status Summaria Species & Cover				
Sapling/Shrub Stratum	VEGETATION - Use scientific names of plants			
Number of Dominant Species that are OBL, FACW or FAC: 2 (A)	Tues Chustoms Districts (OO Foot Dadius)	I L	Dominance Test worksheet	
Saoling/Shrub Stratum Plot size (15 Foot Radius) Herbaceous Stratum Plot size (5 Foot Radius) Bromus inermis Elymus repens Poa pratensis Poa pratensis Decision (30 Foot Radius) Woody Vine Stratum Plot size (30 Foot Radius) Woody Vine Stratum Plot size (30 Foot Radius) Woody Vine Stratum Plot size (30 Foot Radius) Percent Bare Ground Percent Bare Ground Percent Bare Ground Percent Bare Indicator Supported by wetland hydrology (1987 COE Wetland Delineation Manual). Species Across All Strata: Percent do Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet Total % Cover of: Multiply by: OBL species 0 X 1 0 FACW species 0 X 2 0 FAC species 85 X 3 255 FACU species 5 X 5 25 Column Totals 90 (A) 280 (B) Prevalence Index = B/A = 3.11111 Hydrophytic Vegetation Indicators 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is <= 3.0 4 - Morphological Adaptations (Provide supporting data in remarks or on separate sheet. 5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation (Explain) Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5. Hydrophytic Vegetation Yes No Present? Remarks: Although marginal hydrophytic vegetation was observed, the data point lacked evidence of hydric soil development and is not supported by wetland hydrology (1987 COE Wetland Delineation Manual).	,,, oover, epoc	N		2 (A)
That Are OBL, FACW, or FAC: 100 % (A/B)				2 (B)
Herbaceous Stratum Plot size (5 Foot Radius) Bromus inermis	Sanling/Shruh Stratum Plot size #5 Foot Radius)			100 % (A/B)
Herbaceous Stratum Plot size (5 Foot Radius) Bromus inermis 5 UPL Elymus repens 65 ▼ FAC Poa pratensis 20 ▼ FAC Woody Vine Stratum Plot size (30 Foot Radius) Woody Vine Stratum Plot size (30 Foot Radius) Woody Vine Stratum Plot size (30 Foot Radius) Percent Bare Ground 10 Remarks: Although marginal hydrophytic vegetation was observed, the data point lacked evidence of hydric soil development and is not supported by wetland hydrology (1987 COE Wetland Delineation Manual).	Saping/Sirub Stratum 1 for size (15 1 correction)	F	Prevalence Index worksheet	
Herbaceous Stratum Plot size (5 Foot Radius) Bromus inermis		-	_	
Herbaceous Stratum Plot size (5 Foot Radius) Bromus inermis Elymus repens 65			· · · · · · · · · · · · · · · · · · ·	
Herbaceous Stratum			' =	
Bromus inermis 5			' =	
Elymus repens 65 FAC Poa pratensis 20 FAC Prevalence Index = B/A = 3.11111 Hydrophytic Vegetation Indicators 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is <= 3.0 4 - Morphological Adaptations (Provide supporting data in remarks or on separate sheet. 5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation (Explain) Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5. Hydrophytic Vegetation Yes NO Remarks: Although marginal hydrophytic vegetation was observed, the data point lacked evidence of hydric soil development and is not supported by wetland hydrology (1987 COE Wetland Delineation Manual).		1	JPL species 5 X 5	25
Prevalence Index = B/A = 3.11111 Hydrophytic Vegetation Indicators 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is <= 3.0 4 - Morphological Adaptations (Provide supporting data in remarks or on separate sheet. 5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation (Explain) Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5. Hydrophytic Vegetation Yes NO Percent Bare Ground 10 Remarks: Although marginal hydrophytic vegetation was observed, the data point lacked evidence of hydric soil development and is not supported by wetland hydrology (1987 COE Wetland Delineation Manual).			Column Totals 90 (A)	280 (B)
Hydrophytic Vegetation Indicators 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is <= 3.0 4 - Morphological Adaptations (Provide supporting data in remarks or on separate sheet. 5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation (Explain) Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5.			Prevalence Index = B/A = 3.1	1111
✓ 2 - Dominance Test is >50% 3 - Prevalence Index is <= 3.0 4 - Morphological Adaptations (Provide supporting data in remarks or on separate sheet. 5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation (Explain) Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5. Hydrophytic Vegetation Yes ✓ NO □ Percent Bare Ground 10 Remarks: Although marginal hydrophytic vegetation was observed, the data point lacked evidence of hydric soil development and is not supported by wetland hydrology (1987 COE Wetland Delineation Manual).				
3 - Prevalence Index is <= 3.0 4 - Morphological Adaptations (Provide supporting data in remarks or on separate sheet. 5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation (Explain) Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5. Hydrophytic Vegetation Vegetation Percent Bare Ground 10 Remarks: Although marginal hydrophytic vegetation was observed, the data point lacked evidence of hydric soil development and is not supported by wetland hydrology (1987 COE Wetland Delineation Manual).				-
4 - Morphological Adaptations (Provide supporting data in remarks or on separate sheet. 5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation (Explain)				
woody Vine Stratum Plot size (30 Foot Radius) Percent Bare Ground 10 Remarks: Although marginal hydrophytic vegetation was observed, the data point lacked evidence of hydric soil development and is not supported by wetland hydrology (1987 COE Wetland Delineation Manual). supporting data in remarks or on separate sheet. □ 5 - Wetland Non-Vascular Plants □ Problematic Hydrophytic Vegetation (Explain) Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5. Hydrophytic Vegetation Yes ✔ NO □ Present? Remarks: Although marginal hydrophytic vegetation was observed, the data point lacked evidence of hydric soil development and is not supported by wetland hydrology (1987 COE Wetland Delineation Manual).				
Woody Vine Stratum Plot size (30 Foot Radius) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5. Hydrophytic Vegetation Yes ✓ NO □ Present? Remarks: Although marginal hydrophytic vegetation was observed, the data point lacked evidence of hydric soil development and is not supported by wetland hydrology (1987 COE Wetland Delineation Manual).			supporting data in remarks of	
Woody Vine Stratum Plot size (30 Foot Radius) Percent Bare Ground 10 Permarks: Although marginal hydrophytic vegetation was observed, the data point lacked evidence of hydric soil development and is not supported by wetland hydrology (1987 COE Wetland Delineation Manual). Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5. Hydrophytic Vegetation Yes ✓ NO ☐ Present?			5 - Wetland Non-Vascular Pl	lants
Woody Vine Stratum Plot size (30 Foot Radius) Percent Bare Ground 10 Permarks: Although marginal hydrophytic vegetation was observed, the data point lacked evidence of hydric soil development and is not supported by wetland hydrology (1987 COE Wetland Delineation Manual). Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5. Hydrophytic Vegetation Yes ✓ NO ☐ Present?			Problematic Hydrophytic Ved	getation (Explain)
Plot size (30 Foot Radius) Percent Bare Ground 10 Percent Bare Ground 10 Remarks: Although marginal hydrophytic vegetation was observed, the data point lacked evidence of hydric soil development and is not supported by wetland hydrology (1987 COE Wetland Delineation Manual).		 		
Percent Bare Ground 10 Remarks: Although marginal hydrophytic vegetation was observed, the data point lacked evidence of hydric soil development and is not supported by wetland hydrology (1987 COE Wetland Delineation Manual).	Woody Vine Stratum Plot size (30 Foot Radius)			
Remarks: Although marginal hydrophytic vegetation was observed, the data point lacked evidence of hydric soil development and is not supported by wetland hydrology (1987 COE Wetland Delineation Manual).	Percent Bare Ground 10	\	/egetation Yes ✓ NO	
supported by wetland hydrology (1987 COE Wetland Delineation Manual).	Remarks:			
US Army Corps of Engineers Western Mountains Valleys and Coasts, Varsion 2.0			ce of hydric soil development and	is not
	LIS Army Corns of Engineers	\\/_	stern Mountains Valleys and Coost	s - Version 2.0

B-41

SOIL										Sampling Point: DP04u
Profile Desc	ription: (De	scribe to	the dep	th neede	d to docum	ent the	indicator	or confirm	the absence	
Depth		/latrix			Redox	Feature				
(inches)	Color (m		%	Color	(moist)	%	Type'	_Loc ²	Texture	Remarks
0-02	10YR 3	3/1	100						Clay Loam	Coarse roots throughout
02-16	10YR :	3/1	100						Clay Loam	Bottom of pit
							· ——			
Type: C=Co								ed Sand Gr		ation: PL=Pore Lining, M=Matrix.
Hydric Soil I		(Applica	ble to all				ed.)			rs for Problematic Hydric Soils ³ :
Black Hi	pipedon (A2)		(411)	Strip Loai	dy Redox (S oped Matrix (my Mucky M my Gleyed N leted Matrix	(S6) lineral (F ⁄latrix (F2		t MLRA 1)	Red Very	n Muck (A10) Parent Material (TF2) Shallow Dark Surface (TF12) er (Explain in Remarks)
	irk Surface (/		(Δ11)		ox Dark Sur				³ Indicator	rs of hydrophytic vegetation and
	ucky Minera			$\overline{}$	leted Dark S					nd hydrology must be present,
	leyed Matrix			Red	ox Depressi	ons (F8)			unless	s disturbed or problematic.
Restrictive L	ayer (if pre	sent):								
Туре:										
Depth (inc	ches):								Hydric Soil	Present? Yes 🔲 No 🗹
No hydric so										
HYDROLO										
Wetland Hyd									_	
Primary Indic	·	um of on	e required	l; check a		•	(50) (dary Indicators (2 or more required)
	Water (A1)	.			Water-Stair			xcept	VV	ater-Stained Leaves (B9) (MLRA 1, 2,
High vva	ter Table (A2	2)			MLRA 1 Salt Crust (and 4B)			4A, and 4B)
_	arks (B1)			౼	Aquatic Inv		e (B13)			rainage Patterns (B10) ry-Season Water Table (C2)
_	t Deposits (E	32)			Hydrogen S		, ,			aturation Visible on Aerial Imagery (C9)
	osits (B3)	,			Oxidized R			Livina Roo		eomorphic Position (D2)
_	t or Crust (B	4)			Presence o		_	_	` ' —	nallow Aquitard (D3)
	osits (B5)	,			Recent Iron		•	-	_	AC-Neutral Test (D5)
	Soil Cracks (B6)			Stunted or	Stressed	Plants (D	1) (LRR A)) Ra	aised Ant Mounds (D6) (LRR A)
Inundation	on Visible on	Aerial Im	agery (B7	7)	Other (Expl	ain in Re	emarks)		Fr	ost-Heave Hummocks (D7)
Sparsely	Vegetated 0	Concave	Surface (E	38)						
Field Observ	/ations:				1					
Surface Water	er Present?	Ye	ا ا	۷o <u> </u>	- - - - - - - -					
Water Table	Present?	Ye	ا <u></u> ا	_	Depth (inc					
Saturation Pr (includes cap	illary fringe)	Ye			Depth (inc					Present? Yes No
Describe Red	corded Data	(stream g	auge, mo	nitoring \	well, aerial p	hotos, pr	evious ins	pections),	if available:	
Remarks: No evidence	of wetland	hydrolo	gy obser	ved.						

Project/Site: Easton Ranch	City/C	ounty: Park		Sampling Dat	e: 7/19/2022
Applicant/Owner: MDT			State: Montana		
	Section	on, Township, Range: _			
Landform (hillslope, terrace, etc.): Valley bottom					
Subregion (LRR): LRR E					
Soil Map Unit Name: 155A: Meadowcreek, rarely flooded	dNesda comp	plex, 0 to 2 percent s	SIOD NIVII classifica	tion:Rp1SS	
Are climatic / hydrologic conditions on the site typical for this				-	
Are Vegetation, Soil, or Hydrology si					✓ No □
Are Vegetation, Soil, or Hydrology na					
SUMMARY OF FINDINGS – Attach site map s					
Hydrophytic Vegetation Present? Yes <u>✓</u> No				<u> </u>	•
Hydric Soil Present? Yes V		Is the Sampled Area			
Wetland Hydrology Present? Yes <u>V</u> No		within a Wetland?	Yes	No	
Remarks:					
This point is located in the stand of cottonwoods on the	ne S end of the	e site.			
VEGETATION - Use scientific names of plan					
Tree Stratum Plot size (30 Foot Radius) Absolute % Cover:		tatus	ominance Test work		
Populus balsamifera 50	✓ F.		umber of Dominant S at are OBL, FACW o		2 (A)
Salix lutea 5		DBL To	otal Number of Domir pecies Across All Stra	nant	2 (B)
		Pe	ercent of Dominant S hat Are OBL, FACW,	pecies	100 % (A/B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)			revalence Index woi		
			Total % Cover of		Multiply by:
		0	BL species	38 X 1	38
			ACW species	3 X2	6
			•	0 X 3 0 X 4	180
Herbaceous Stratum Plot size (5 Foot Radius)			ACU species PL species	0 X4	0
Agrostis gigantea 1	□ FAC				-
Cirsium arvense 3	☐ FAC)1 (A)	224 (B)
Poa palustris 5	☐ FAC		Prevalence Index		
Ranunculus macounii 3	☐ OBI		ydrophytic Vegetati		
Rumex crispus 1	FAC		_	, , ,	tic Vegetation
Rumex salicifolius 3	☐ FAC	CW	✓ 2 - Dominano		
Scirpus microcarpus 30	✓ OBI	-	✓ 3 - Prevalenc	e Index is <= :	3.0
			4 - Morpholog supporting da sheet.		ons (Provide or on separate
			5 - Wetland N	on-Vascular F	Plants
					egetation (Explain)
Woody Vine Stratum Plot size (30 Foot Radius)			dicators of hydric sil a esent, unless disturbe		
Percent Bare Ground 54		V	ydrophytic egetation Ye resent?	s 🗹 NO	
Remarks: A positive dominance test and a prevalence index be	low three indic		a hydrophytic vege		

SOIL										S	ampling Point:	DP04w
Profile Des	cription: (Describe	to the de	pth neede	d to docur	nent the i	indicato	r or conf	firm the absence			
Depth		Matrix				x Feature						
(inches)	Color	(moist)	%	Color	(moist)	%	Type ¹	Loc ²			Remarks	
0-05	10YR	2/1	100						Silty Clay Loa	m		
05-18	2.5Y	4/1	85	2.5YR	3/6	15	С	PL	Silty Clay Loar	m Botton	of pit	
-	-			-								
	-											
1									2			
Type: C=C Hydric Soil								ted Sanc			Pore Lining, Note Pore L	
Histoso		. (Applic	able to al				eu.,			n Muck (A1	_	ic dolla .
	pipedon (A	2)			dy Redox (S ped Matrix						terial (TF2)	
	Histic (A3)	2)			ny Mucky N	. ,	1) (excei	nt MIRA	_		ark Surface (T	F12)
_	en Sulfide ((A4)			ny Gleyed			pt IIILI (in Remarks)	1 12)
Deplete	ed Below Da	ark Surfac	e (A11)		leted Matrix							
	ark Surface			$\overline{}$	ox Dark Su					-	phytic vegetati	
	Mucky Mine				leted Dark \$	•	7)			-	gy must be pre	
Restrictive	Gleyed Mat			<u> </u>	ox Depress	ions (F8)			unies	s disturbed	or problemation	O
Type:	Layer (II p	resent).										
	nches):								Hydric Soil	Dracant?	Yes 🔽	No \square
Remarks:	101103)								Tiyane con	T TCSCIII.	103	
	201/											
HYDROLO												
Wetland Hy Primary Indi				d check :	all that anni	v)			Secon	ıdary Indica	ators (2 or more	e required)
	Water (A1		one require		Water-Stai	•	es (R9) (evcent		-	ed Leaves (B9)	-
_	ater Table (•				1, 2, 4A, a		except		4A, and 4		(WILIXA I, Z,
	ion (A3)	, (2)			Salt Crust		45,			•	tterns (B10)	
	Marks (B1)				Aquatic Inv	,	s (B13)				Water Table (0	C2)
	nt Deposits	(B2)			Hydrogen					-	isible on Aerial	
_	posits (B3)			<u></u>	Oxidized F	Rhizosphe	res along	g Living F	Roots (C3) 🔽 G	eomorphic	Position (D2)	
Algal M	lat or Crust	(B4)			Presence	of Reduce	d Iron (C	24)	sı	hallow Aqu	itard (D3)	
Iron De	posits (B5)				Recent Iro	n Reducti	on in Till	ed Soils	(C6) <u>V</u> F/	AC-Neutral	Test (D5)	
Surface	Soil Crack	s (B6)			Stunted or	Stressed	Plants (l	D1) (LRF	RA) 🖳 R	aised Ant N	lounds (D6) (L	.RR A)
	tion Visible				Other (Exp	olain in Re	marks)		Fr	ost-Heave	Hummocks (D	97)
	ly Vegetate	d Concav	e Surface	(B8)								
Field Obse												
Surface Wa					Depth (in			I				
Water Table			′es		Depth (inc							
Saturation F (includes ca			′es	No <u> </u>	Depth (inc	ches):		— w	etland Hydrology	/ Present?	Yes <u> </u>	No <u> </u>
			n gauge, m	onitoring v	vell, aerial p	ohotos, pr	evious in	spection	s), if available:			
Remarks:	-ΔC-neutr	altest th	na noint's	aeomorn	hic nositio	n and o	vidizad	rhizoenk	neres along living	a roote inc	licate wetland	d hydrology
at this point									ioros along living	y 10013 III	alouto vvotialit	a riyarology
•		• •										

Project/Site: Easton Ranch	City/County: Park	Sampling [Date: 7/19/2022
Applicant/Owner: MDT		State: Montana Sampling F	
I Trilling	Section, Township, Ran	O 00 T 411 B	9E
	•	onvex, none): undulating	
Landform (hillslope, terrace, etc.): Flat			
Subregion (LRR): LRR E Lat: Lat:			
Soil Map Unit Name: 155A: Meadowcreek, rarely floodedNesd			iapped
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes 🔽 No 👤	(If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significantl	y disturbed? Are "N	Normal Circumstances" present? Ye	es 🔽 No 🔲
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If nee	eded, explain any answers in Remar	ks.)
SUMMARY OF FINDINGS - Attach site map showin	g sampling point lo	cations, transects, importa	nt features, etc.
Hydrophytic Vegetation Present? Yes No			
Hydric Soil Present? Yes No	Is the Sampled within a Wetland		✓
Wetland Hydrology Present? Yes No	- Within a Welland	1 res NO	<u></u>
Remarks: This point is located in a flat area at the SW corner of the site			
This point is located in a flat area at the SVV comer of the site			
VEGETATION - Use scientific names of plants			
Tree Stratum Plot size (30 Foot Radius) Absolute Domia % Cover: Specie		Dominance Test worksheet	
, deven. eposio	o. Claido	Number of Dominant Species that are OBL, FACW or FAC:	5 (A)
		Total Number of Dominant Species Across All Strata:	5 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)		Percent of Dominant Species That Are OBL, FACW, or FAC:	100 % (A/B)
Sapining-Onlaw Stratum 1 lot 5/25 (15 1 sort radius)		Prevalence Index worksheet	
		Total % Cover of:	Multiply by:
		OBL species 0 X 1	0
		FACW species 3 X 2 FAC species 78 X 3	<u>6</u> 234
		FAC species 78 X 3 FACU species 5 X 4	20
Herbaceous Stratum Plot size (5 Foot Radius)		UPL species 5 X 5	25
Agrostis stolonifera 3	FAC	Column Totals 91 (A)	
Bromus inermis 5	UPL	,	
Elymus repens 10	FAC	Prevalence Index = B/A =	
Equisetum arvense 15	FAC	Hydrophytic Vegetation Indicate	
Leymus cinereus 10	FAC	1 - Rapid Test for Hydro	
Phalaris arundinacea 3	FACW	✓ 2 - Dominance Test is >	
Phleum pratense 30	FAC	☐ 3 - Prevalence Index is <	<= 3.0
Poa pratensis 10	FAC	4 - Morphological Adapta	
Taraxacum officinale 5	FACU	supporting data in remainsheet.	ks or on separate
		5 - Wetland Non-Vascula	ar Plante
		☐ Problematic Hydrophytic	
Woody Vine Stratum Plot size (30 Foot Radius)		Indicators of hydric sil and wetland present, unless disturbed or proble	
Percent Bare Ground 11		Hydrophytic Vegetation Present?	
Remarks:		<u>I</u>	
Although marginal hydrophytic vegetation was observed, the supported by wetland hydrology (1987 COE Wetland Delinea		ence of hydric soil development	and is not
US Army Corps of Engineers		Western Mountains, Valleys, and Co	pasts - Version 2.0

SOIL								Sampling Point: DP05u
Profile Desc	ription: (Describe	to the dept	h needed to docur	ment the indicat	or or confire	n the absence o	
Depth		Matrix			x Features			
(inches)	Color	(moist)	%	Color (moist)	% Type	e ¹ Loc ²	Texture	Remarks
0-10	10YR	3/2	100				Silty Clay	
10-16	10YR	3/2	100				Sandy Loam	Gravels, bottom of pit
	oncentratio	on, D=Dep		Reduced Matrix, CS	S=Covered or Co	 ated Sand G	rains. ² Loca	ation: PL=Pore Lining, M=Matrix.
				RRs, unless othe				rs for Problematic Hydric Soils ³ :
Black His Hydroge Depleted Thick Da	pipedon (A stic (A3) n Sulfide (d Below Da ark Surface lucky Mine dleyed Mat	(A4) ark Surface e (A12) eral (S1) rix (S4)	e (A11)	Sandy Redox (i Stripped Matrix Loamy Mucky M Loamy Gleyed Depleted Matrix Redox Dark Su Depleted Dark Redox Depress	(S6) Mineral (F1) (exco Matrix (F2) ((F3) rface (F6) Surface (F7)	ept MLRA 1	Red Very Othe 3Indicator wetlan	Muck (A10) Parent Material (TF2) Shallow Dark Surface (TF12) r (Explain in Remarks) rs of hydrophytic vegetation and hydrology must be present, s disturbed or problematic.
Type:	-ayer (ii p	resentj.						
Depth (inc	ches):						Hydric Soil I	Present? Yes No 🗸
Remarks:							11,74	
No hydric so	on mulcar	OIS ODSEI	veu.					
HYDROLO(
Wetland Hyd							_	
			ne required:	check all that appl	•			dary Indicators (2 or more required)
	Water (A1				ined Leaves (B9)			ater-Stained Leaves (B9) (MLRA 1, 2,
	ter Table ((A2)			1, 2, 4A, and 4B)		4A, and 4B)
Saturation				Salt Crust				ainage Patterns (B10)
	arks (B1)	(D0)			vertebrates (B13)			y-Season Water Table (C2)
	t Deposits				Sulfide Odor (C1	-	_	turation Visible on Aerial Imagery (C9)
	osits (B3)				Rhizospheres aloi			eomorphic Position (D2)
	t or Crust	(B4)			of Reduced Iron			allow Aquitard (D3)
	osits (B5)	/= - \			n Reduction in Ti			C-Neutral Test (D5)
	Soil Crack				Stressed Plants			ised Ant Mounds (D6) (LRR A)
Inundation					olain in Remarks)		Fro	ost-Heave Hummocks (D7)
Field Observ		u Concave	Surface (B	0)				
Surface Wate		2 V.	es 🗆 N	lo 🔽 Depth (in	ches):			
Water Table					ches):	I		
Saturation Pr					ches):		land Hydrology	Present? Yes No
(includes cap Describe Red			gauge, mor	nitoring well, aerial			if available:	
Remarks: Although a p	ositive F	AC-Neutr	al test was	s observed a seco	ondary indicator	r is not pres	ent to demons	strate wetland hydrology.

Project/Site: Easton Ranch	City/C	c _{ounty:} Park		Sampling Dat	_{te:} 7/19/2022
Applicant/Owner: MDT		,	State: Montana		
	Section	on Township Range	s 32 T		
Landform (hillslope, terrace, etc.): Excavated depression					
Subregion (LRR): LRR E					
Soil Map Unit Name: 155A: Meadowcreek, rarely flooded					
•					эрса
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology sig					
Are Vegetation, Soil, or Hydrology na	turally problema	atic? (If need	ed, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS - Attach site map s	howing san	npling point loc	ations, transects	, important	features, etc.
Hydrophytic Vegetation Present? Yes No					
Hydric Soil Present? Yes No		Is the Sampled Ai	rea Vos 🗸	No	
Wetland Hydrology Present? Yes Ves No		Within a viction a	103		
Remarks: This point is located in the SW corner of the site.					
This point is located in the GW come, of the site.					
VEGETATION - Use scientific names of plant	ts				
<u>Tree Stratum</u> Plot size (30 Foot Radius) Absolute % Cover:		ndicator Status	Dominance Test wor	ksheet	
Cover.	Species? S	status	Number of Dominant Sthat are OBL, FACW of		6 (A)
			Total Number of Domi Species Across All Str		6 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)			Percent of Dominant S That Are OBL, FACW,		100 % (A/B)
		-014/	Prevalence Index wo	rksheet	
Alnus incana 10 Populus balsamifera 15		ACW_	Total % Cover of		Multiply by:
Salix boothii 10		CW		23 X 1	23
Salix exigua 5		CW	•	50 X 2 40 X 3	100 120
Salix lutea 10	✓ OE		FACU species	0 X4	0
Herbaceous Stratum Plot size (5 Foot Radius)			UPL species	0 X 5	0
Carex aquatilis 3	□ OB	L	Column Totals 1	13 (A)	243 (B)
Carex nebrascensis 5	☐ OB				, , ,
Eleocharis palustris 5	ОВ	L	Prevalence Index		
Juncus balticus 25	✓ FAC	CW	Hydrophytic Vegetati		
Lotus corniculatus 20	✓ FAC	C	_		ytic Vegetation
Poa palustris 5	FAG	C		ce Test is >50°	
			✓ 3 - Prevalend	ce Index is <=	3.0
			supporting da	gical Adaptatio ata in remarks	ons (Provide or on separate
			sheet.	Non-Vascular F	Diamete.
			☐ Problematic I	Hydrophytic Ve	egetation (Explain)
Woody Vine Stratum Plot size (30 Foot Radius)			Indicators of hydric sil a present, unless disturb		
Percent Bare Ground 37			Hydrophytic Vegetation Present?	es 🗸 NO	
Remarks: A positive dominance test and a prevalence index be	low three indic		of a hydrophytic veg		

SOIL											Sampling Point: DP05w
Profile Des	cription: (Describe	to the dep	th neede	d to docui	ment the i	ndicato	r or con	firm the abs	sence	of indicators.)
Depth (inches)	Depth Matrix Redox Features						uro	Remarks			
0-04					4/6	3					Kemarks
04-16	10YR 10YR	3/2		7.5YR 7.5YR	4/6	3	С	M,PL M,PL	Cla		am Cobbles throughout
04-10	1011	3/2	91	7.511	4/0	3	C	IVI,FL	Saliuy Cia	ay Lua	an Cobbles till oughout
16+			-			-			Cobb	oles	Rock refusal
Type: C=C	oncentratic	on, D=Dep	letion, RM:	-Reduced	d Matrix, C	S=Covered	d or Coa	ited Sand	d Grains.		cation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators	: (Applic	able to all	LRRs, u	nless othe	rwise note	∍d.)		In	_	rs for Problematic Hydric Soils³:
Black H Hydrog Deplete Thick D Sandy I Sandy O	pipedon (A listic (A3) en Sulfide (ed Below Da Park Surface Mucky Mine Gleyed Mat	(A4) ark Surfac e (A12) eral (S1) trix (S4)	e (A11)	Strip Loai Loai Dep Red Dep	dy Redox (pped Matrix my Mucky I my Gleyed leted Matrix ox Dark Su leted Dark ox Depress	(S6) Mineral (F2 Matrix (F2 x (F3) Irface (F6) Surface (F)	pt MLRA		Red Very Othe dicato wetla	n Muck (A10) Parent Material (TF2) y Shallow Dark Surface (TF12) er (Explain in Remarks) ers of hydrophytic vegetation and end hydrology must be present, es disturbed or problematic.
Restrictive	Layer (if p	resent):									
Type: Depth (ir	nches).								Hydri	c Soil	Present? Yes <u>✓</u> No
Remarks:									,		
HYDROLC											
Wetland Hy											
Primary Indi	· · · · · · · · · · · · · · · · · · ·		ne require	d; check a							ndary Indicators (2 or more required)
High W	e Water (A1) ater Table (ion (A3) Marks (B1)				Water-Sta MLRA Salt Crust Aquatic In	1, 2, 4A, a (B11)	nd 4B)			D	/ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2)
Drift De	nt Deposits posits (B3) at or Crust				Presence	Rhizosphe of Reduce	res alon d Iron (0	g Living F C4)	Roots (C3)	☑ G ☑ SI	aturation Visible on Aerial Imagery (C9) eomorphic Position (D2) hallow Aquitard (D3)
Surface	posits (B5) Soil Crack ion Visible y Vegetate	on Aerial		7)	Recent Iro Stunted or Other (Exp	Stressed	Plants (, ,	R	AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
Field Obser	rvations:										
Surface Wa				No		ches):					
Water Table Saturation F				No <u> </u>	Depth (in Depth (in	ches): ches):			<i>l</i> etland Hyd	rology	y Present? Yes 🔽 No 🔲
(includes ca Describe Re			ı gauge, mo	onitoring v	vell, aerial	photos, pr	evious ii	nspection	ns), if availab	ole:	
Remarks:											
Remarks: The point's test indicate					e soil surf	face, oxid	ized rh	izosphe	res along li	iving r	roots, and a positive FAC-neutral

Project/Site: Easton Ranch	City/Co	_{ounty:} Park	;	Sampling Date	7/19/2022
Applicant/Owner: MDT			_{State:} Montana s		
Investigator(s): S Weyant	Contin	n Tournahin Ban			
			go		
				S	nope (76)
Subregion (LRR): LRR E Lat:			Long:110.639		
Soil Map Unit Name: 155A: Meadowcreek, rarely floodedNesda	a comp	lex, 0 to 2 perce	ent slop NWI classifica	_{tion:} Not mapp	ped
Are climatic / hydrologic conditions on the site typical for this time of year	ear? Ye	es 🔽 No 🔼	(If no, explain in Re	marks.)	
Are Vegetation, Soil, or Hydrology significantly	y disturb	ped? Are "N	lormal Circumstances" pre	esent? Yes _	✓ No □
Are Vegetation , Soil , or Hydrology naturally pr	roblema [.]	tic? (If nee	ded, explain any answers	in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing		•		ŕ	features, etc.
Hydrophytic Vegetation Present? Yes ✓ No □					
Hydric Soil Present? Yes No	_	Is the Sampled A			
Wetland Hydrology Present? Yes No		within a Wetland	1? Yes <u> </u>	No <u> </u>	_
Remarks:					
This point is located between excavated cells, roughly half a form	foot hig	her in elevation	than DP06-w		
VEGETATION - Use scientific names of plants	-4 1	di 4 - n			
Tree Stratum Plot size (30 Foot Radius) Absolute Domian % Cover: Species		dicator atus	Dominance Test work	sheet	
·			Number of Dominant Sp that are OBL, FACW or		2 (A)
			Total Number of Domin Species Across All Stra		2 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)			Percent of Dominant Sp That Are OBL, FACW, o		100 % (A/B)
<u></u>			Prevalence Index wor	ksheet	
			Total % Cover of:	_	Multiply by:
			'	0 X 1	0
			'	0 X 2 5 X 3	0
				0 X4	255 0
Herbaceous Stratum Plot size (5 Foot Radius)			•	0 X 5	50
Bromus inermis 10	UPL				
Elymus repens 20	FAC		Column Totals 95	5 (A)	305 (B)
Lotus corniculatus 5	FAC		Prevalence Index	= B/A = 3.2	1053
Phleum pratense 50	FAC		Hydrophytic Vegetation		
Poa pratensis 10	FAC		☐ 1 - Rapid Test	for Hydrophyt	ic Vegetation
			2 - Dominance	e Test is >50%)
			3 - Prevalence	e Index is <= 3	.0
			4 - Morpholog supporting dat sheet.		`
			5 - Wetland No	on Magaular Di	anta
			☐ Problematic H	ydrophytic Ve	getation (Explain)
Woody Vine Stratum Plot size (30 Foot Radius)			Indicators of hydric sil ar present, unless disturbed		
Percent Bare Ground 5			Hydrophytic Vegetation Yes Present?	s 🗹 NO	
Remarks: Although marginal hydrophytic vegetation was observed, the supported by wetland hydrology (1987 COE Wetland Delinear		anual).	ence of hydric soil deve		

SOIL							Sampling Point: DP06u
Profile Des	cription: (Descr	ibe to the dept	h needed to docu	ment the indicator	or confirm t	he absence of i	
Depth	Matr	-		x Features			
(inches)	Color (moist		Color (moist)	% Type ¹	Loc ²	Texture	Remarks
0-06	7.5YR 3/2	100			Silt	ty Clay Loam F	ine roots throughout
06-16	7.5YR 3/2	100			Silt	ty Clay Loam B	Sottom of pit
				S=Covered or Coate	ed Sand Grai		n: PL=Pore Lining, M=Matrix.
_		plicable to all L	RRs, unless othe	-			or Problematic Hydric Soils ³ :
Histoso	` '	<u>, </u>	Sandy Redox (uck (A10)
	Epipedon (A2)	=	Stripped Matrix	` '			rent Material (TF2)
	listic (A3) en Sulfide (A4)	-	Loamy Mucky l Loamy Gleyed	Mineral (F1) (excep t	t MLRA 1)		allow Dark Surface (TF12) Explain in Remarks)
	ed Below Dark Su	rface (A11)	Depleted Matri				explain in Remarks)
	Dark Surface (A12		Redox Dark Su	. ,		³ Indicators o	f hydrophytic vegetation and
_	Mucky Mineral (S	· -	Depleted Dark				ydrology must be present,
Sandy	Gleyed Matrix (S4)	Redox Depress	sions (F8)		unless dis	sturbed or problematic.
Restrictive	Layer (if presen	t):					
Туре:							
Depth (ir	nches):					Hydric Soil Pre	sent? Yes 🔲 No 🗹
HYDROLO	201						
	ydrology Indicate	ors:					
Primary Ind	icators (minimum	of one required:	check all that appl	y)		Secondar	y Indicators (2 or more required)
Surface	e Water (A1)		Water-Sta	ined Leaves (B9) (e	xcept	Water	-Stained Leaves (B9) (MLRA 1, 2
High W	/ater Table (A2)		MLRA	1, 2, 4A, and 4B)		4A	, and 4B)
Saturat	ion (A3)		Salt Crust	(B11)		Draina	age Patterns (B10)
Water N	Marks (B1)		Aquatic In	vertebrates (B13)		Dry-S	eason Water Table (C2)
Sedime	ent Deposits (B2)		Hydrogen	Sulfide Odor (C1)		Satura	ation Visible on Aerial Imagery (C
Drift De	eposits (B3)		Oxidized F	Rhizospheres along	Living Roots	(C3) LGeom	norphic Position (D2)
	lat or Crust (B4)			of Reduced Iron (C4	-	L Shallo	ow Aquitard (D3)
	posits (B5)			n Reduction in Tille		_	Neutral Test (D5)
	e Soil Cracks (B6)		_	Stressed Plants (D	1) (LRR A)		d Ant Mounds (D6) (LRR A)
	tion Visible on Aeı			olain in Remarks)		Frost-	Heave Hummocks (D7)
	ly Vegetated Con	cave Surface (B	8)				
Field Obse							
	ter Present?	Yes N		ches):			
Water Table				ches):			
Saturation F (includes ca	?resent? apillary fringe)	Yes _L N	lo <u> </u>	ches):	Wetlan	d Hydrology Pr	esent? Yes No <u>v</u>
		eam gauge, mor	nitoring well, aerial	photos, previous ins	pections), if a	available:	
Remarks:							
	y at time of obs	ervation, and r	no evidence of we	etland hydrology w	vas present.		

Project/Site: Easton Ranch			_ City/Co	ounty: Park	Sampling Date:7/19/202	22
Applicant/Owner: MDT					State: Montana Sampling Point: DP06w	
nvestigator(s): S Weyant			Sectio	n, Township, Rar	nge: S 32 T 4N R 9E	
• ,,					convex, none): concave Slope (%):	5
	·				Long:110.639643963 Datum: NAD 83	
					ent slop NWI classification:Not mapped	
•						
are climatic / hydrologic conditions on the		-				_
are Vegetation, Soil, or F	ydrology <u> </u>	nificantl	ly disturb	ped? Are "	Normal Circumstances" present? Yes 🗹 🔃 No 🗌	
Are Vegetation ${\color{red}\square}$, Soil ${\color{red}\square}$, or F	lydrology natı	urally p	roblema	tic? (If ne	eded, explain any answers in Remarks.)	
SUMMARY OF FINDINGS - At	tach site map sh	owin	g sam	pling point lo	ocations, transects, important features, e	tc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes V No Yes No No		-	Is the Sampled within a Wetlan		
Remarks:						
This point is located just N of the W	portion of the acce	ess roa	nd that r	uns though the	site.	
VEGETATION - Use scientific		S Domia	nt In	dicator	1	
<u>Tree Stratum</u> Plot size (30 Foot R	adima\	Specie		atus	Dominance Test worksheet	
					Number of Dominant Species that are OBL, FACW or FAC: 4 (A)	
					Total Number of Dominant Species Across All Strata: 4 (B)	
Sapling/Shrub Stratum Plot size (15 Foot Radius)				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 % (A/B)	
Populus balsamifera	4		FA	_	Prevalence Index worksheet	
Salix bebbiana	1		FA		Total % Cover of: Multiply by:	_
Salix lutea	3	V	OB		OBL species 6 X 1 6	
Cally lutea		V	OD		FACW species 11 X 2 22	
					FAC species 88 X 3 264 FACU species 0 X 4 0	
Herbaceous Stratum Plot size (5 Foot Radius)				UPL species 2 X 5 10	
Alopecurus arundinaceus	20	~	FAC	:	Column Totals 107 (A) 302 ((B)
Carex nebrascensis	1		OBL		Column Totals 107 (A) 302 (,D)
Cirsium arvense	1		FAC		Prevalence Index = B/A = 2.82243	
Juncus balticus	10	П	FAC		Hydrophytic Vegetation Indicators	
Lotus corniculatus	55	✓	FAC		1 - Rapid Test for Hydrophytic Vegetation	
Poa pratensis	5		FAC	>	✓ 2 - Dominance Test is >50%	
Potentilla gracilis	3		FAC)	✓ 3 - Prevalence Index is <= 3.0	
Scirpus microcarpus	2		OBL	_	4 - Morphological Adaptations (Provide	
Stachys palustris	2		NL		supporting data in remarks or on separate	
					sheet.	
					☐ 5 - Wetland Non-Vascular Plants	
					☐ Problematic Hydrophytic Vegetation (Expla	ain)
Woody Vine Stratum Plot size (30 Foot Radius)				Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5.	
Percent Bare Ground 10					Hydrophytic Vegetation Present? Ves ✓ NO	
Remarks: A prevalence index below three and data point.	d a positive domina	nce te	st indic	ate the presend	te of a hydrophytic vegetation community at this	

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SOIL										Sar	mpling Point:	DP06w
Profile Desc	ription: (l	Describe t	o the de	oth neede	d to docur	ment the ir	ndicato	or confi	irm the absence			
Depth		Matrix			Redo	x Features			_			
(inches)	Color ((moist)	%	Color	(moist)	%	Type ¹	Loc ²			Remarks	
0-06	10YR	3/1	100						Silty Clay Lo			
06-12	10YR	3/2	97	7.5YR	4/6	3	С	M	Sandy Clay L	oarr		
12+									Hardpan	Refusal		
		un D-Denl			Matrix CS		or Coat		Grains ² L	 ocation: PL=P	ore Lining M-	Matrix
Hydric Soil								eu Sanu		tors for Proble		
Black Hi Hydroge Depleted Thick Da Sandy M	pipedon (A stic (A3) n Sulfide (d Below Da ark Surface fucky Mine Gleyed Mati	A4) ark Surface e (A12) eral (S1) rix (S4)	ı (A11)	Strip Loan Loan Depl Redo	ny Gleyed eted Matrix ox Dark Su	(S6) Mineral (F1 Matrix (F2) ((F3) rface (F6) Surface (F		ot MLRA	1) Re Ve	cm Muck (A10) ed Parent Mate ery Shallow Dar ther (Explain in ttors of hydroph land hydrology ess disturbed o	rial (TF2) rk Surface (TF Remarks) ytic vegetatio must be pres	n and
Restrictive I	Layer (if p	resent):										
Type:												
Depth (inc	ches):								Hydric Sc	oil Present?	Yes <u> </u>	No
Prominent r				On Within	Jon Matri	.						
HYDROLO												
Wetland Hy											' 0	
Primary India			ne require				(50) (ondary Indicato	•	
High Wa	arks (B1) and Deposits cosits (B3) and or Crust cosits (B5) Soil Crack con Visible v Vegetated	(B2) (B4) s (B6) on Aerial Ir		[77] [88)	MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	vertebrates Sulfide Od Rhizospher of Reduced n Reduction Stressed I	nd 4B) is (B13) or (C1) es along d Iron (C on in Tille Plants (I marks)	J Living R 4) ed Soils (D1) (LRR	Coots (C3)	Water-Stained 4A, and 4B Drainage Patte Dry-Season W Saturation Visi Geomorphic P Shallow Aquita FAC-Neutral T Raised Ant Mo Frost-Heave H) ems (B10) fater Table (Cable on Aerial I osition (D2) and (D3) est (D5) unds (D6) (LF	2) magery (C9) RR A)
Surface Wate	er Presentí	? Ye	es 🔲	No	Depth (in	ches):						
Water Table		Υe	es			ches):						
Saturation Pi (includes cap	oillary fringe	e)	es			ches):			etland Hydrolo	gy Present?	Yes <u>V</u>	No
Describe Rec	corded Dat	ta (stream	gauge, m	onitoring w	∕ell, aerial ¡	photos, pre	vious in	spections	s), if available:			
Remarks: A positive Famoist at the				nt's geom	orphic po	sition indi	cate we	etland hy	ydrology at thi	s data point. <i>i</i>	Additionally,	soils were

Project/Site: Easton Ranc	h	City/C	_{ounty:} Park		_ Sampling Da	ate: 7/19/2022
Applicant/Owner: MDT				State: Montana		
Investigator(s): S Weyant		Section	on, Township, Rang	O 00 T		9E
- 17	etc.): Valley bottom					Slope (%): 0
Subregion (LRR): LRR E	, -		6.0592754441		 339419588	Datum: NAD 83
	Lat: Lat:			_		
	: Meadowcreek, rarely floodedNes			<u></u>		арре u
	nditions on the site typical for this time of	-		\perp (If no, explain in F	Remarks.)	
Are Vegetation, Soil	, or Hydrology significar	ntly disturt	oed? Are "N	ormal Circumstances"	present? Yes	s <u> </u>
Are Vegetation, Soil	, or Hydrology naturally	problema	itic? (If nee	ded, explain any answe	ers in Remark:	s.)
SUMMARY OF FINDI	NGS – Attach site map showi	ing sam	pling point lo	cations, transects	s, importar	ıt features, etc.
Hydrophytic Vegetation Pr Hydric Soil Present?	resent? Yes V No No V	_	Is the Sampled A	Area		
Wetland Hydrology Preser			within a Wetland		No <u></u>	<u>•</u>
Remarks:	103 110 110	_				
	he W central portion of the site.					
VEGETATION - Use	scientific names of plants					
Tree Stratum Plot size	(30 Foot Radius) Absolute Dom % Cover: Spec		dicator tatus	Dominance Test wo	rksheet	
	// // Gover. Spec	JE3: 0	lalus	Number of Dominant that are OBL, FACW		3 (A)
				Total Number of Dom Species Across All S		3 (B)
Sapling/Shrub Stratum	Plot size (15 Foot Radius)			Percent of Dominant That Are OBL, FACW		100 % (A/B)
				Prevalence Index w		
				Total % Cover of		Multiply by:
				OBL species	0 X1 0 X2	0
				FACW species FAC species	70 X3	210
				FACU species	0 X4	0
Herbaceous Stratum	Plot size (5 Foot Radius)			UPL species	0 X5	0
Bromus ciliatus	5	FAC		Column Totals	70 (A)	210 (B)
Elymus repens	15 🗸	FAC				
Phleum pratense	30 🗸	FAC		Prevalence Inde		3
Poa pratensis	20 🗸	FAC		Hydrophytic Vegeta		
					• •	hytic Vegetation
					nce Test is >50	
				✓ 3 - Prevaler	nce Index is <=	= 3.0
					ogical Adaptat data in remark	tions (Provide s or on separate
					Non-Vascular	· Plants
				□ Problematic	Hydrophytic \	Vegetation (Explain)
Woody Vine Stratum	Plot size (30 Foot Radius)			Indicators of hydric sil present, unless disturb		
Percent Bare G	round 30			Hydrophytic Vegetation Present?	Yes 🗹 NO	
Remarks:						
	ophytic vegetation was observed, th ydrology (1987 COE Wetland Delin			nce of hydric soil de	velopment a	nd is not
LIS Army Corps of Engine	ore			Nestern Mountains Va	llove and Cor	acte Vorcion 2.0

Sampling Point: DP07u confirm the absence of indicators.) Loc² Texture Remarks Silt Loam
Silt Loam
Silt Loam
Sandy Clay Loan Gravelly
Cobbles Rock refusal
Sand Grains. ² Location: PL=Pore Lining, M=Matrix.
Indicators for Problematic Hydric Soils ³ :
2 cm Muck (A10) Red Parent Material (TF2) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present,
unless disturbed or problematic.
Hydric Soil Present? Yes No
Secondary Indicators (2 or more required)
ept
4A, and 4B)
Drainage Patterns (B10)
Dry-Season Water Table (C2)
Saturation Visible on Aerial Imagery (CS
ving Roots (C3)
Shallow Aquitard (D3)
Soils (C6) FAC-Neutral Test (D5)
(LRR A) Raised Ant Mounds (D6) (LRR A)
Frost-Heave Hummocks (D7)
Wetland Hydrology Present? Yes No
Wetland Hydrology Present? Yes No
ections), if available:
ections), if available:

Project/Site: Easton Ranch		City/County: Park	Sampling Date:7/19/2022
Applicant/Owner: MDT			State: Montana Sampling Point: DP07w
••		Section, Township, Ra	
Landform (hillslope, terrace, etc.): Valley bottom/floodplai			3 · ·
			5 Long: -110.639463743 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 Hydrology si			
Are Vegetation, Soil, or Hydrology n.			
SUMMARY OF FINDINGS – Attach site map s		sampling point	locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes V No Hydric Soil Present? Yes No No No No No No No No No No		Is the Sample	d Area
Hydric Soil Present? Wetland Hydrology Present? Yes No No No No No No No No No N		within a Wetla	
Remarks:	'_ <u></u>		
This point is located within a depressional area at the	W centra	al portion of the site.	
VEGETATION - Use scientific names of plan	ts		
Tree Stratum Plot size (30 Foot Radius) Absolute % Cover	Domiant		Dominance Test worksheet
Flot Size (30 Foot Radius) % Cover:	Species'	? Status	Number of Dominant Species that are OBL, FACW or FAC: 4 (A)
			Total Number of Dominant Species Across All Strata: 4 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)			Percent of Dominant Species That Are OBL, FACW, or FAC: 100 % (A/B)
,		FAC	Prevalence Index worksheet
Populus balsamifera 7 Salix exigua 2		FACW	Total % Cover of: Multiply by:
Salix exigua 2 Salix lutea 1		OBL	OBL species 4 X 1 4
Suily lutou		OBL	FACW species 22 X 2 44 189 189
			FACU species 21 X 4 84
Herbaceous Stratum Plot size (5 Foot Radius)			UPL species 0 X 5 0
Carex pachystachya 1		FAC	Column Totals 110 (A) 321 (B)
Carex pellita 3		OBL	
Carum carvi 4		FACU	Prevalence Index = B/A = 2.91818
Elymus repens 5		FAC	Hydrophytic Vegetation Indicators 1 - Rapid Test for Hydrophytic Vegetation
Juncus balticus 20	✓	FACW	✓ 2 - Dominance Test is >50%
Lotus corniculatus 50	<u> </u>	FAC	✓ 3 - Prevalence Index is <= 3.0
Medicago lupulina 2 Taraxacum officinale 15		FACU	
Taraxacum officinale 15		FACU	4 - Morphological Adaptations (Provide supporting data in remarks or on separate sheet.
			5 - Wetland Non-Vascular Plants
			Problematic Hydrophytic Vegetation (Explain)
Woody Vine Stratum Plot size (30 Foot Radius)			Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5.
Percent Bare Ground 0			Hydrophytic Vegetation Present? Ves ✓ NO
Remarks: A positive dominance test and a prevalence index be US Army Corps of Engineers	elow three	indicate the presen	nce of a hydrophytic vegetation community. Western Mountains, Valleys, and Coasts - Version 2.0

SOIL									Sampling Point: DP07	w
Profile Desc	ription: (Describe	to the dep	th neede	ed to docun	nent the i	ndicato	r or confi	m the absence		
Depth	Matrix			Redo	x Features			_		
(inches)	Color (moist)	%	Color	(moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-14	7.5YR 3/2	96	10YR	4/6	5	С	M	Sandy Clay Lo	am Gravels, cobbles	
14+								Cobbles	Rock refusal	
						-				
							_			
					· ——			_	-	
Type: C=Co	oncentration, D=Depl	etion, RM=	Reduce	d Matrix, CS	=Covered	or Coa	ed Sand (– ————— Grains. ² Loc	 cation: PL=Pore Lining, M=Matrix	 C.
	ndicators: (Applica								ors for Problematic Hydric Soils	
Histosol			San	dy Redox (S	S5)				n Muck (A10)	
	pipedon (A2)			oped Matrix	. ,			_	l Parent Material (TF2)	
Black His				my Mucky M			pt MLRA 1		y Shallow Dark Surface (TF12)	
	n Sulfide (A4) I Below Dark Surface	- (Δ11)		my Gleyed ! leted Matrix)		Otn	er (Explain in Remarks)	
	irk Surface (A12)	z (A11)	_ :	lox Dark Sur	. ,			³ Indicato	ors of hydrophytic vegetation and	
=	lucky Mineral (S1)		$\overline{}$	leted Dark S	. ,	7)			ind hydrology must be present,	
_	leyed Matrix (S4)			ox Depress	-	•			s disturbed or problematic.	
Restrictive L	ayer (if present):									
Туре:										
Depth (inc	ches):							Hydric Soil	Present? Yes V No	
Remarks:	edox concentration									
HYDROLO	CV .									
	Irology Indicators:									
	ators (minimum of o	ne required	l: check a	all that apply	()			Secor	ndary Indicators (2 or more requir	ed)
	Water (A1)		,, 0.110 0.11	Water-Stai	-	es (B9) (except		Vater-Stained Leaves (B9) (MLRA	
	ter Table (A2)				I, 2, 4A, a		Схосрі	•	4A, and 4B)	` 1, 2,
☐ Saturatio				Salt Crust					rainage Patterns (B10)	
Water Ma	arks (B1)			Aquatic Inv	ertebrates	s (B13)			ry-Season Water Table (C2)	
Sedimen	t Deposits (B2)			Hydrogen	Sulfide Od	or (C1)		s	aturation Visible on Aerial Image	y (C9)
Drift Dep	osits (B3)			Oxidized R	hizospher	es alon	g Living Ro	oots (C3) 💆 G	Geomorphic Position (D2)	
Algal Ma	t or Crust (B4)			Presence o	of Reduce	d Iron (C	C4)	s	hallow Aquitard (D3)	
	osits (B5)		<u> </u>	Recent Iroi			,	_	AC-Neutral Test (D5)	
_	Soil Cracks (B6)		<u> </u>	Stunted or		•	D1) (LRR	_	aised Ant Mounds (D6) (LRR A)	
	on Visible on Aerial II			Other (Exp	lain in Rei	marks)		F	rost-Heave Hummocks (D7)	
	Vegetated Concave	Surface (l	38)							
Field Observ				1						
Surface Water				Depth (inc						
Water Table			_	Depth (inc						
Saturation Pr (includes cap	illary fringe)			Depth (inc					y Present? Yes <u>V</u> No _	
Describe Rec	corded Data (stream	gauge, mo	nitoring	well, aerial p	hotos, pre	vious ir	nspections), if available:		
Remarks:										
	served to be moist,	a positiv	e FAC-r	eutral test	and the	point's	geomorp	hic position ind	licate wetland hydrology.	
	•	-					•	-		

Project/Site: Easton Ranch		_ City/0	_{County:} Park	s	Sampling Dat	e:7/19/2022
Applicant/Owner: MDT				_{State:} Montana _S		
		Secti	on, Township, Ran			
Landform (hillslope, terrace, etc.): Low terrace				90		
						Slupe (70)
Subregion (LRR): LRR E				Long: -110.639		
Soil Map Unit Name: 155A: Meadowcreek, rarely floor						opea
Are climatic / hydrologic conditions on the site typical for t	nis time of	year? \	∕es <u></u> No _	(If no, explain in Ren	narks.)	
Are Vegetation, Soil, or Hydrology	significant	tly distu	rbed? Are "N	lormal Circumstances" pre	sent? Yes	✓ No
Are Vegetation, Soil, or Hydrology	naturally p	oroblem	atic? (If nee	eded, explain any answers	in Remarks.)
SUMMARY OF FINDINGS - Attach site map				cations, transects, i	mportant	features, etc.
	No 🔽 No 🔽	_	Is the Sampled			
	No 🔽	_	within a Wetland	d? Yes	_ No <u> </u>	
Remarks:	<u> </u>		l			
This point is located about 0.75 feet above DP08-v	<i>I</i> .					
VEGETATION - Use scientific names of pla		nt I	ndicator			
<u>Tree Stratum</u> Plot size (30 Foot Radius) Absolu % Cove			ndicator Status	Dominance Test works	sheet	
	·			Number of Dominant Sp that are OBL, FACW or I		2 (A)
				Total Number of Domina Species Across All Strat		2 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius	;)			Percent of Dominant Spo That Are OBL, FACW, o		100 % (A/B)
	,			Prevalence Index work	sheet	
				Total % Cover of:		Multiply by:
				'	0 X1	0
				· '	0 X2 8 X3	204
				-	0 X4	120
Herbaceous Stratum Plot size (5 Foot Radius	s)				2 X 5	10
Bromus inermis	2 🗆	UP	L	Column Totals 100	(A)	334 (B)
Carum carvi 1	5 🗆	FA	CU	100		、 ,
Elymus repens 2	5 🗸	FA	С	Prevalence Index =		3.34
Lotus corniculatus 3	0	FA	С	Hydrophytic Vegetation		
Phleum pratense 1	0 🗌	FA	С	1 - Rapid Test		
Potentilla gracilis	3	FA	С	✓ 2 - Dominance		
Taraxacum officinale 1	5 🗌	FA	CU	☐ 3 - Prevalence	Index is <=	3.0
				4 - Morphologio supporting data sheet.		ons (Provide or on separate
				5 - Wetland No	n-Vascular l	Plants
				Problematic Hy	drophytic Ve	egetation (Explain)
Woody Vine Stratum Plot size (30 Foot Radius	5)			Indicators of hydric sil and present, unless disturbed	d wetland hy	drology must be
Percent Bare Ground 0				Hydrophytic Vegetation Present?	, V NO	
Remarks: Although marginal hydrophytic vegetation was obs supported by wetland hydrology (1987 COE Wetla			lanual).	ence of hydric soil devel		

SOIL									S	ampling Point:	DP08u
Profile Des	cription: (Describe	to the dep	th needed to	document the	e indicator	or confi	rm the absence			
Depth		Matrix			Redox Featu			_			
(inches)		(moist)	%	Color (moi	st) %	Type ¹	Loc ²	Texture		Remarks	
0-04	10YR	3/2	100					Clay Loam	Dense	fine roots	
04-14	10YR	3/2	100					Clay Loam	Cobble	s throughou	t
14+								Cobbles	Rock re	efusal	
					rix, CS=Cover		ed Sand (Pore Lining, M=	
Histoso Histic E			cable to all	Sandy Ro	edox (S5) Matrix (S6) lucky Mineral (-	of MIRA	2 c Re	m Muck (A1 d Parent Ma	0)	
Hydroge	en Sulfide (ed Below Da		ce (A11)	Loamy G	leyed Matrix (I Matrix (F3)		T MEICA	_	-	in Remarks)	12)
Thick D	ark Surface Mucky Mine	e (A12) eral (S1)	()	Redox D	ark Surface (F Dark Surface	(F7)			-	phytic vegetatio gy must be pres	
	Gleyed Mat	. ,		Redox D	epressions (F8	3)		unle	ss disturbed	or problematic.	
Restrictive	Layer (if p	resent):									
Type:										\Box	
Depth (in Remarks:	iches):							Hydric Soi	I Present?	Yes	No <u> </u>
HYDROLC Wetland Hy		dicators	•								
-				l; check all tha	at apply)			Seco	ndary Indica	ators (2 or more	required)
	Water (A1		ono roquiroc		er-Stained Lea	aves (R9) (e	evcent		•	ed Leaves (B9)	
	ater Table (/ILRA 1, 2, 4A		cxccpt	<u> </u>	4A, and 4		(1011177 1, 2,
Saturati		(, (_)			Crust (B11)	, una 42,			Drainage Pa	•	
一	/larks (B1)				atic Invertebra	tes (B13)				Water Table (C	2)
	nt Deposits	(B2)			rogen Sulfide				-	sible on Aerial I	
	posits (B3)				lized Rhizosph		ı Livina Ro			Position (D2)	magory (or
	at or Crust				sence of Redu	_	_	• • —	Shallow Aqu		
	posits (B5)	(51)			ent Iron Reduc	-	-		FAC-Neutral		
	Soil Crack	s (B6)			ited or Stresse			_		founds (D6) (LF	DD A)
_			Imagery (B7	_	er (Explain in F		oi) (LIXIX	_		Hummocks (D7	-
			/e Surface (E	· —	sı (Explaili ili i	(Ciliaiks)		'	1031-11eave	Tidilililocks (D7	,
Field Obser		a conca	, country (i								
Surface Wat		? `	Yes 🗆 I	No 🔽 De	oth (inches): _						
Water Table			Yes 🔲 1		oth (inches): _						
Saturation P (includes ca	pillary fring	e)		No <u> </u>	oth (inches): _		We	tland Hydrolog	gy Present?	Yes	No 🔽
Describe Re	ecorded Da	ta (strear	n gauge, mo	nitoring well,	aerial photos,	previous in:	spections), it available:			
Remarks:											
	e of wetla	nd hydro	ology obser	ved. Soils w	ere dry at tim	ne of obse	rvation.				

Project/Site: Easton Ranch		Citv/Cou	_{ınty:} Park		Sampling D	ate: 7/19/2022
Applicant/Owner: MDT		, ,		State: Montana	Sampling P	oint:DP08w
		Section	, Township, Range		4N R	
Landform (hillslope, terrace, etc.): Valley bottom/depression Subregion (LRR): LRR E	n Lat:	Local re	elief (concave, con .0598657264 Lo	vex, none): concave ong: -110.6	39097415	Datum: NAD 83
Soil Map Unit Name: 155A: Meadowcreek, rarely flooded-						appeu
Are climatic / hydrologic conditions on the site typical for this ti						
Are Vegetation, Soil, or Hydrology sign						
Are Vegetation, Soil, or Hydrology natu SUMMARY OF FINDINGS - Attach site map sh						
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes ✓ No			s the Sampled Arwithin a Wetland?	ea Yes	No]
Remarks: This point is located in a small depressional area at the	N cen	itral port	ion of the site.			
VEGETATION - Use scientific names of plants	5					
Tree Ctreture Diet size (20 Foot Podius)	Domian Species		cator	Dominance Test wo	ksheet	
	Species	s: Sia		Number of Dominant that are OBL, FACW		3 (A)
				Total Number of Dom Species Across All St		3 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)				Percent of Dominant That Are OBL, FACW		100 % (A/B)
Populus balsamifera 30	✓	FAC	ı	Prevalence Index wo		
Salix exigua 1		FAC	١٨/	Total % Cover of OBL species	<u>f:</u> 4 X1	Multiply by:
Salix lutea 4		OBL		FACW species	19 X 2	38
				FAC species	82 X3	246
Harbanana Stratura Plataina (5. Fact Padius)				FACU species	0 X4	0
Herbaceous Stratum Plot size (5 Foot Radius)		E40		UPL species	0 X 5	0
Elymus repens 1 Juncus balticus 18	<u> </u>	FAC FACV		Column Totals	05 (A)	(B)
Lotus corniculatus 50	<u> </u>	FAC		Prevalence Inde	x = B/A = 2	2.74286
Poa palustris 1		FAC		Hydrophytic Vegeta		
					• •	hytic Vegetation
					ce Test is >5	
					ce Index is <	
						tions (Provide ks or on separate
				5 - Wetland	Non-Vascula	r Plants
				☐ Problematic	Hydrophytic '	Vegetation (Explain)
Woody Vine Stratum Plot size (30 Foot Radius)				ndicators of hydric sil resent, unless disturb		
Percent Bare Ground 30				Hydrophytic Vegetation _Y Present?	es 🗹 NO	
Remarks: A prevalence index below three and a positive domina US Army Corps of Engineers	nce tes	st indica	·	of a hydrophytic veç		

SOIL											Sa	ampling Poi	nt: DP08w
Profile Desc	ription:	(Describe t	o the dep	th neede	d to docun	nent the i	ndicato	or or con	firm the	absence o			
Depth		Matrix				x Features		4 ,	-				
(inches)		r (moist)	%		(moist)	<u>%</u>	Type			exture		Remark	
0-06	2.5Y	4/1	98	10YR	4/6	2	С	PL	Cla	y Loam	Gravels	s, cobbles	
06+									Grave	el/Cobbles	Rock re	fusal	
¹ Type: C=Co								ated Sand	d Grains.			Pore Lining,	
Hydric Soil I		s: (Applica	ible to all				ed.)					_	dric Soils³:
Histosol		4.6\			dy Redox (S						Muck (A10		
Histic Ep		A2)			ped Matrix		() /	4 MI D /	. 4\	_		terial (TF2)	(TE40)
Black His		(ΔΛ)			my Mucky M my Gleyed I			ept WLKA	4 1)			ark Surface n Remarks)	
		(ハ4) Dark Surface	(A11)		leted Matrix		,				(Explail)	ii Neillaiks)	i
Thick Da			, (/ (1)		ox Dark Sur					3Indicator	s of hydror	ohytic veget	ation and
Sandy M				$\overline{}$	leted Dark S	. ,	7)					y must be p	
Sandy G	leyed Ma	atrix (S4)		Red	ox Depressi	ions (F8)				unless	disturbed	or problema	atic.
Restrictive L	_ayer (if	present):											
Туре:													
Depth (inc	ches):								Ну	dric Soil F	Present?	Yes	No <u></u>
Remarks:													
Prominent re	edox co	ncentration	is along o	dead roo	t pores we	re comm	ion tho	bughtout	matrix.				
HYDROLO	GY												
Wetland Hyd	drology l	ndicators:											
Primary Indic	ators (mi	nimum of or	ne required	d; check a	all that apply	<i>'</i>)				Second	dary Indica	tors (2 or m	ore required)
Surface \	Water (A	1)			Water-Stair	ned Leave	es (B9)	(except		Wa	ater-Staine	d Leaves (F	39) (MLRA 1, 2,
High Wa						I, 2, 4A, a					4A, and 4		
Saturatio	n (A3)				Salt Crust	(B11)				Dra	ainage Pat	terns (B10)	
Water Ma	arks (B1)	i			Aquatic Inv	ertebrate	s (B13)				y-Season ∖	<i>N</i> ater Table	(C2)
Sedimen	it Deposi	ts (B2)			Hydrogen S	Sulfide Od	dor (C1))		Sa	turation Vi	sible on Aer	rial Imagery (C9)
Drift Dep	osits (B3	5)			Oxidized R	hizosphei	res alor	ng Living	Roots (C	3) 🔽 Ge	omorphic	Position (D2	2)
Algal Ma	t or Crus	t (B4)			Presence of	of Reduce	d Iron ((C4)		Sh	allow Aqui	tard (D3)	
Iron Dep	osits (B5)			Recent Iron	n Reductio	on in Til	lled Soils	(C6)	_ ✓ FA	C-Neutral	Test (D5)	
Surface s	Soil Crac	ks (B6)			Stunted or	Stressed	Plants	(D1) (LRI	R A)	Ra	ised Ant N	lounds (D6)	(LRR A)
Inundation	on Visible	on Aerial Ir	magery (B	7)	Other (Exp	lain in Re	marks)			Fro	st-Heave	Hummocks	(D7)
Sparsely	Vegetat	ed Concave	Surface (B8)									
Field Observ	/ations:				ı								
Surface Water	er Presen	it? Ye	es _Ц	No <u> </u>	(
Water Table	Present?	Υe	es	No	Depth (inc	:hes):						_	_
Saturation Pr			es 🔲	No <u> </u>	Depth (inc	:hes):		v	Vetland F	Hydrology	Present?	Yes	No
(includes cap Describe Rec			gauge, mo	nitorina v	vell. aerial p	hotos, pre	evious i	inspection	ns), if ava	ilable:			
		(J J - ,		, ,	, ,			,,				
Remarks:													
Soil was obs	served to	be moist.	A positiv	e FAC-r	eutral test	and the	geomo	orphic po	osition o	f the poin	t indicate	the preser	nce of wetland
hydrology.													

Project/Site: Easton Ranch	City/County: Park		Sampling Date	e:7/19/2022
Applicant/Owner: MDT		State: Montana		
0.144	Section, Township, Rang	• • • • • • • • • • • • • • • • • • • •		
Landform (hillslope, terrace, etc.): shelf	Local relief (concave, co			Slope (%): 0
Subregion (LRR): LRR E Lat:		Long: -110.639		. , ,
Soil Map Unit Name: 155A: Meadowcreek, rarely floodedNesda				
Are climatic / hydrologic conditions on the site typical for this time of ye				
Are Vegetation, Soil, or Hydrology significantly		ormal Circumstances" pre		✓ No □
Are Vegetation, Soil, or Hydrology naturally pro		ded, explain any answers		
SUMMARY OF FINDINGS – Attach site map showing				
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No No No No No No No N	Is the Sampled A	Area		,
Wetland Hydrology Present? Yes No	within a Wetland	l? Yes <u> </u>	No <u> </u>	_
Remarks:				
This data point is located about 3 feet above DP09-w, betwee	1 two excavated cells.			
VEGETATION - Use scientific names of plants				
Tree Stratum Plot size (30 Foot Radius) Absolute Domian % Cover: Species		Dominance Test work	sheet	
		Number of Dominant Sp that are OBL, FACW or		2 (A)
		Total Number of Domin Species Across All Stra		2 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)		Percent of Dominant Sp That Are OBL, FACW, o		100 % (A/B)
		Prevalence Index work		N do aldino la colonia
		Total % Cover of: OBL species	0 X 1	Multiply by: 0
		•	0 X 1 =	0
			5 X 3	255
Harbanana Otratura Plataira (5. 5 at Patius)		•	0 X4	0
Herbaceous Stratum Plot size (5 Foot Radius)	540	UPL species	0 X 5	0
Elymus repens 65 Poa pratensis 20	FAC FAC	Column Totals 85	5 (A)	255 (B)
Poa pratensis 20 ✓	FAC	Prevalence Index	= B/A =	3
		Hydrophytic Vegetation 1 - Rapid Test		tic Vegetation
		✓ 2 - Dominance		-
		✓ 3 - Prevalence		
		4 - Morpholog	ical Adaptation	
		sheet. 5 - Wetland No	on-Vascular P	lants
		☐ Problematic H	ydrophytic Ve	getation (Explain)
Woody Vine Stratum Plot size (30 Foot Radius)		Indicators of hydric sil ar		
Percent Bare Ground 15		Hydrophytic Vegetation Yes Present?	s 🗸 NO	
Remarks: Although marginal hydrophytic vegetation was observed, the supported by wetland hydrology (1987 COE Wetland Delineat	tion Manual).	ence of hydric soil deve		

B-61

SOIL									Sampling Point: DP09u
Profile Des	cription: ([Describe	to the depth	needed to doo	ument the	indicator	or confir	m the absence	
Depth		Matrix			dox Featur				
(inches)	Color (%	Color (moist)	%	Type ¹ _	Loc ²	Texture	Remarks
0-02	7.5YR	2.5/2	100					Silt Loam	Dense fine roots
02-16	7.5YR	2.5/2	100					Silt Loam	Bottom of pit
				Reduced Matrix,			ed Sand C		cation: PL=Pore Lining, M=Matrix.
_		: (Applic	able to all L	RRs, unless oth		ted.)			ors for Problematic Hydric Soils ³ :
	ol (A1) Epipedon (A2 Histic (A3)	2)	<u> </u>		rix (S6)	-1) (excep	t MI RA 1	Red	m Muck (A10) d Parent Material (TF2) y Shallow Dark Surface (TF12)
Hydrog	en Sulfide (Loamy Gleye	d Matrix (F				er (Explain in Remarks)
	ed Below Da		e (A11) <u> </u>	Depleted Ma	. ,	• • • • • • • • • • • • • • • • • • • •		31 11	and of boundaries the control of the
	ark Surface Mucky Mine		<u> </u>	☑ Redox Dark : ☑ Depleted Dai					ors of hydrophytic vegetation and and hydrology must be present,
= -	Gleyed Matr	, ,	Ţ	Redox Depre					ss disturbed or problematic.
Restrictive	-	. ,			()	/			
Type:									
Depth (ir	nches):							Hydric Soil	l Present? Yes _ □ No <u>✓</u>
IYDROLO	ncv								
Wetland Hy		dicators:							
-				check all that ap	pply)			Seco	ndary Indicators (2 or more required)
Surface	Water (A1))		Water-S	tained Lea	ves (B9) (e	except	v	Vater-Stained Leaves (B9) (MLRA 1, 2
High W	ater Table (A2)			A 1, 2, 4A,				4A, and 4B)
Saturat	ion (A3)			Salt Cru	st (B11)				Orainage Patterns (B10)
Water N	Marks (B1)			Aquatic	Invertebrat	es (B13)			ry-Season Water Table (C2)
Sedime	ent Deposits	(B2)		Hydroge	en Sulfide C	Odor (C1)		<u> </u>	Saturation Visible on Aerial Imagery (CS
Drift De	posits (B3)				d Rhizosph	_	_	oots (C3) 📙 G	Geomorphic Position (D2)
	lat or Crust ((B4)			e of Reduc	-	-		Shallow Aquitard (D3)
	posits (B5)				Iron Reduc				AC-Neutral Test (D5)
	Soil Cracks		()		or Stresse	-	01) (LRR <i>i</i>		Raised Ant Mounds (D6) (LRR A)
			magery (B7)		xplain in R	emarks)		F	rost-Heave Hummocks (D7)
		Concave	e Surface (B	3)					
Field Obser		, v	es	o <u> </u>	(inahaa):				
Surface Wa Water Table			es N				I		
Saturation F				o <u>V</u> Depth (tland Hydrolog	y Present? Yes 🔲 No 🔽
(includes ca Describe Re			ı gauge, mon	itoring well, aeria	al photos, p	revious ins	spections)), if available:	
Remarks:									
	ne soil was	moist in	this profile,	no evidence c	of wetland	hydrology	y was ob	served.	

Project/Site: Easton Ranch		City/C	County: Park		Sampling Da	ate: 7/19/2022
Applicant/Owner: MDT		•		State: Montana	Sampling Po	DP09w
		Section	on, Township, Rang		1N R	
Landform (hillslope, terrace, etc.): Floodplain/overflow ch				,		
Subregion (LRR): LRR E						
Soil Map Unit Name: 155A: Meadowcreek, rarely floode						Datum
					-	
Are climatic / hydrologic conditions on the site typical for this						
Are Vegetation, Soil, or Hydrology s						
Are Vegetation, Soil, or Hydrology r	aturally p	roblem	atic? (If nee	ded, explain any answer	s in Remarks	s.)
SUMMARY OF FINDINGS - Attach site map	showin	g san	npling point lo	cations, transects,	importan	it features, etc.
	<u> </u>	_				
	o <u> </u>	-	Is the Sampled A	\rea I2 Ves ✓	No	1
, , , , , , , , , , , , , , , , , , , ,	o <u> </u>	_	Within a viction	163 <u> </u>		
Remarks: This point is located in the overflow channel at the N	W nortio	n of th	a sita			
This point is located in the overnow chainler at the tw	vv portio	11 01 111	c sitc.			
VEGETATION - Use scientific names of plan	nts					
Tree Stratum Plot size (30 Foot Radius) Absolute % Cover			ndicator Status	Dominance Test wor	ksheet	
, 70 Cover	. Зресіє	:S! C	otatus	Number of Dominant S that are OBL, FACW of		4 (A)
				Total Number of Domi Species Across All Str		4 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)				Percent of Dominant S That Are OBL, FACW,		100 % (A/B)
,			0)4/	Prevalence Index wo	rksheet	
Alnus incana 15 Salix drummondiana 3			CW CW	Total % Cover of	<u>:</u>	Multiply by:
Salix drummondiana 3 Salix lutea 7		OE			65 X 1	65
Odili idica	V	OL	<u> </u>	FACW species FAC species	33 X2 7 X3	21
				FACU species	7 X 3 0 X 4	0
Herbaceous Stratum Plot size (5 Foot Radius)				UPL species	0 X 5	0
Carex pellita 10		ОВ	L	Column Totals 1	05 (A)	152 (B)
Carex utriculata 10		ОВ			. ,	
Cirsium arvense 3		FA	C	Prevalence Index		
Juncus balticus 15	✓	FA	CW	Hydrophytic Vegetati		
Phleum pratense 2		FA	C	✓ 1 - Rapid Tes	• •	
Poa palustris 2		FA		✓ 2 - Dominano		
Scirpus microcarpus 30	✓	OB		✓ 3 - Prevalenc	e Index is <=	= 3.0
Typha latifolia 8		OB	<u>L</u>			ions (Provide s or on separate
				5 - Wetland N	lon-Vascular	Plants
						/egetation (Explain)
						,
Woody Vine Stratum Plot size (30 Foot Radius)				Indicators of hydric sil a present, unless disturbe		
Percent Bare Ground 17				Hydrophytic Vegetation Ye Present?	es 🗹 NO	
Remarks: A positive dominance test and a prevalence index b	elow thre	ee indid		e of a hydrophytic veg		

SOIL											s	ampling Po	oint: DP09w
Profile Desc	cription: (Describe	to the dep	oth need	ed to docur	nent the i	ndicato	r or confi	irm the abs	sence of			
Depth		Matrix				x Features		. 2					
(inches)		(moist)	%	Colo	r (moist)	%	_Type ¹	Loc ²				Remark	
0-02	2.5Y	3/2	100						Muck/F	Fibric	Greasy	, high ON	1
02-16	2.5Y	4/1	93	2.5Y	4/6	7	С	M	Silty Clay	y Loam	Moist,	nigh OM,	bottom of p
			· ——										
Type: C=C								ted Sand					g, M=Matrix.
Hydric Soil Histosol Histic E			able to all	☐ Sar	i nless othe i idy Redox (\$ pped Matrix	S5)	ed.)			2 cm N	/luck (A1		ydric Soils ³ :
<u>✓</u> Hydroge	istic (A3) en Sulfide (d Below Da		e (A11)	Loa	imy Mucky N imy Gleyed l pleted Matrix	Matrix (F2		pt MLRA	1)			ark Surface in Remarks	
Sandy N	ark Surface Mucky Mine Gleyed Mat	eral (S1)		De _l	dox Dark Sur pleted Dark S dox Depress	Surface (F	7)			wetland	hydrolog	ohytic vege gy must be or problem	present,
Restrictive					30X 20p.000	()						<u> </u>	
Type: Depth (in	ches):								Hydrid	c Soil Pı	esent?	Yes _	No 🗆
IYDROLO Wetland Hy		ndicators:											
Primary Indi			ne require	d; check	all that apply	/)				Seconda	ary Indica	tors (2 or n	nore required)
Surface	Water (A1)] Water-Stai	ned Leave 1, 2, 4A, a		except		Wat	er-Staine A, and 4	d Leaves (B9) (MLRA 1 ,
Water M	on (A3) farks (B1) nt Deposits	s (B2)			Aquatic Inv	/ertebrate				Dry-	Season	Water Tabl	•
Algal Ma	posits (B3) at or Crust oosits (B5)	(B4)			Oxidized R Presence of Recent Iro	of Reduce	d Iron (C	C4)		Sha	llow Aqu	Position (D tard (D3) Test (D5)	2)
Surface	Soil Crack	s (B6) on Aerial I			Stunted or Other (Exp	Stressed	Plants (,		Rais	sed Ant N	lounds (D6 Hummocks	
Field Obser Surface Wat	ter Present		es	_	Depth (inc								
Water Table Saturation P (includes ca	resent?	Υ	es <u> </u>	No	Depth (ind			_	etland Hyd	rology F	resent?	Yes	No
Describe Re	corded Da	ta (stream	gauge, m	onitoring	well, aerial p	photos, pre	evious ir	spections	s), if availab	ole:			
	norphic p	osition an											utral test, the etation is laid

Project/Site: Easton Ranch			City/C	c _{ounty:} Park		Sampling Dat	te: 7/19/2022
Applicant/Owner: MDT					_{State:} Montana		
Investigator(s): S Weyant			Section	on, Township, Rar			
• ,,	etc.): Berm				90		Slana (%): 50
							Slope (70)
Subregion (LRR): LRR E	Mandayyanadı, yayalı, flandadı						
•	Meadowcreek, rarely flooded					-	opea
Are climatic / hydrologic cond	litions on the site typical for this t	ime of ye	ear? Y	es 🔽 No 🔃	(If no, explain in Re	emarks.)	
Are Vegetation $_{oxdotsime}$, Soil $_{oxdotsime}$	$\overline{\square}$, or Hydrology $\overline{\square}$ sig	nificantly	distur	bed? Are "I	Normal Circumstances" p	resent? Yes	✓ No
Are Vegetation, Soil _	, or Hydrology nat	urally pr	oblema	atic? (If ne	eded, explain any answei	rs in Remarks.)
SUMMARY OF FINDIN	GS – Attach site map sh	nowing	g san	npling point lo	cations, transects	, important	t features, etc.
Hydrophytic Vegetation Pre					_		
Hydric Soil Present?	Yes No	<u> </u>		Is the Sampled within a Wetlan		No	
Wetland Hydrology Present	? Yes No	<u> </u>		within a wellan	ur res <u> </u>	, NO <u>•</u>	
Remarks:	256 (1:1 : 1 : 0 : 11	DD4	•				
This point located about 2	2.5 feet higher in elevation tha	an DP1	UW				
VEGETATION - Use s	scientific names of plants Absolute	S Domiar	nt Ir	ndicator	1		
<u>Tree Stratum</u> Plot size (30 Foot Radius) % Cover:	Species		itatus	Dominance Test wor		
Populus balsamifera	40	✓	F	AC	Number of Dominant S that are OBL, FACW of		3 (A)
					Total Number of Domi Species Across All Str		4 (B)
Sapling/Shrub Stratum	Plot size (15 Foot Radius)				Percent of Dominant S That Are OBL, FACW,		75 % (A/B)
<u>Supinigronias Stratum</u>	1 101 0120 (10 1 001 1 1 1 1 1 1 1 1				Prevalence Index wo	rksheet	
					Total % Cover of	f:	Multiply by:
					OBL species	0 X 1	0
					FACW species	0 X 2	0
					· ·	91 X3 12 X4	273
Herbaceous Stratum	Plot size (5 Foot Radius)				•	12 A4 45 X5	<u>48</u> 225
Bromus inermis	45		UP				
Cirsium arvense	5		FA		Column Totals 1	48 (A)	546 (B)
Lotus corniculatus	15	V	FA		Prevalence Index	c = B/A = 3.0	68919
Medicago lupulina	2		FA		Hydrophytic Vegetati	ion Indicators	S
Phleum pratense	15	✓	FA		1 - Rapid Tes	st for Hydroph	ytic Vegetation
Poa pratensis	14		FA		✓ 2 - Dominano	ce Test is >50°	%
Populus balsamifera	2		FA		3 - Prevalenc	ce Index is <=	3.0
Taraxacum officinale	10		FA				
Taraxacum omomaic			IA			gical Adaptatio ata in remarks	ons (Provide or on separate
					5 - Wetland N	Non-Vascular F	Plants
					Problematic I	Hydrophytic Ve	egetation (Explain)
							,
Woody Vine Stratum	Plot size (30 Foot Radius)				Indicators of hydric sil a present, unless disturbe		
Percent Bare Gro	ound 0				Hydrophytic Vegetation Present?	es 🗹 NO	
	of hydrophytic vegetation wa I hydrology (1987 COE Wetla			on Manual).	ked evidence of hydric		

B-65

SOIL											Sampling Point: DP10u
Profile Des	cription: (Describe	to the dep	th need	ed to docu	ment the	indicator	or con	firm the al	sence	e of indicators.)
Depth		Matrix				ox Featur					
(inches)	Color	(moist)	%	Colo	r (moist)	%	Type ¹	Loc ²	Tex	ture	Remarks
0-02	10YR	3/1	100						Lo	am	Dense fine roots
02-16	10YR	3/1	100						Lo	am	Bottom of pit
			- —— - ——								
			 pletion, RM=					ed Sand			ocation: PL=Pore Lining, M=Matrix.
		: (Appli	cable to all				ted.)		li		ors for Problematic Hydric Soils ³ :
Black H	Epipedon (A Histic (A3) en Sulfide ((A4)	(044)	Stri	ndy Redox (pped Matrix amy Mucky amy Gleyed	((S6) Mineral (F Matrix (F		ot MLRA	. 1) [Red	m Muck (A10) d Parent Material (TF2) ry Shallow Dark Surface (TF12) ner (Explain in Remarks)
Thick D	ed Below Da Park Surface Mucky Mine Gleyed Mat	e (A12) eral (S1)	ce (A11)	Red	oleted Matri dox Dark Su oleted Dark dox Depres	urface (F6 Surface (F7)		3	wetla	ors of hydrophytic vegetation and and and hydrology must be present, ss disturbed or problematic.
Restrictive	-			Rec	dox Depres	SIONS (FO)			urne	ss disturbed of problematic.
Type:	Layer (ii p	reserrey.									
	nches):								Llydi	ria Sai	I Present? Yes _ □ No ☑
Remarks:									- Inyun	10 001	111 C3CIII: 1C3 1V0
IVDDOLG											
HYDROLO Wetland Hy		dicators	i:								
-			one required	l; check	all that app	lv)				Seco	endary Indicators (2 or more required)
Surface	Water (A1)			Water-Sta	ined Lea	ves (B9) (e	except			Water-Stained Leaves (B9) (MLRA 1, 2
	ater Table (1, 2, 4A,					4A, and 4B)
	ion (A3)	,			Salt Crust		,				Orainage Patterns (B10)
	Marks (B1)				Aquatic In	vertebrat	es (B13)			_	Ory-Season Water Table (C2)
Sedime	nt Deposits	s (B2)			Hydrogen	Sulfide C	odor (C1)			s	Saturation Visible on Aerial Imagery (CS
Drift De	posits (B3)				Oxidized	Rhizosph	eres along	Living I	Roots (C3)		Geomorphic Position (D2)
Algal M	lat or Crust	(B4)			Presence	of Reduc	ed Iron (C	4)		s	Shallow Aquitard (D3)
Iron De	posits (B5)				Recent Iro	on Reduc	tion in Tille	d Soils	(C6)	F	FAC-Neutral Test (D5)
Surface	Soil Crack	s (B6)			Stunted o	r Stresse	d Plants (D	01) (LR F	R A)	F	Raised Ant Mounds (D6) (LRR A)
Inundat	tion Visible	on Aerial	Imagery (B7	') <u> </u>	Other (Ex	plain in R	emarks)			F	Frost-Heave Hummocks (D7)
Sparsel	ly Vegetate	d Conca	ve Surface (l	38)							
Field Obse	rvations:				_						
Surface Wa	ter Present	?	Yes _L I	۷o <u> </u>	🙎 Depth (in	iches):					
Water Table	e Present?	,	YesI	No	🖊 Depth (in	iches):		_			
Saturation F (includes ca	pillary fring	e)			Depth (in						gy Present? Yes No
Describe Re	ecorded Da	τa (strear	n gauge, mo	nitoring	well, aerial	pnotos, p	revious ins	spection	ıs), ıt availa	ible:	
Remarks: Soils in this	s profile we	ere note	d to be dry	No evi	dence of v	vetland h	vdrology	ohserv	ved		
	, Promo we	5.0 11010	a to be dry.	. 40 0 0	451100 OI V	. Juana 1	., ar ology	55501 V			

Project/Site: Easton Ranch	City/Co	_{ounty:} Park		Sampling Da	te: 7/19/2022
Applicant/Owner: MDT			State: Montana		
	Sectio	n, Township, Range:		4N R 9	
Landform (hillslope, terrace, etc.): toeslope/floodplain					Slope (%):10
Subregion (LRR): LRR E					
Soil Map Unit Name: 155A: Meadowcreek, rarely flooded					
Are climatic / hydrologic conditions on the site typical for this tim				<u> </u>	
Are Vegetation, Soil, or Hydrology signif					✓ No □
Are Vegetation, Soil, or Hydrology natur			l, explain any answe		
SUMMARY OF FINDINGS – Attach site map sho					
Hydrophytic Vegetation Present? Yes No					
Hydric Soil Present? Yes Ve No		Is the Sampled Area within a Wetland?	a Yes V	Z No_□	
Wetland Hydrology Present? Yes No Remarks:		William & Wolland			
This point is located near the property boundary at the N	NW portion o	of the site.			
	•				
VEGETATION - Use scientific names of plants					
Trace Christian Diet size (OO Foot Dedice)		dicator	ominance Test wo	rksheet	-
Tree Stratum Plot size (30 Foot Radius) % Cover: S	Species? St		umber of Dominant at are OBL, FACW		2 (A)
			otal Number of Dom pecies Across All St		3 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)			ercent of Dominant hat Are OBL, FACW		66.7 % (A/B)
Populus balsamifera 25	✓ FAC	C P	revalence Index wo		
1 opulus balsamilicia 25	V IA		Total % Cover o		Multiply by:
			BL species ACW species	0 X1 0 X2	0
			AC species	85 X3	255
			ACU species	35 X4	140
Herbaceous Stratum Plot size (5 Foot Radius)			PL species	5 X 5	25
Bromus inermis 5	UPL		olumn Totals 1	125 (A)	420 (B)
Carum carvi 20	FAC		Prevalence Inde	x = B/A =	3.36
Lotus corniculatus 50 Poa pratensis 10	FAC		ydrophytic Vegetat	tion Indicators	 ;
Taraxacum officinale 15	☐ FAC		1 - Rapid Te	est for Hydrophy	ytic Vegetation
			2 - Dominan	nce Test is >50°	%
			3 - Prevalen	nce Index is <=	3.0
			supporting of	ogical Adaptatio data in remarks	ons (Provide or on separate
			sheet.	Niam Manasalam I	DI 4 -
				Non-Vascular F	
			□ Problematic	Hydrophytic Ve	egetation (Explain)
Woody Vine Stratum Plot size (30 Foot Radius)			dicators of hydric sil esent, unless disturb		
		V		∕es ✓ NO	
Percent Bare Ground 0 Remarks:		P	resent?		
A positive dominance test indicates the presence of hyd	drophytic veg	getation.			
US Army Corps of Engineers		Wes	stern Mountains, Val	lleys, and Coas	sts - Version 2.0

SOIL											Sampling Point: DP10w
Profile Des	cription: (l	Describe	to the de	pth neede	d to docur	nent the i	ndicat	or or con	firm the abs	ence d	of indicators.)
Depth		Matrix				x Feature		1			
(inches)	Color (%		(moist)	%	Туре		Textu	re	Remarks
0-06	10YR	3/2	95	7.5YR	5/6	5	С	PL	Loar	n	Fine roots to 3 inches.
06-16	2.5Y	4/2	92	10YR	3/6	8	С	M	Sandy L	_oam	Bottom of pit
			_								
			_								
						- ——				—	
Type: C=C	oncentratio	n. D=Dei	letion. RN	. ———— /I=Reduce	d Matrix. CS	S=Covered	d or Co	— —— ated San	— ——— d Grains.		ation: PL=Pore Lining, M=Matrix.
Hydric Soil											s for Problematic Hydric Soils ³ :
Histoso					dy Redox (•			,	Muck (A10)
_	pipedon (A	2)			ped Matrix						Parent Material (TF2)
	listic (A3)	_,			my Mucky N	. ,	l) (exce	ept MLRA	A 1)		Shallow Dark Surface (TF12)
	en Sulfide ((A4)			my Gleyed			-			r (Explain in Remarks)
	d Below Da		ce (A11)		leted Matrix		,				, ,
	ark Surface			Red	ox Dark Su	rface (F6)					s of hydrophytic vegetation and
	Mucky Mine				leted Dark		7)				id hydrology must be present,
	Gleyed Matı			L Red	ox Depress	ions (F8)				unless	disturbed or problematic.
Restrictive	Layer (if p	resent):									
Туре:											
Depth (in	nches):								Hydric	Soil F	Present? Yes 🗹 No 🔲
HYDROLC)CV										
Wetland Hy		dicators	<u> </u>								
Primary Indi				ed; check a	all that appl	y)				Second	dary Indicators (2 or more required)
Surface	Water (A1))	•		Water-Sta	ined Leav	es (B9)	(except		☐ Wa	ater-Stained Leaves (B9) (MLRA 1, 2,
_	ater Table (1, 2, 4A, a			_	_	4A, and 4B)
Saturati	,	,			Salt Crust			,		☐ Dra	ainage Patterns (B10)
	/larks (B1)			一百	Aquatic In	,	s (B13)	1	_		y-Season Water Table (C2)
_	nt Deposits	(B2)		一	Hydrogen		, ,		_	_ `	turation Visible on Aerial Imagery (C9)
_	posits (B3)	()		<u> </u>				•	Roots (C3)	=	eomorphic Position (D2)
	at or Crust ((B4)		一	Presence						allow Aquitard (D3)
	posits (B5)	()			Recent Iro				(C6)	_	C-Neutral Test (D5)
	Soil Cracks	s (B6)			Stunted or					_	ised Ant Mounds (D6) (LRR A)
	ion Visible o		lmagery (E	37)	Other (Exp				, _		ost-Heave Hummocks (D7)
	y Vegetated				(,		-		(,
Field Obser	• •										
Surface Wat		? \	′es □	No 🔽	Depth (in	ches):					
Water Table			/es 🗌		Depth (in						
Saturation P			′es 🗌	_	Depth (in				Vetland Hydr	ology	Present? Yes V No
(includes ca			62	INO	ī pehin (iii)	Ciles)		"	velianu nyui	ology	rieseitt: Tes No
			n gauge, m	nonitoring	well, aerial _l	photos, pr	evious	inspection	ns), if availabl	e:	
Remarks:											
	izospheres	s along l	iving root	s and the	point's a	eomorphi	c posit	ion indic	ate the pres	ence	of wetland hydrology at this data
point.		5	5		. 9	' "	•		,		, 3,

MDT Montana Wetland Assessment Form (revised March 2008)

1. Project name Easto	n Ranch	2. MDT project#	STPP STWD (813)	Control# 9680000			
3. Evaluation Date 7/19/2	2022 4. Evaluators J	Trilling, S Weyant 5.	Wetland/Site# (s) Creation				
6. Wetland Location(s): T Approx Stationing or Milepo	4N R 9E	Sec1 32	T R	Sec2			
Watershed 13 - Upper Y	'ellowstone Wat	tershed/County Park					
7. Evaluating Agency	Confluence Consulting		8. Wetland size acres	13.24			
Purpose of Evaluation			How assessed:	Measured e.g. by GPS			
☐ Wetlands potentially af	fected by MDT project		9. Assesssment area	13.24			
☐ Mitigation Wetlands: pr	e-construction		(AA) size (acres) How assessed:	Measured e.g. by GPS			
✓ Mitigation Wetlands: po	st construction		now assesseu.	ivieasured e.g. by GP3			
☐ Other							
10. Classification of Wetlar	nd and Aquatic Habitats i	in AA					
HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardi	n) Water Regime	% of AA			
Riverine	Emergent Wetland	Excavated	Seasonal/Intermittent	69			
Depressional	Aquatic Bed	Excavated	Seasonal/Intermittent	1			
Riverine	Scrub-Shrub Wetland	Excavated	Seasonal/Intermittent	30			
11. Estimated Relative Abur	ndance Common]				
12. General Condition of A	A below to determine [circle] ap	propriate response – see instr	ructions for Montana-listed noxiou	s weed and			
			minant conditions adjacent to (within 500	h /			
Conditions wi	thin 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 predomi grazed, hayed, logged, or otherwise coroads or occupied buildings; and noxic <=15%.	onverted; does not contain	low disturbance	low disturbance	moderate disturbance			
AA not cultivated, but may be moderat selectively logged; or has been subjec placement, or hydrological alteration; or noxious weed or ANVS cover is <=30%	et to relatively minor clearing, fill contains few roads or buildings;	moderate disturbance	moderate disturbance	high disturbance			
AA cultivated or heavily grazed or logg substantial fill placement, grading, cleahigh road or building density; or noxio >=30%.	aring, or hydrological alteration;	high disturbance	high disturbance	high disturbance			
A new house was built west of managed in a natural state, as ii. Prominent noxious, aqua	a few ranch structures to the f the Shield River on an up g are most of the lands with tic nuisance, other exotic	ne east. Undeveloped ripari land terrace. Two species on 500 feet of the AA.		plands to north, south, and west. It within the AA. The AA is			
Cirsium arvense and Cynogle	ossum officinale						
iii. Provide brief descriptive	summary of AA and sur	rounding land use/habita	<u> </u>				
The AA consists of five constru	ucted wetland cells. The lo najority of higher elevations	west contours of the wetlands within the site lack wetlands	nd cells are seasonally inunda id characteristics and support i	ted and have developed upland plant communities. The			

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	ls current management existence of additio na		Modified Rating
>=3 (or 2 if 1 is forested) classes	Н	NA	NA	NA
2 (or 1 if forested) classes	М	NA	NA	NA
1 class, but not a monoculture	М	<no< td=""><td>YES></td><td>L</td></no<>	YES>	L
1 class, monoculture (1 species comprises>=90% of total cover)	L	NA	NA	NA

documented use

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. A slight increase in PSS wetlands was documented in 2022.

SECTION PERTAINING to FUNCTIONS VALUES ASSESSMENT

14A. Habitat for Federally Listed or Proposed Threatened or Endangered Plants or Animals:

was observed soaring above project area in 2022.

i	AA is Documented (F	D) or Suspected (S)	to contain (check one	based on definitions	contained in instructions):

Primary or critical habitat	(list species)	□ D) S				
Secondary habitat (list Sp	oecies)	(D () s				
Incidental habitat (list spe	ecies)	○ D •	S Canada Lyn	x (LT), North Ameri	can Wolverine (P1	Γ)	
No usable habitat		_ s					
ii. Rating (use the cond	usions from i a	bove and the m	atrix below to arriv	e at [check] the fun	ctional 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	.8H	.7M	.3L	.1L	0L
Sources for US documented use	SFWS IPAC 202	22					
14B. Habitat for plant or a in14A above) i. AA is Documented (D Primary or critical habitat) or Suspected		ı (check one base	d on definitions co			
Secondary habitat (list Sp	oecies)	(D () s				
Incidental habitat (list spe	ecies)	● D (S Golden Eagle	e (S3)			
No usable habitat			S				
ii. Rating (use the conc	usions from ia	bove and the m	atrix below to arrive	e at [check] the fun	ctional 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	.8Н	7M	6M	.2L	1L	OL
S2 and S3 Species: Functional Points and Rating	.9H	.7M	6M	.5M	.2L	1L	OL
Sources for MTN	HP, 2013 and 2	2019-2022 field	observations. Bobo	olink nesting on site	documented by N	/IDT staff. Golden	Eagle

observations																			Mod	erate	•
	d on an	y of the	followin	g [che	:ck]):						Minir	nal (b	ased or	any of	the follo	owing	[check])	:	1		
obundant	of abun	dant wil	idlife #s	or hig	h specie	es diver	sity (dur	ing an	y period	i)	fe	w or n	o wildlif	e obser	vations	during	j peak u	se peri	ods		
abundant wild	life sigr	n such a	as scat,	tracks	, nest s	ructure	s, game	trails,	etc.		lit	tle to r	no wildlit	e sign							
presence of ex	xtremel	ly limitin	ıg habita	at feati	ures not	availat	ole in the	e surro	unding	area	s	parse a	adjacen	t upland	d food s	ources	;				
interviews with			-								in in	iterviev	vs with I	ocal bio	ologists	with k	nowledo	ae of the	e AA		
		Ü			Ü										Ü						
oderate (based o	n any o	of the fo	llowing	[check	(]) :																
observations of			•					•				eriods									
common occu	rrence	of wildli	fe sign s	such a	ıs scat, i	racks,	nest stru	uctures	s, game	trails, e	etc.										
dequate adja	cent up	pland fo	od sour	ces																	
interviews with	n local l	piologist	ts with k	nowle	dge of t	he AA															
i. Wildlife habi rom #13. For o other in terms o permanent/pere erms])	class of of their	cover to	o be co	onside positi	ered ev ion of t	enly d he AA	listribut (see #	ed, th	ie mos Abbre\	t and I /iation:	east p	revale urface	ent veg water	etateo durati	d class ons are	es mi e as f	ust be sollows:	within P/P =	20% c	of each	
Structural diversity (see #13)				Hi	igh							Mode	erate					Lo	w		
Class cover distribution (all vegetated classes)		Eve	en			Une	ven			Eve	en			Une	ven			Eve	en		
Duration of surface water in ≥ 10% of AA	P/P	S/I	T/E	А	P/P	S/I	T/E	Α	P/P	S/I	T/E	А	P/P	S/I	T/E	А	P/P	S/I	T/E	А	
L ow disturbance at AA (see #12i)	Е	Е	E	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 (u Evidence of w					om i a		above :	and t	he ma		Vildlife		ive at		rating			points	and	rating) Low
Substantial			\pm	-						.9I						8H	Ĭ				.7M
Moderate					1E .9H	_		\vdash		.71					_	оп 5М					.7 IVI
Minimal					.6N	1				.41	И					.2L					.1L

i. Habitat Quality and	labitat Quality and Known / Suspected Fish Species in AA (use matrix to arrive at [check the functional points and rating)																		
Duration of surface water in AA		Pei	manent / l	Perennial	l			Se	easonal / l	Intermitten	t		Temporary / Ephemeral						
Aquatic hiding / resting / escape cover	Ор	timal	Adeq	uate	Po	oor	Opti	Optimal Adequate		Poor		Optimal		Adequate		Poor			
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	.3L	
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	.7М	.6М	.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 fo	und in AA:	:								
ii. Modified Rating (NOTE: Modified score car a) Is fish use of the AA significantly reduced by a current final MDEQ list of waterbodies in need of fishery or aquatic life support, or do aquatic nuisa yes, reduce score in i above by 0.1: Modified	culvert, di TMDL dev	ke, or other m elopment with	an-made [′] s n listed "Pro	obable Imp	aired Úses	a" including	cold or w	varm water	ne If	
b) Does the AA contain a documented spawning comments) for native fish or introduced game fish		ner critical hab Y • N			he adjusted				1	
iii. Final Score and Rating: 0 NA	Commer	nts: Wetland	d cells ar	e isolate	d from S	hields R	liver with	n no fish l	habitat pr	esent.
14E. Flood Attenuation: (Applies only to wetla channel or overbank flow, click NA here		ct to flooding veed to 14F.)	via in-chanı	nel or over	bank flow.	If wetland	s in AA ar	e not floode	ed from in-	
i. Rating (working from top to bottom, use the r	natrix belo	w to arrive at	[check] the							
Estimated or Calculated Entrenchment (Rosgen 1994, 1996)	Slightly	y entrenched - stream types			ely entrenc stream type		Entrenc	hed-A, F, G types	stream	
% 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	
Slightly Entrenched		Moderately	Entronchod				ntrenched			_
ER = >2.2		ER = 1.4	11 – 2.2	ER = 1.0 – 1.4						
C stream type D stream type E stream	type	B strea	m type	Â	A stream type F stream type				stream type	-
	_									
Floodprone width ii. Are ≥10 acres of wetland in the AA subject to within 0.5 mile downstream of the AA (check)? Comments: AA receives overbank flow to the state of the st	/ Bank widtl flooding A Y •	h ND are man-r N	nade featu		Banl 28 = may be sign	Flood-prorekfull Widt Entrence ratio nificantly of	h	4.75 by floods loo	cated	
Floodprone width ii. Are ≥10 acres of wetland in the AA subject to within 0.5 mile downstream of the AA (check)? Comments: AA receives overbank flow to the subject to within 0.5 mile downstream of the AA (check)? AA receives overbank flow to the subject to within 0.5 mile downstream of the AA (check)? Comments: AA receives overbank flow to the subject to within 0.5 mile downstream of the AA (check)? 14F. Short and Long Term Surface Wate upland surface flow, or groundwater flow. 14G.) i. Rating (Working from top to bottom, us water durations are as follows: P/P = perm further definitions of these terms].) Estimated maximum acre feet of water contained in	/ Bank width flooding Al Y • From Shire er Stora of the main set the m	Refull ND are man-r N oelds River of the properties and sin the properties and the properties are the properties and the properties are the proper	nade featu during hi to wetland A are su	gh flow e	Banl 28 = may be sign events. and or pone pone ponding or pone pone pone pone pone pone pone pone	Entrend ratio nificantly of ponding, and points	h chment lamaged b verbank of dick	or in-chanr NA here	nel flow, pr e and proc riations for [see instru	eed to surface ctions for
2 x Bankfull Dewidth ii. Are ≥10 acres of wetland in the AA subject to within 0.5 mile downstream of the AA (check)? Comments: AA receives overbank flow to the surface flow, or groundwater flow. 14G.) i. Rating (Working from top to bottom, us water durations are as follows: P/P = perm 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	/ Bank widtl flooding Al Y • From Shine er Storage of no wetland an ent/per	Afull h ND are man-r N ○ elds River of the state of th	nade featu during hi to wetlandAA are su arrive at	gh flow e	Banl 28 = may be sign events. and or pone cooding or ment; and T	Entrend ratio nificantly of ponding, nal points	h chment lamaged b verbank of dick and ratin	or in-chanr NA here	nel flow, pre and proc riations for [see instru	surface ctions for
The stand Long Term Surface Wat upland surface flow, or ground water flow. 14F. Short and Long Term Surface Wat upland surface flow, or ground water flow. 14G.) i. Rating (Working from top to bottom, us water durations are as follows: P/P = perm further definitions of these terms].) Estimated maximum acre feet of water contained in wetlands within the AA that are subject to periodic	/ Bank width flooding Al Y • From Shire er Stora of the main set the m	Refull ND are man-r N oelds River of the properties and sin the properties and the properties are the properties and the properties are the proper	nade featu during hi to wetland A are su	gh flow e	Banl 28 = may be sign events. and or pone cooding or ment; and T	Entrend ratio nificantly of ponding, and points	h chment lamaged b verbank of dick	or in-chanr NA here	nel flow, pr e and proc riations for [see instru	eed to surface ctions for
2 x Bankfull Dewidth ii. Are ≥10 acres of wetland in the AA subject to within 0.5 mile downstream of the AA (check)? Comments: AA receives overbank flow to the surface flow, or groundwater flow. 14G.) i. Rating (Working from top to bottom, us water durations are as follows: P/P = perm 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	/ Bank widtl flooding Al Y • From Shine er Storage of no wetland an ent/per	Afull h ND are man-r N ○ elds River of the state of th	nade featu during hi to wetlandAA are su arrive at	gh flow e	Banl 28 = may be sign events. and or pone pone pooding or pone pone function rent; and T	Entrend ratio nificantly of ponding, nal points	h chment lamaged b verbank of dick and ratin	or in-chanr NA here	nel flow, pre and proc riations for [see instru	surface ctions for

Comments: (13.24 acre wetland) * (1 ft. max depth at highwater) = 13.24 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, click NA here and proceed to 14H.)															
i. Rating (working from = low])	n top to bott	om, use th	ne matrix b	elow to	arrive a	t [checl	k] the fu	unctiona	l points	and ra	ting [H	= high,	M = m	oderate,	or L
Sediment, nutrient, and toxi levels within AA	cant input	to de compour not sub:	AA receives or surrounding land use with potential to deliver levels of sediments, nutrients, or compounds at levels such that other functions are not substantially impaired. Minor sedimentation, sources of nutrients or toxicants, or signs of eutrophication present. Waterbody on MDEQ list of waterbodies in need of TMD development for "probable causes" related to sediment nutrients, or toxicants or AA receives or surrounding land with potential to deliver high levels of sediments, nutrients compounds such that other functions are substantially impaired. Minor sedimentation, sources of nutrients or toxicants, or so of eutrophication present.					ediment, ing land u nutrients, ally impai	ise or red.						
% cover of wetland vegetate Evidence of flooding / pond		≥ 7 Yes	0% No	Yes	< 70	% No		Yes	≥ 70	% No	,	Yes	< 70	% No	
AA contains no or restricte	ed outlet	1H	.8H	.71	1	.5M	1	.5N	1	.41		.3L		.2L	
AA contains unrestricted of	outlet	.9H	.7M	.6N	1	.4M	i	.4N	1	.3	L	.2L	i	.1L	П
Comments: There wa	s evidence	of ponding	and floodi	ng in 2	022. Ma	any of th	e low ly	ying are	as wer	e satura	ited du	ring the	monito	ring eve	nt.
14H Sediment/Shoreline drainage, or on the shoreline proceed to 14I.) i. Rating (working from to	ne of a standi	ng water bo	dy which is	subject f	to wave t [check]	action. I	f 14H do tional po	oes not a	pply, cli		tural or r NA he		е		
% Cover of <u>wetland</u> streambar shoreline by species with stabil of ≥6 (see Appendix F).		Permane	nt / Perennial	Duration		water ad				emporary	/ Epheme	eral			
≥ 65%			1H			.91	1			.7	м				
35-64%			.7M			.6N	1				5М				
< 35%			.3L			.2L					1L				
	Ill open wate I in 2022 inc	clude willow							bserve	d in 202	22. Dee	p-rooted	l speci	es	
i. Level of Biological A			llife and fish				7								
Rating (14D.iii.)	E/H	1	M		Ĺ	- 1									
E/H	Н	_	Н			М									
M .	H M		M M			M L									
L N/A	Н		M			L									
ii. Rating (Working from wetland component in the subsurface outlet; the final [see instructions for further	AA; Factor B three rows pe definitions of	= level of bi ertain to dur f these term	ological acti ation of surf	vity ratin ace wat	ng from a er in the	bove (14 AA, whe	ll.i.); Fac re P/P,	ctor C =	whether	or not thas previ	ne AA co ously de	ontains a fined, an	surface d A = "a	or	
B High	Moderate es No	Low Yes N		gh No		erate No		ow No	Hi Yes			erate No		ow No	
	8H .5M	.6M .4I		.6M	.7H	.4M	.5M	.3L	.8H	.6M	.6M	.4M	.3L	.2L	
s/I .9H .6M	7H .4M	.5M .3	L .8H	.5M	.6M	.3L	.4M	.2L	.7H	.5M	.5M	.3L	.3L	.2L	
T/E/A .8H .5M	6M .3L	.4M .2	L .7H	.4M	.5M	.2L	.3L	.1L	.6M	.4M	.4M	.2L	.2L	.1L	
iii. Modified Rating (NOT plant cover, ≤ 15% noxious vontrol). a) Is there an average ≥ 50 it to the score in ii above and Comments:	weed or ANVS	S cover, and etated uplar accordingly	d that is not and buffer ard Modified	subjecte ound ≥ 7: I Rating	ed to perion of the graph of th	iodic med e <i>AA circ</i> H	chanical cumferer	mowing	or cleàr Y ●	ring (unle	ess for w	veed s, add 0.	1		

i. Discharge Indicators The AA is a slope wetland Springs or seeps are known or observed Vegetation growing during domant season/drought Wetland occurs at the toe of a natural slope Seeps are present at the wetland edge AA permanently flooded during drought periods Wetland contains an outlet, but no inlet Shallow water table and the site is saturated to the surface Other:				Wetl	neable substra and contains am is a known	inlet but no o	rithoutunderl utlet	s ying impeding e volume decr	•	
iii. Rating (use the inform	nation from i		and the table Duration of sat	uration at AA	Wetlands FRO	OM GROUND	VATER DISC	HARGE OR WIT	H WATER	
Omita ni -			D/D	THAT IS	RECHARGING	THE GROUN				
<i>Criteria</i> Groundwater Discharge or R	echarge		P/P 1H		S/I .7M		.4M	No	L	
Insufficient Data/Information						NA NA				
Soil satura	ated to surf	ace across	most of the c	onstructed	wetlands in	2022.				
i. Rating (working from to	AA contai or matu wetland c	ns fen, bog, vore (>80 yr-old or plant association of the Marketter)	warm springs d) forested ciation listed	AA does cited rai diversity (k] the function not contain pre types and (#13) is high cociation listed the MTNHP	previously structural or contains I as "S2" by	AA does	s not contain pre types or assuctural diversit	sociations y (#13) is	
Estimated relative abundance (#11)	rare	commo	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)	.9Н	.8H	.7M	.7M	.5M	.4M	.4M	.3L	.2L	
High disturbance at AA (#12i)	.8H	.7H	.6M	.6M	.4M	.3L	.3L	.2L	.1L	
Site distur 14L. Recreation/Educatic i. Is the AA a known or properties and proceed to the categoric Other ii. Check categoric Other iii. Rating (use the matrix	otential rec to the overal	I: (affords "bo ./ed. site: (ch I summary ar Iy to the AA:	neck) Y Onderating page	N ●) nal/scientific	(if 'Yes' confinence study; C	tinue with the	e evaluation;	if 'No' then cli		
Known or Potential Recreation Public ownership or public e			r across (no no	rmission roa	uired)		k		ential	
Private ownership with gener		· .			un c u)			.2H	.15H	
Private or public ownership v					or public acce	ess		.15H	.1M .05L	
Comments: Landowner does not allo	ow public a	ccess or ed	ucational use	e of the site	ı.					
General Site Notes										

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 Estimated AA Acreage)	Indicate the four most prominent functions with an asterisk (*)
A. Listed/Proposed T&E Species Habitat	L	.1	1	1.32	
B. MT Natural Heritage Program Species Habitat	Н	.9	1	11.92	✓
C. General Wildlife Habitat	Н	.9	1	11.92	✓
D. General Fish Habitat	NA	0	0	0.00	
E. Flood Attenuation	Н	.8	1	10.59	
F. Short and Long Term Surface Water Storage	Н	.8	1	10.59	✓
G. Sediment/Nutrient/Toxicant Removal	Н	.9	1	11.92	V
H. Sediment/Shoreline Stabilization	Н	.9	1	11.92	
Production Export/Food Chain Support	Н	.8	1	10.59	
J. Groundwater Discharge/Recharge	М	.7	1	9.27	
K. Uniqueness	М	.6	1	7.94	
L. Recreation/Education Potential (bonus points)	NA	0	NA	0.00	
Totals:		7.4	10	97.98	
Percent of Possible Score			74 %		

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 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 #).	IV)
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: (check appropriate category based on the criteria outlined above)

1	II	III	IV

MDT Montana Wetland Assessment Form (revised March 2008)

1. Project name Easton	n Ranch	2. MDT project#	STPP STWD (813)	Control#	9680000
3. Evaluation Date 7/19/2	2022 4. Evaluators	J Trilling, S Weyant 5.	Wetland/Site# (s) Preserva	tion	
6. Wetland Location(s): T Approx Stationing or Milepo	4N R 9I	E Sec1 32	T R	Sec2	
Watershed 13 - Upper Y		atershed/County Park			
7. Evaluating Agency	Confluence Consulting I	Inc	8. Wetland size acres		1.1
Purpose of Evaluation	J		How assessed:	Measured e.g.	
Wetlands potentially aff	fected by MDT project		9. Assessment area	ivicasureu e.g.	1.1
			(AA) size (acres)		1.1
✓ Mitigation Wetlands: pr✓ Mitigation Wetlands: po			How assessed:	Measured e.g.	by GPS
✓ Other Preserved PSS/F					
10. Classification of Wetlar	nd and Aquatic Habitats	in AA			
HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardi		% of <i>i</i>	4A
Riverine	Scrub-Shrub Wetland		Seasonal/Intermittent		10
Riverine	Forested Wetland		Seasonal/Intermittent		20
Riverine	Emergent Wetland		Seasonal/Intermittent		70
Estimated Relative Abur General Condition of A. i. Disturbance: (use matrix aquatic nuisance vegetation	A below to determine [circle] a		ructions for Montana-listed noxiou		
Conditions wi	thin AA	Predoi 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 o or logged; subject placement, gradii	t to substantial fill ng, clearing, or ation; high road or or noxious weed
AA occurs and is managed in predomi grazed, hayed, logged, or otherwise oc roads or occupied buildings; and noxio <=15%.	onverted; does not contain	low disturbance	low disturbance	moderate o	disturbance
AA not cultivated, but may be moderat selectively logged; or has been subjec placement, or hydrological alteration; on noxious weed or ANVS cover is <=30%	t to relatively minor clearing, fill contains few roads or buildings;	moderate disturbance	high dis	turbance	
AA cultivated or heavily grazed or logo substantial fill placement, grading, cleahigh road or building density; or noxio >=30%.	aring, or hydrological alteration;	high disturbance	high disturbance	high dis	turbance
Comments: (types of disturk AA consists of existing riverine and adjacent areas are managine. Prominent noxious, aqua Cirsium arvense, Cynoglossu	e PFO/PSS/PEM wetlands ged in a natural state, distr tic nuisance, other exot	s located adjacent to the cre curbance is low.	eated depressional wetlands a	nd flood channe	el. AA
iii. Provide brief descriptive AA contains small areas of exi area. The existing PFO/PEM h Both wetland features are born	sting PFO/PSS/PEM weth nabitat located at the south	lands located at the northwe hern end of the AA receives	est (Shields River) and southors direct hydrologic inputs from		

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		rent management ence 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	M	<no< td=""><td></td><td>YES></td><td>L</td></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:

Primary or critical habitat	t (list species)	□ D □	S				
Secondary habitat (list S	oecies)	(D (s				
Incidental habitat (list sp	ecies)	\bigcirc D \odot	S Canada Lyn	x (LT), North Ameri	can Wolverine (PT	_)	
No usable habitat		□ S					
ii. Rating (use the cond	usions from i a	bove and the m	atrix below to arriv	e at [check] the fun	ctional 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	.8H	.7M	.3L	.1L	OL
Sources for US documented use	SFWS IPAC 202	22					

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 (check one based on definitions contained in instructions):

Primary or critical habitat (list species)	● D ○ S Bobolink (S3B)
Secondary habitat (list Species)	□ D
Incidental habitat (list species)	● D ○ S Golden Eagle (S3)
No usable habitat	

ii. Rating (use the conclusions from i above and the matrix below to arrive at [check] the functional points and rating)

ii. Italiing tuse the cone	idololio liotii ta	bove and the n	iau ix below to aili w	c at joileon, the full	ctional points and	raurig)	
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	_OL_
S2 and S3 Species: Functional Points and Rating	.9Н	.7M	.6M	.5M	.2L	1L	OL

Sources for documented use

MTNHP, 2013 and 2019-2022 field observations. Bobolink nesting on site documented by MDT staff. Golden Eagle was observed soaring above project area in 2022.

abund e sign remely		followin																Mod	erate	,
e sign remely	dant wile		g [che	ck]):						Minir	nal (b	ased on	any of	the follo	owing	[check])	:			
remely		dlife #s	or hig	h specie	es diver	sity (dur	ing an	y period	I)	fe	w or n	o wildlife	e obser	vations	during	peak u	se peri	ods		
	such a	ıs scat,	tracks	, nest st	ructure	s, game	trails,	etc.		lit	tle to r	o wildlif	e sign							
ocal b	y limitin	g habita	at featu	ures not	availal	ole in the	surro	unding	area	S	oarse a	adjacent	upland	food so	ources					
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							•				eriods									
		•		ıs scat,	tracks,	nest stru	uctures	s, game	trails, e	etc.										
ocal b	oiologist	s with k	inowle	dge of t	he AA															
their	percer	nt com	positi	ion of t	he ÅA	(see #	10).	Abbrev	/iations	s for su	ırface	water	duration	ons are	as f	ollows:	P/P =	:		
			Hi	gh							Mode	erate					Lo	w		
	Eve	∍n			Une	ven			Eve	en			Une	/en			Eve	en		
P/P	S/I	T/E	А	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	А	
Е	Е	Е	Н	Е	E	Н	н	Е	Н	н	М	Е	Н	М	М	Е	Н	М	М	
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М	М	М	L	М	М	L	L	М	М	L	L	М	L	L	L	L	L	L	L	
						above a	and t	he ma	И	Vildlife				rating	g (ii)		points	and	rating) Low
					-1											1				
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Inial; S/I = seasonal/intermittent; T/E = temporary High Even Uneven High Even Uneven High H H H H H H H H H H H H H H H H H H H	scattered wildlife groups or individuals or relatively few species ence of wildlife sign such as scat, tracks, nest structures, game ent upland food sources ocal biologists with knowledge of the AA It features (Working from top to bottom, check appropries cover to be considered evenly distributed, the most cheir percent composition of the AA (see #10). Abbrevinial; S/I = seasonal/intermittent; T/E = temporary/ephetically. High Even Uneven High H H H H H H H H H H H H H H H H H H H	scattered wildlife groups or individuals or relatively few species during ence of wildlife sign such as scat, tracks, nest structures, game trails, each upland food sources ocal biologists with knowledge of the AA It features (Working from top to bottom, check appropriate A iss cover to be considered evenly distributed, the most and I isheir percent composition of the AA (see #10). Abbreviations inial; S/I = seasonal/intermittent; T/E = temporary/ephemeral High Even Uneven Even Uneven Even Uneven Even High H H H H H H H H H H H H H H H H H H H	scattered wildlife groups or individuals or relatively few species during peak peace of wildlife sign such as scat, tracks, nest structures, game trails, etc. and upland food sources occal biologists with knowledge of the AA It features (Working from top to bottom, check appropriate AA attrikes cover to be considered evenly distributed, the most and least petheir percent composition of the AA (see #10). Abbreviations for such inial; S/I = seasonal/intermittent; T/E = temporary/ephemeral; and ABB	scattered wildlife groups or individuals or relatively few species during peak periods ence of wildlife sign such as scat, tracks, nest structures, game trails, etc. ent upland food sources ocal biologists with knowledge of the AA It features (Working from top to bottom, check appropriate AA attributes is scover to be considered evenly distributed, the most and least prevale their percent composition of the AA (see #10). Abbreviations for surface enial; S/I = seasonal/intermittent; T/E = temporary/ephemeral; and A = ab High Wood Even Uneven Even Uneven Even Uneven Even High M M M M M M M M M M M M M M M M M M	scattered wildlife groups or individuals or relatively few species during peak periods ence of wildlife sign such as scat, tracks, nest structures, game trails, etc. and upland food sources ocal biologists with knowledge of the AA It features (Working from top to bottom, check appropriate AA attributes in matrix secover to be considered evenly distributed, the most and least prevalent vegical their percent composition of the AA (see #10). Abbreviations for surface waterinal; S/I = seasonal/intermittent; T/E = temporary/ephemeral; and A = absent [state	scattered wildlife groups or individuals or relatively few species during peak periods ence of wildlife sign such as scat, tracks, nest structures, game trails, etc. Inturbuland food sources ocal biologists with knowledge of the AA It features (Working from top to bottom, check appropriate AA attributes in matrix to a lass cover to be considered evenly distributed, the most and least prevalent vegetated their percent composition of the AA (see #10). Abbreviations for surface water durational; S/I = seasonal/intermittent; T/E = temporary/ephemeral; and A = absent [see insometric field of the intermittent]. High	scattered wildlife groups or individuals or relatively few species during peak periods ence of wildlife sign such as scat, tracks, nest structures, game trails, etc. ent upland food sources ocal biologists with knowledge of the AA It features (Working from top to bottom, check appropriate AA attributes in matrix to arrive a lass cover to be considered evenly distributed, the most and least prevalent vegetated class their percent composition of the AA (see #10). Abbreviations for surface water durations are nial; S/I = seasonal/intermittent; T/E = temporary/ephemeral; and A = absent [see instruction here] High	scattered wildlife groups or individuals or relatively few species during peak periods ence of wildlife sign such as scat, tracks, nest structures, game trails, etc. Intrinsic provided in the provided service of wildlife sign such as scat, tracks, nest structures, game trails, etc. Intrinsic provided sources obtained by the provided service of wildlife sign such as scat, tracks, nest structures, game trails, etc. Intrinsic provided sign such as scat, tracks, nest structures, game trails, etc. Intrinsic provided sign such as scat, tracks, nest structures, game trails, etc. Intrinsic provided sign such as scat, tracks, nest structures, game trails, etc. Intrinsic provided sign such as scat, tracks, nest structures, game trails, etc. Intrinsic provided sign such as scat, tracks, nest structures, game trails, etc. Intrinsic provided sign such as scat, tracks, nest structures, game trails, etc. Intrinsic provided sign such as scat, tracks, nest structures, game trails, etc. Intrinsic provided sign such as scat, tracks, nest structures, game trails, etc. Intrinsic provided sign such as scat, tracks, nest structures, game trails, etc. Intrinsic provided sign such as scat, tracks, nest structures, game trails, etc. Intrinsic provided sign such as scat, tracks, nest structures, game trails, etc. Intrinsic provided sign such as scat, tracks, nest structures, game trails, etc. Intrinsic provided sign such as scat, tracks, nest structures, game trails, etc. Intrinsic provided sign such as scat, tracks, nest structures, game trails, etc. Intrinsic provided sign such as scat, tracks, nest structures, game trails, etc. Intrinsic provided sign such as scat, tracks, nest structures, game trails, etc. Intrinsic provided sign such as scat, tracks, nest structures, game trails, etc. Intrinsic provided sign such as scat, and structures and structures and scat, and	scattered wildlife groups or individuals or relatively few species during peak periods ence of wildlife sign such as scat, tracks, nest structures, game trails, etc. and upland food sources ocal biologists with knowledge of the AA It features (Working from top to bottom, check appropriate AA attributes in matrix to arrive at rating. Struss cover to be considered evenly distributed, the most and least prevalent vegetated classes must be their percent composition of the AA (see #10). Abbreviations for surface water durations are as follows: A	scattered wildlife groups or individuals or relatively few species during peak periods ence of wildlife sign such as scat, tracks, nest structures, game trails, etc. introduction of wildlife sign such as scat, tracks, nest structures, game trails, etc. introduction of the AA and tributes in matrix to arrive at rating. Structura is scover to be considered evenly distributed, the most and least prevalent vegetated classes must be within their percent composition of the AA (see #10). Abbreviations for surface water durations are as follows: P/P = nial; S/I = seasonal/intermittent; T/E = temporary/ephemeral; and A = absent [see instructions for further defining in the production of the AP in the AP	scattered wildlife groups or individuals or relatively few species during peak periods ence of wildlife sign such as scat, tracks, nest structures, game trails, etc. Introduction interdiction interdiction introduction introduction introduction interdiction interdic	scattered wildlife groups or individuals or relatively few species during peak periods ence of wildlife sign such as scat, tracks, nest structures, game trails, etc. Int upland food sources ocal biologists with knowledge of the AA It features (Working from top to bottom, check appropriate AA attributes in matrix to arrive at rating. Structural diversity is iss cover to be considered evenly distributed, the most and least prevalent vegetated classes must be within 20% of each their percent composition of the AA (see #10). Abbreviations for surface water durations are as follows: P/P = nial; S/I = seasonal/intermittent; T/E = temporary/ephemeral; and A = absent [see instructions for further definitions of the the properties of the properties

i. Habitat Quality and	Known	/ Suspec	ted Fish	Specie	s in A	A (usen	natrix to	arrive a	t [check	the funct	ional po	intsan	drating)					
Duration of surface water in AA							Se	easonal /	Intermitten	t		Temporary / Ephemeral						
Aquatic hiding / resting / escape cover	Ор	timal	Adeq	uate	Po	oor	Opti	mal	Ade	quate	Po	or	Opti	mal	Aded	quate	Po	or
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	.3L
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	.7М	.6М	.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 can a) Is fish use of the AA significantly reduced by a courrent final MDEQ list of waterbodies in need of if fishery or aquatic life support, or do aquatic nuisar yes, reduce score in i above by 0.1: Modified F	culvert, d TMDL de nce plant	dike, or other m evelopment with	an-made ['] s n listed "Pr	structure or obable Imp	aired Ú	ses" includir	ng cold or v	varm water	ne If	
b) Does the AA contain a documented spawning a comments) for native fish or introduced game fish:		ther critical hab			he adju	sted score in				
iii. Final Score and Rating: 0 NA	Comme	ents: No fish	habitat v	vithin AA	-					
14E. Flood Attenuation: (Applies only to wetlar channel or overbank flow, click NA here		ect to flooding voceed to 14F.)	via in-chan	nel or overl	oank flo	w. If wetlan	ds in AA aı	e not floode	ed from in-	
 i. Rating (working from top to bottom, use the m Estimated or Calculated Entrenchment (Rosgen 1994, 1996) 		ow to arrive at ly entrenched - stream types	· C, D, E	Moderate		enched – B	Entrenc	hed-A, F, G types	stream	
% of flooded wetland classified as forested and/or scrub/shrub	75%	25-75%	<25%	75%	25-7	5% <25%	75%	25-75%	<25%	
AA contains no outlet or restricted outlet	1H	.9H	.6M	.8H	.71	1 .5M	.4M	.3L	.2L	
AA contains unrestricted outlet	.9H	.8H	.5M	.7M	.6۱	1 .4M	.3L	.2L	.1L	
										_
Slightly Entrenched ER = >2.2		Moderately I ER = 1.4	11 – 2.2			E	Entrenched R = 1.0 – 1.4			
C stream type D stream type E stream t	ype	B stream	m type	A	stream ty	/pe	F stream ty	de G	stream type	
2 x Bankfull Dep		Bankfull Do	epth V	333	28	Flood-prosankfull Wic		4.75		
width ii. Are ≥10 acres of wetland in the AA subject to f	wid	th	nade featu	ree which r		_ ratio		4.75	nated	
within 0.5 mile downstream of the AA (check)?	Y ()	N 💿								
Comments: Approximately 30% of the pr south into relict channel that this location.										
 14F. Short and Long Term Surface Water upland surface flow, or groundwater flow. In 14G.) i. Rating (Working from top to bottom, user water durations are as follows: P/P = perma further definitions of these terms].) 	fnowet ethema	tlands in the A	AA are su arrive at	bject to flo [check] th	ooding e func	orponding tional point	, dick [s and ratii	NA here	e and proce	eed to
Estimated maximum acre feet of water contained in wetlands within the AA that are subject to periodic		>5 acre feet			1.1	to 5 acre feet			≤1 acre foot	
flooding or ponding Duration of surface water at wetlands within the AA	P/P	S/I	T/E	P/F		S/I	T/E	P/P	S/I	T/E
	1H	.9Н	.8H	.81	- 1	.6M	.5M	.4M	.3L	.2L

Estimated maximum acre feet of water contained in wetlands within the AA that are subject to periodic flooding or ponding		>5 acre feet		1.:	1 to 5 acre feet		≤1 acre foot			
Duration of surface water at wetlands within the AA	P/P	S/I	T/E	P/P	S/I	T/E	P/P	S/I	T/E	
Wetlands in AA flood or pond ≥ 5 out of 10 years	1H	.9Н	.8H	.8Н	.6M	.5M	.4M	.3L	.2L	
Wetlands in AA flood or pond < 5 out of 10 years	.9Н	.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

	gh influ													receive s n input, c				ortoxic and proc	
i. R a = low	•	vorking	from to	p to bot	tom, us	se the n	natrix b	elow to	arrive a	t [chec	k] the f	unctiona	al points	s and rati	ng [H	= high,	M = m	oderate,	or L
Se dim leve Is	ent, nutr within A	4	l toxicant	•	com	to deliver pounds substan	levels of at levels tally imp of nutrien	of sedime such that paired. M		ients, or unctions imentations signs of	are on,	deve nutrient with po compour	lopment s, or toxi tential to nds such edimenta		able cau AA rece ghleve functions ses of n	uses" relatives or so this of sed ons are s	ated to surround iments, ubstanti or toxicant.	ediment, ing land u nutrients, ally impai ants, or si	use or red.
			etation ii onding i			≥ 70%			< 70	%			≥ 70	%			< 70	1%	
			ricted o		Yes		8H	.7N	1	.5M	1	.5N	1	.4M		Yes .3L	T	No .2L	1
AA co	ntains ur	nrestrict	ed outle	t	.9I		7M	.6N		.4M	1	.41		.4IV		.3L		.2L	1
14H S draina	edimen	t/ShoreI	ine Stat	oilization	n: (App	lies only	if AA oc	curs on	or within	the ban	ks or a	river, stre		other natu	ral or r		de		
					use the	matrix I	pelow to		t [check]								T		
shorelir	e by spe	cies with s	mbank or stability ra		D		Di-I	Duration	of surface								l		
	ee Appeı	ndix F).			Perr	manent / F	1		Sea	asonal / In	1	ı	16	emporary / E	Ť	erai	l		
≥ 65%						1H	-			.91				.7N	_				
35-64%	1			_		.7N				.6N	1			.51	И				
<u>i. L</u>	Produ	ction Ex	cport/Fo	od Chai	in Supp	ort:	and fish	habitat	ratings [check])									
	neral Fis Rating (*	sh Habit	at	G E/H	eneral \	Wildlife	Habitat M	Rating	(14C.iii.))									
<u> </u>		-		H	1		н			<u>-</u> м 1									
	<u>E/I</u>			н			М			M									
	L			М			м												
	N/	A		Н			М			L									
wetlan subsui	d compo face ou	onent in tlet; the t ns for fur	the AA; final thre rther def	Factor B	s = level pertain to of these	of biolog duratio	gical acti	vity ratir face wat	ng from a	above (14 AA, whe	4I.i.); Fa ere P/P,	ctor C =	whether	Factor A or not the as previous	e AA co usly de	ontains a	surface	e or	
B C	Hi Yes	igh No	Mod Yes	erate No	Yes	ow No	H Yes	igh No		erate No		ow No	Hi Yes	gh No		erate No		ow No	
P/P	1E	.7H	.8H	.5M	.6M	.4M	.9H	.6M	.7H	.4M	.5M	.3L	.8H	.6M	.6M	.4M	.3L	.2L	
S/I	.9Н	.6M	.7H	.4M	.5M	.3L	.8H	.5M	.6M	.3L	.4M	.3L	.7H	.5M	.5M	.3L	.3L	.2L	
T/E/A	.8H	.5M	.6M	.3L	.4M	.2L	.7H	.4M	.5M	.2L	.3L	.1L	.6M	.4M	.4M	.2L	.2L	.1L	
plant co control).	ver, ≤ 15	5% noxid	ous weed	d or ANV	/S cover	, and the	at is not	subjecte	ed to peri	iodic me	chanica	l mowing		VUB): Are ring (unles	s for w		1		

Comments: A restricted surface water outlet is present to the south.

14J. Groundwater Discharge/Recharge: (check the appropriate indicators in i & ii below) i. Discharge Indicators ii. Recharge Indicators Permeable substrate present without underlying impeding layer The AA is a slope wetland Springs or seeps are known or observed Wetland contains inlet but no outlet Vegetation growing during dormant season/drought Stream is a known 'losing' stream; discharge volume decreases Wetland occurs at the toe of a natural slope Other: Seeps are present at the wetland edge AA permanently flooded during drought periods Wetland contains an outlet, but no inlet Shallow water table and the site is saturated to the surface Other: iii. Rating (use the information from i and ii above and the table below to arrive at [check] the functional points and rating) Duration of saturation at AA Wetlands <u>FROM GROUNDWATER</u> <u>DISCHARGE OR WITH WATER</u> THAT IS RECHARGING THE GROUNDWATER SYSTEM Criteria P/P S/I т None Groundwater Discharge or Recharge 1H .4M .1L .7M Insufficient Data/Information Comments: Shallow groundwater table documented at the northern and southern portions of the AA during 2022. 14K. Uniqueness: i. Rating (working from top to bottom, use the matrix below to arrive at [check] the functional points and rating) AA does not contain previously AA contains fen, bog, warm springs cited rare types and structural AA does not contain previously Replacement potential or mature (>80 yr-old) forested diversity (#13) is high or contains cited rare types or associations wetland or plant association listed and structural diversity (#13) is plant association listed as "S2" by as "S1" by the MTNHP the MTNHP low-moderate Estimated relative abundant abundant abundant commo common rare rare common rare abundance (#11) n Low disturbance at AA 1H .9H .8H H8. .6M .5M .5M .4M .3L (#12i) Moderate disturbance at .9H H8. .7M .7M .5M .4M .4M .3L .2L AA (#12i) High disturbance at AA .8H .4M .3L .2L .7H .6M .6M .3L .1L (#12i) Comments: Site disturbance is low and structural diversity is high. 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: (check) Y N 💿 (if 'Yes' continue with the evaluation; if 'No' then click NA here and proceed to the overall summary and rating page) Check categories that apply to the AA: Educational/scientific study; Consumptive rec.; Non-consumptive rec.; ___Other iii. Rating (use the matrix below to arrive at [check] the functional points and rating) Known or Potential Recreation or Education Area Known Potential Public ownership or public easement with general public access (no permission required) 2H 15H Private ownership with general public access (no permission required) .15H .1M Private or public ownership without general public access, or requiring permission for public access .1M .05L Comments: Landowner does not allow public access or educational use of the site. **General Site Notes**

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 Estimated AA Acreage)	Indicate the four most prominent functions with an asterisk (*)
A. Listed/Proposed T&E Species Habitat	L	.1	1	0.11	
B. MT Natural Heritage Program Species Habitat	Н	.9	1	0.99	>
C. General Wildlife Habitat	Н	.9	1	0.99	✓
D. General Fish Habitat	NA	0	0	0.00	
E. Flood Attenuation	Н	.9	1	0.99	✓
F. Short and Long Term Surface Water Storage	М	.6	1	0.66	
G. Sediment/Nutrient/Toxicant Removal	Н	1	1	1.10	✓
H. Sediment/Shoreline Stabilization	NA	0	0	0.00	
Production Export/Food Chain Support	Н	.9	1	0.99	
J. Groundwater Discharge/Recharge	М	.7	1	0.77	
K. Uniqueness	М	.6	1	0.66	
L. Recreation/Education Potential (bonus points)	NA	0	NA	0.00	
Totals:		6.6	9	7.26	
Percent of Possible Score			73.33 %		

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: (check appropriate category based on the criteria outlined above)

ı	II	III	IV

MDT Montana Wetland Assessment Form (revised March 2008)

1. Project name Easton	n Ranch		2. MDT project#	ST	PP STWD (81	3)	Control	9680000
3. Evaluation Date 7/19/2	2022 4. Evaluators	J Trilli	ng, S Weyant 5.	Wet	land/Site# (s)	Restorat	ion	
6. Wetland Location(s): T	4N R 9	E	Sec1 32	- т	R		Sec2	
Approx Stationing or Milepo	osts NA							
Watershed 13 - Upper Y	'ellowstone Wa	atersh	ed/County Park					
7. Evaluating Agency	Confluence Consulting I	Inc			8. Wetland s	size acres	,	1.64
Purpose of Evaluation					How assess		Measured e.	
Wetlands potentially af	fected by MDT project				9. Assesssr	nent area		1.64
☐ Mitigation Wetlands: pr	e-construction				(AA) size (ac	•		
☐ Mitigation Wetlands: po					How assess	ed:	Measured e.	g. by GPS
✓ Other Restored channel	 el							
10. Classification of Wetlar	•	in AA						
HGM Class (Brinson)	Class (Cowardin)		Modifier (Cowardi	in)	Water Re		% c	of AA
Riverine	Emergent Wetland		Excavated		Seasonal/Int			93
Riverine	Scrub-Shrub Wetland		Excavated		Seasonal/In	termittent		7
11. Estimated Relative Abur	ndance Common							
12. General Condition of A. i. Disturbance: (use matrix aquatic nuisance vegetation	A below to determine [circle] a	ppropri	iate response – see insi	tructio	ns for Montana-li	sted noxiou	us weed and	
					conditions adjacent		1	d an handhannan d
Conditions wi	thin AA	natura hayed conve roads	aged in predominantly al state; is not grazed, d, logged, or otherwise erted; does not contain s or buildings; and noxious or ANVS cover is <=15%.	sele subj	d not cultivated, but lerately grazed or ha ctively logged; or ha ect to minor clearing roads or buildings; r d or ANVS cover is	ayed or as been g; contains noxious	or logged; sub placement, gra hydrological a	d or heavily grazed ject to substantial fill ading, clearing, or lteration; high road or ty; or noxious weed r is >=30%.
AA occurs and is managed in predomi grazed, hayed, logged, or otherwise coroads or occupied buildings; and noxid <=15%.	onverted; does not contain	lo	ow disturbance		low disturba	ince	moderate	e disturbance
AA not cultivated, but may be moderat selectively logged; or has been subjec placement, or hydrological alteration; or noxious weed or ANVS cover is <=30%	et to relatively minor clearing, fill contains few roads or buildings;		moderate disturbance	m	oderate distu	rbance	high d	isturbance
AA cultivated or heavily grazed or logg substantial fill placement, grading, cleahigh road or building density; or noxio >=30%.	aring, or hydrological alteration;	hi	gh disturbance		high disturba	ince	high d	isturbance
Comments: (types of disturk Limited agriculture (hay) and re species of noxious weeds pres	anch structures to the eas	st. Und	developed riparian co anaged in a natural s	orridoi state,	and herbaceo as are most of	us upland: the lands	s to north, sou within 500 fee	ith, and west. Two it of the AA.
ii. Prominent noxious, aqua		tic spe	ecies:					
Cirsium arvense, Cynoglossu								
iii. Provide brief descriptive The AA consists of one constr					tion area. The	channol in	active during	high flow events
is seasonally inundated by sha								riigii iiow events,

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	ls 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	М	NA	NA	NA
1 dass, but not a monoculture	М	<no< td=""><td>YES></td><td>L</td></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.

SECTION PERTAINING to FUNCTIONS VALUES ASSESSMENT

14A. Habitat for Federally Listed or Proposed Threatened or Endangered Plants or Animals:

i	AA is Documented (F	D) or Suspected (S)	to contain (check one	based on definitions	contained in instructions):

secondary habitat (list Species) D S Canada Lynx (LT), North American Wolverine (PT)	Secondary habitat (list Species) Incidental habita	oints and rating)
In cidental habitat (list species) D S Canada Lynx (LT), North American Wolverine (PT) Io usable habitat S Iii. Rating (use the conclusions from i above and the matrix below to arrive at [check] 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 8H .7M .3L .1L 0L	ncidental habitat (list species) D S Canada Lynx (LT), North American Wolve Solve and Lynx (LT), North American Wolve Solve S	oints and rating)
ii. Rating (use the conclusions from i above and the matrix below to arrive at [check] 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 8H 7M 3L 1L 0L	ii. Rating (use the conclusions from i above and the matrix below to arrive at [check] the functional policy and the matrix below to arrive at [check] the functional policy and the matrix below to arrive at [check] the functional policy and the matrix below to arrive at [check] the functional policy and the matrix below to arrive at [check] the functional policy and the matrix below to arrive at [check] the functional policy and the matrix below to arrive at [check] the functional policy are the functional policy and the matrix below to arrive at [check] the functional policy are the functional policy and the matrix below to arrive at [check] the functional policy are the functional po	oints and rating)
ii. Rating (use the condusions from i above and the matrix below to arrive at [check] 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 8H 7M 33L 1L 0L	ii. Rating (use the conclusions from i above and the matrix below to arrive at [check] the functional policy and the matrix below to arrive at [check] the functional policy and the matrix below to arrive at [check] the functional policy and the matrix below to arrive at [check] the functional policy and the matrix below to arrive at [check] the functional policy and the matrix below to arrive at [check] the functional policy and the matrix below to arrive at [check] the functional policy are the functional policy and the matrix below to arrive at [check] the functional policy are the functional policy and the matrix below to arrive at [check] the functional policy are the functional policy and the matrix below to arrive at [check] the functional policy are the functional policy and the functional policy are the functional policy are the functional policy are the functional policy are the functional policy and the functional policy are the functional policy and the functional policy are the f	O/
Highest Habitat Level doc/primary sus/primary doc/secondary sus/secondary doc/incidental sus/incidental None Functional Points and Rating 1H 9H 8.8H 7.7M 3.3L 7.1L 0L	Highest Habitat Level doc/primary sus/primary doc/secondary sus/secondary doc/inc	O/
Functional Points and Rating 1H 9H 8H .7M .3L .1L 0L	Functional Points and	idental sus/incidental None
Rating 1H .9H .8H .7M .3L .1L 0L	Functional Points and	
Sources for USFWS IPAC 2022	1L	L .1L OL
documented use		

i. AA is Documented (D) or Suspected (S) to contain (check one based on definitions contained in instructions):

Primary or critical habitat (list species)	● D ○ S Bobolink (S3B)
Secondary habitat (list Species)	□ D □ S □
Incidental habitat (list species)	● D ○ S Golden Eagle (S3)
No usable habitat	

ii. Rating (use the conclusions from i above and the matrix below to arrive at [check] the functional points and rating)

ii. Italiing tuse the cone	idololio liotii ta	bove and the n	iau ix below to aili w	c at joileon, the full	ctional points and	raurig)	
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	_OL_
S2 and S3 Species: Functional Points and Rating	.9Н	.7M	.6M	.5M	.2L	1L	OL

Sources for documented use MTNHP, 2013 and 2019-2022 field observations. Bobolink nesting on site documented by MDT staff. Golden Eagle was observed soaring above project area in 2022.

bstantial (base																			Mod	erate	9
,		•		• •								•	ased or	•			-				
observations					•		• •	-		I)			o wildlif		vations	during	peak u	se peri	ods		
abundant wil	•						. 0						no wildli								
presence of		•	•				ole in the	surro	unding	area			adjacen								
interviews wi	th local b	ologist	s with k	nowle	dge of t	he AA					in in	terviev	ws with	local bid	ologists	with k	nowledg	ge of the	e AA		
derete (based	an anu.	of the fel	llaurina l	[abaal	را/،																
oderate (based observations	-					uale or	relativel	v fow	enecies	durina	neak ne	oriode									
common occ			•					•				nous									
adequate ad					s scat,	iiacks,	nest sut	uctures	s, game	uans, c	510.										
interviews wi					idae of t	he AA															
,		no.og.oc			ago o. c																
i. Wildlife hal	oitat fea	itures (Workii	ng fro	m top	to bott	tom, ch	eck a	ppropr	iate A	A attrik	outes	in mat	rix to a	rrive at	t ratin	g. Str	uctura	divers	sity is	
from #13. For						,		,					•							f eacl	า
other in terms permanent/pe		•		•			,	,												of the	se
erms])	orninai,			<u> </u>	JIIII	,	- 1011	iporui	уторпо	morai	, and r	· ub	ooni [c	,00 1110	ii dolloi	10 101	Tartifo	ı domi	1110110	01 1110	
Structural diversity (see				Hig	ah							Mode	erate					Lo	w		
#13)					g								1						<u> </u>		
Class cover distribution (all		Eve	n n			Une	von			Eve	nn.			Une	(OD			Eve	nn		
vegetated classes)		Eve	11			One	ven			Eve	311			One	/en			Eve	311		
Duration of																	- :-			١	
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	
_ow disturbance at AA (see #12i)	Е	E	E	н	Е	Е	н	н	Е	Н	н	м	Е	Н	М	м	Е	Н	М	М	
Moderate				۳	_									J ''			_				1
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	M	M	М		M	М			M				М			-					
at AA (see #12i)	M	M	M	L	M	_ M		L	М	M	L	L	M	L	L	L	_L	L	L	L	
	use th	e cond	clusio	ns fro	om i a	nd ii a	above a	and t	he ma	atrix b	elow t	o arri	ive at	checl	() the	funct	ional ı	points	and i	rating	1)
iii. Rating (wil dlife	use (i)							V	Vildlife	habi	itat fe	atures	rating	j (ii)					
	wii aiii e			E	Except	ional				High	1				Mod	derat	е				Low
	wii dili e					- 1				.91	н					8H					.7M
iii. Rating (Evidence of Substantial	wii diii e		T		1E																
Evidence of						- 1		Н		7	N4					51/1					ગ
Evidence of Substantial					1E .9F	- 1				.7 .41	М					5M					.3L

i. Habitat Quality and	Known	/ Suspec	ted Fish	Specie	s in A	A (usen	natrix to	arrive a	t [check	the funct	ional po	ints and	drating)					
Duration of surface water in AA		Pei	rmanent / I	Perennial	l			Se	easonal /	Intermitten	t			Tem	porary/	Epheme	eral	
Aquatic hiding / resting / escape cover	Opt	timal	Adeq	uate	Po	oor	Opti	mal	Ade	quate	Po	or	Opti	mal	Adeo	quate	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	.3L
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 Intro duced Game fish	.8H	.7М	.6М	.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 A	<i>A</i> ·									
ii. Modified Rating (NOTE: Modified score ca) Is fish use of the AA significantly reduced by current final MDEQ list of waterbodies in need of fishery or aquatic life support, or do aquatic nuisyes, reduce score in i above by 0.1: Modified	annot exc a culvert, of TMDL d	eed 1 or b dike, or ot levelopmer nt or anima	her m nt with	nan-made s h listed "Pr	structure or obable Imp	aired Ús	ses" includir	ng cold or i	warm water		
b) Does the AA contain a documented spawning comments) for native fish or introduced game fis		other critica Y				he adjus	sted score in			า	
iii. Final Score and Rating: 0 NA	Comm						flow ever		n the Shie	elds River,	no
14E. Flood Attenuation: (Applies only to wet channel or overbank flow, click NA her		ject to floo oceed to 14		via in-chan	nel or over	bank flov	w. If wetlan	ds in AA a	re not flood	ed from in-	
i. Rating (working from top to bottom, use the								- Fuebrane	-hl A E C	> -4	
Estimated or Calculated Entrenchment (Rosge 1994, 1996)	Sligr	Slightly entrenched - C, D, E stream types				ely entre	enched – B /pe	Entrend	types	Sueam	
% of flooded wetland classified as forested and/or scrub/shrub	759	% 25-7	75%	<25%	75%	25-75	<25%	75%	25-75%	<25%	
AA contains no outlet or restricted outlet	11-	9.	нΊ	.6M	.8H	.7M	.5M	.4M	.3L	.2L	
AA contains unrestricted outlet	.91	Н .8	н	.5M	.7M	.6M	.4M	.3L	.2L	.1L	
Slightly Entrenched		Moder	ately	Entrenched	.		E	Entrenched			٦
ER = >2.2 C stream type D stream type E stream	n type	_		41 - 2.2 m type	A	stream ty		R = 1.0 - 1.4 F stream ty		S stream type	-
									1	T	
2 x Bankfull D	epth	Bankf	iull D	epth (44	В	Flood-pro ankfull Wid				
Floodprone 133		ınkfull dth				28 :	Entren	chment	4.75		
ii. Are ≥10 acres of wetland in the AA subject twithin 0.5 mile downstream of the AA (check)?				made featu	ıres which ı	may be s		damaged	by floods lo	cated	
Comments: Outlet is restricted. AA sub at the south end of AA. 9%	ject to d	overflow	fron			nd emp	oties into o	old mear	nders of t	he Shields	s River
14F. Short and Long Term Surface Waupland surface flow, or groundwater flow. 14G.)	ater Stor If no we	rage: (Appetants in	olies the <i>i</i>	to wetlan AA are su	ds that flo	od or p ooding (ond from c or ponding	verbank , dick	or in-chanı ☑ NA her	nel flow, proce e and proce	e dipitation eed to
 i. Rating (Working from top to bottom, usater durations are as follows: P/P = perfurther definitions of these terms].) 											
Estimated maximum acre feet of water contained in wetlands within the AA that are subject to periodic		>5 acre	feet			1.1 t	to 5 acre feet			≤1 acre foot	t
flooding or ponding Duration of surface water at wetlands within the AA	P/P	S/I		T/E	P/F		S/I	T/E	P/P	S/I	T/E
Wetlands in AA flood or pond ≥ 5 out of 10 years	1H	.9Н		.8H	.81	н	.6M	.5M	.4M	.3L	.2L
	ОП	0		714	71	<u>, i</u>	- FN4	45.4	21	21	1. 1

Estimated maximum acre feet of water contained in wetlands within the AA that are subject to periodic flooding or ponding		>5 acre feet		1.	1 to 5 acre feet			≤1 acre foot	
Duration of surface water at wetlands within the AA	P/P	S/I	T/E	P/P	S/I	T/E	P/P	S/I	T/E
Wetlands in AA flood or pond ≥ 5 out of 10 years	1H	.9Н	.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

	gh influ									(Applies vetlands									, ortoxic and prod	
	. • `	working	from	top to	bot	tom, us	e the n	natrix be	elow to	arrive a	t [chec	k] the fu	unctiona	al points	and ra	iting [H	= high,	M = m	oderate,	or L
= low]) Sediment, nutrient, and toxicant input levels within AA				ut	com not	o deliver pounds a substan	·levels o at levels tially imp	f sedimesuch the aired. Notes or tox	and use wents, nutrat other following sedicants, or oresent.	ients, or unctions imentatio	are n, o	deve nutrient with po compour	lopment s, or toxi tential to nds such	for "prol cants or deliver l that othe tion, sou	bable ca AA rece high leve er function rces of r	uses" rela eives or s els of sed ons are s	ated to surround iments, ubstant or toxica	d of TMDI sediment, ling land ι nutrients, ially impai ants, or si	use or red.	
	% cover of wetland vegetation in AA Evidence of flooding / ponding in AA					Yes	≥ 70%	No	Ye	< 70	% No		Yes	≥ 70	% No		Yes	< 70)% No	
AA coı	ntains n	o or rest	ricted	d outlet	t	11		8H	.71	1	.5M	1	.51		.41		.3L	1	.2L	1
AA coı	ntains u	nrestrict	ed ou	utlet		.9ŀ	_	7M	.61	Л	.4M		.41	1	.3	L	.2L	1	.1L	1
Comi	ments	: Cove	r in <i>F</i>	AA is g	reat	er than	70% a	nd outle	et is top	ographi	ically re	stricted							_	
draina procee	ge, or o	n the sho I.)	orelin	e of a s	tand	ing wate	er body v	which is	subject	or within to wave at [check]	action. I	f 14H do	es not a	apply, cli		tural or r		le		
shorelin	ne by spe	and stream			3	Perr	nanent / F		Duration	of surface	e water ad				emnorary	/ Epheme	ral			
of ≥6 (s ≥ 65 %	ee Appe	ndix F).				1 611	1H	1			.91			10		7M	iai			
35-64%)						.7M	-			.61	_				5M				
< 35%							.3L				.21	-				1L				
<u>i. L</u>	Produ	and J ction Ex Biologic	oport	JS Spe	cies. Chai	n Supp	ort:	and fish	habitat	ratings [check])	- WILLIAM	- Jan Stat	- Tac			Odiix, i v		, Carex,	
		sh Habit 14D.iii.)	at		G E/H	eneral \	Vildlife	Habitat M	Rating	(14C.iii.) L	-									
	E/	Н			Н			н			м									
	M	1			Н	Щ		М			М									
	L				Н	H	_	М			L									
wetlan subsur	d comp face ou	orking fr	the A final t	À; Fac hree ro	ottom tor B	= level ertain to	of biologo duratio	below to	vity ratii	at [checl ng from a ter in the	k] the fur	1I.i.); Fa	ctor C =	whether	or not the	he AA co	ontains a	surfac	e or	
A B C		igh		Moderate		L	DW No.		gh	_	erate	Lo		Hi	gh	Mod	erate	L	ow No	
P/P	Yes 1E	.7H	Ye:	\neg	√o 5M	Yes .6M	.4M	Yes .9H	.6M	Yes .7H	.4M	Yes .5M	.3L	Yes .8H	.6M	Yes .6M	No .4M	Yes .3L	No .2L	
S/I	.9H	.6M	.7	Н .4	4M	.5M	.3L	.8H	.5M	.6M	.3L	.4M	.2L	.7H	.5M	.5M	.3L	.3L	.2L	
T/E/A	.8H	.5M	.6	М .	3L	.4M	.2L	.7H	.4M	.5M	.2L	.3L	.1L	.6M	.4M	.4M	.2L	.2L	.1L	
plant co control). a) Is the to the so	i. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1.) Vegetated Upland Buffer (VUB): Area with ≥ 30% lant cover, ≤ 15% noxious weed or ANVS cover, and that is not subjected to periodic mechanical mowing or clearing (unless for weed																			

i. Discharge Indicators The AA is a slope wetland Springs or seeps are known or observed Vegetation growing during domant season/drought Wetland occurs at the toe of a natural slope Seeps are present at the wetland edge AA permanently flooded during drought periods				ii. Recharge Indicators ✓ Permeable substrate present without underlying impeding layer Wetland contains inlet but no outlet Stream is a known 'losing' stream; discharge volume decreases Other:						
Wetland contains an Shallow water table a Other:	outlet, but no	o inlet s s aturated to	the surface	La la companya di Amerika di Amer	t set Sebeseld	W- Emotion	e e e e e e e e e e e e e e e e e e e			ı
iii. Rating (use the inforn	nation from i		Duration of sat	uration at AA		OM GROUND	VATER DISCH	ARGE OR WI	TH WATER	İ
Criteria		P/P		S/I		Т	None			
Groundwater Discharge or R	echarge		1H		.7M		.4M		1L	1
Insufficient Data/Information						NA				İ
Channel is Channel is 14K. Uniqueness:	s intermitter	ntly inundate	ed by shallov	v groundwa	ater and high	n flows from	the Shield	s River.		
i. Rating (working from to	p to bottom	, use the mat	rix below to ar				d rating)			İ
AA contains fen, bo or mature (>80 yr wetland or plant as as "S1" by the			old) forested diversity (#13) is high or contains sociation listed plant association listed as "S2" by a			cited rar	A does not contain previously ited rare types or associations ind structural diversity (#13) is low-moderate			
Estimated relative abundance (#11)	rare	commo	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	.7Н	.6M	.6M	.4M	.3L	.3L	.2L	.1L	
PEM/PSS this one. 14L. Recreation/Education. 15 the AA a known or pure here and proceed to	on Potential otential rec.	: (affords "bo ./ed. site: (ch	neck) Y 🔾	AA provides N	recreation or	education o	oportunity)	10-50% of a		ts similar
ii. Check categori Other iii. Rating (use the matrix					. —	onsumptive	rec.;No	n-consumptiv	e rec.;	
Known or Potential Recreation	or Education	Area					K	nown Pot	tential	
Public ownership or public e	asement with	general publi	c access (no pe	ermission req	uired)			.2H	.15H	
Private ownership with general public access (no permission requi								.15H	.1M	
Private ownership with gene		al public acce	ss, or requiring	permission 1	for public acce	ess		.1M	.05L	
· · ·	without gener									
Private ownership with general Private or public ownership of the comments: Landowner does not allow		ccess or ed	ucational use	e of the site).				<u> </u>	
Private or public ownership v		ccess or ed	ucational use	e of the site).					
Private or public ownership of the comments: Landowner does not allow		ccess or ed	ucational use	e of the site).					

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 Estimated AA Acreage)	Indicate the four most prominent functions with an asterisk (*)
A. Listed/Proposed T&E Species Habitat	L	.1	1	0.16	
B. MT Natural Heritage Program Species Habitat	Н	.9	1	1.48	V
C. General Wildlife Habitat	М	.7	1	1.15	✓
D. General Fish Habitat	NA	0	0	0.00	
E. Flood Attenuation	М	.6	1	0.98	
F. Short and Long Term Surface Water Storage	М	.6	1	0.98	
G. Sediment/Nutrient/Toxicant Removal	Н	1	1	1.64	~
H. Sediment/Shoreline Stabilization	Н	.9	1	1.48	>
Production Export/Food Chain Support	М	.7	1	1.15	
J. Groundwater Discharge/Recharge	М	.7	1	1.15	
K. Uniqueness	М	.4	1	0.66	
L. Recreation/Education Potential (bonus points)	NA	0	NA	0.00	
Totals:		6.6	10	10.82	
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: (check appropriate category based on the criteria outlined above)

ı	II	III	IV

Table B-1. Easton Ranch Wetland Mitigation Site. Comprehensive Vegetation Species List 2010 – 2022

Scientific Names	Common Names	WMVC Indicator Status ¹
Achillea millefolium	Common Yarrow	FACU
Agrostis gigantea	Black Bent	FAC
Agrostis stolonifera	Spreading Bent	FAC
Algae, green	Algae, green	NA
Alisma gramineum	Narrow-Leaf Water-Plantain	OBL
Alnus incana	Speckled Alder	FACW
Alopecurus geniculatus	Marsh Meadow-Foxtail	OBL
Alopecurus arundinaceus	Creeping Meadow-Foxtail	FAC
Alopecurus pratensis	Field Meadow-Foxtail	FAC
Alyssum alyssoides	Pale Alyssum	UPL
Amaranthus retroflexus	Red-Root	FACU
Arctium sp.	Burrdock	UPL
Asclepias speciosa	Showy Milkweed	FAC
Astragalus cicer	Cicer Milkvetch	UPL
Avena fatua	Wild Oats	UPL
Bassia scoparia	Mexican-Fireweed	FAC
Beckmannia syzigachne	American Slough Grass	OBL
Berteroa incana	Hoary False Alyssum	UPL
Bidens cernua	Nodding Burr-Marigold	OBL
Brassica kaber	Brassica kaber	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

Colombidio Norman	Common Names	WMVC
Scientific Names	Common Names	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 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
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
Salix bebbiana	Gray Willow	FACW

Scientific Names	Common Names	WMVC Indicator Status ¹
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 2022 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: 2022



Photo Point: 2 Bearing: 200 degrees

Location: Northeast Corner Year: 2010



Photo Point: 2 Bearing: 200 degrees

Location: Northeast Corner Year: 2022



Photo Point: 3 Bearing: 100 degrees

Location: Northwest Corner Year: 2010



Photo Point: 3 Bearing: 100 degrees

Location: Northwest Corner Year: 2022

Easton Ranch: Photo Point Photos



Photo Point: 4A Bearing: 170 degrees

Location: Shields Bank DS Year: 2010



Photo Point: 4A Bearing: 170 degrees

Location: Shields Bank DS Year: 2022



Photo Point: 4B Bearing: 20 degrees

Location: Shields Bank US Year: 2010



Photo Point: 4B Bearing: 20 degrees

Location: Shields Bank US Year: 2022 – 2021 location*



Photo Point: 5 Bearing: 90 degrees

Location: West Boundary Year: 2010



Photo Point: 5 Bearing: 90 degrees

Location: West Boundary Year: 2022

^{*} 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: 2022



Photo Point: 7 Bearing: 340 degrees

Location: Southeast Corner Year: 2010



Photo Point: 7 Bearing: 340 degrees

Location: Southeast Corner Year: 2022

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: 2022



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: 2022



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: 2022

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: 2022



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: 2022



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: 2022



Data Point: DP01w Year: 2022

Location: Veg Com 15



Data Point: DP01u Year: 2022

Location: Veg Com 18



Data Point: DP02w Year: 2022

Location: Veg Com 11



Data Point: DP02u Year: 2022

Location: Veg Com 1



Data Point: DP03w Year: 2022

Location: Veg Com 11



Data Point: DP03u

Location: Veg Com 1

Year: 2022



Data Point: DP04w Year: 2022

Location: Veg Com 5



Data Point: DP04u Year: 2022

Location: Veg Com 1



Data Point: DP05w Year: 2022

Location: Veg Com 14



Data Point: DP05u Year: 2022

Location: Veg Com 13



Data Point: DP06w Year: 2022

Location: Veg Com 14



Data Point: DP06u Year: 2022

Location: Veg Com 13



Data Point: DP07w Year: 2022

Location: Veg Com 11



Data Point: DP07u Year: 2022

Location: Veg Com 16



Data Point: DP08w Year: 2022

Location: Veg Com 14



Data Point: DP08u Year: 2022

Location: Veg Com 18



Data Point: DP09w Year: 2022

Location: Veg Com 21



Data Point: DP09u Year: 2022

Location: Veg Com 1



Data Point: DP10w Year: 2022

Location: Veg Com 20



Data Point: DP10u Year: 2022

Location: Veg Com 1