Montana Department of Transportation Wetland Mitigation Monitoring Report

EASTON RANCH MITIGATION SITE

Project Overview

Watershed: Watershed #13 – Upper Yellowstone River Basin

Monitoring Year: 2019

Years Monitored: 10th year of monitoring

Corps Permit Number: NWO-2006-90370-MTB

Monitoring Conducted By: RESPEC/HDR/Trec for MDT

Dates Monitoring Was Conducted: July 26, 2019

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 32.65-acre mitigation area. 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 an upland buffer around project wetlands.

Site Location:

Latitude: 46.329611 Longitude: -110.382625 County: Meagher Nearest Town: Wilsall, MT

Map Included: Yes

Mitigation Site Construction Started: 2009 Construction Ended: 2009

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

Activity: Weed Spraying Date: July 2, 2019 Specific recommendations for any additional corrective

actions: Weed treatment will continue in 2020.

Activity: Ditch Cleaning **Date:** June 24, 2019 **Specific recommendations for any additional corrective actions:** Periodic cleaning of irrigation delivery ditch to facilitate water delivery into the northeastern corner of the mitigation site.

-

Anticipated Wetland Credit Acres: 27.41

Wetland Credit Acres Generated to Date: 13.10

Previous Monitoring Reports:

https://www.mdt.mt.gov/publications/brochures/wetland mitigation.shtml

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 established for the Easton Ranch site and whether or not they are being achieved 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.	Y	Areas identified as wetland habitat within the mitigation site exhibit soil saturation for a minimum of 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	Indicators of groundwater filling the depressional wetlands include sparsely vegetated concave surfaces, saturation to the surface, and inundation.
	Construction 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.	Υ	Hydric soil characteristics, including redeoximorphic concentrations and depleted matrix, have developed throughout most of the constructed wetlands.
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.	Υ	Plant cover has continued to develop across disturbed soils.
Hydrophytic Vegetation	Achieved when wetlands delineated as hydrophytic using technical guidelines.	Y	Areas identified as wetland habitat within the mitigation site support a prevalence of hydrophytic vegetation (OBL, FACW, and FAC).
	Trees and shrubs will be installed and survival will be assessed.	Y	Trees and shrubs have been planted throughout the mitigation site and are assessed during each yearly monitoring visit.
Woody Plants	Scrub/shrub wetlands habitat will be achieved where 30 percent absolute cover by cuttings, planted, and volunteer woody plants is reached within the defined monitoring period or site is showing signs of progression toward that goal at the end of the defined monitoring period.	Y	Approximately 25 percent of the wetland areas identified within the site are dominated by woody vegetation. Planted woody species continue to survive and develop along the constructed flood channel. Natural recruitment of aspen, willows, and cottonwoods within the site continue to establish. The site appears to exhibit progress toward these success criteria.
Herbaceous Plants	At least 80 percent ocular vegetation coverage by desirable hydrophytic vegetation.	Y	Preferred hydrophytic vegetation consist of greater than 80 percent of total vegetation cover within delineated wetlands.

Performance Standards	Success Criteria	Criteria Achieved (Y/N)	Discussion
	Provide 27.41 net credit acres for the project area.	N	A total of 13.10 acres of wetland credit has been generated for the mitigation site and includes 9.63 acres of created wetland, 1.56 acres of restored wetland, 1.10 acres of preserved wetland, establishment of a 11.5-acre upland buffer, and 0.67-acre debit from project impacts.
Wetland Acreage	Emergent wetland habitat will be 70–75% of mitigation wetland.	N	Emergent wetland habitat comprises approximately 68% of total wetland areas delineated in 2019.
Development	Scrub/shrub wetland habitat will be 15–20% of wetland area.	Υ	Scrub/shrub wetland habitat comprises approximately 30% of total wetland areas delineated in 2019.
	Open water will be < 5% of wetland area.	Υ	Aquatic macrophytes habitat comprises approximately 2% of total wetland areas delineated in 2019. These inundated areas (<3-ft deep) seasonally fluctuate throughout the growing season and support a diversity of submergent and 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.	Υ	Streambanks along the constructed channel are vegetated with a diversity of deep-rooting and wetland plant species.
Floodplain Channel Restoration	Bank stability will be evaluated by reference reach comparison.	Y	Banks within the constructed floodplain channel are stable and compare to reference reach conditions with no signs of erosion or channel movement.
	Vegetation transect across the floodplain will be monitored.	Y	Vegetation transect across the floodplain has been monitored yearly and supports a prevalence of species with a root-stability index greater than 6.
Bank Stabilization	Area visually inspected and photo-documented.	Y	The results of annual inspection and photo documentation along the Shields River in the northwestern corner of the site are presented in the mitigation monitoring reports.
(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 upland pasture grasses. Soil lifts and the riprap installed along the bank are eroding near 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.	Y	Noxious weed cover is estimated to be 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 established greater than 50 percent cover by non-weed species.
Weed Control	Less than 5 percent absolute cover of state-listed noxious weed species across the site.	Y	State-listed noxious weed species across the site is estimated to be 2 percent absolute cover.
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 in an effort to promote wildlife movement across the wetland and the Shields River riparian corridor. The remaining fences are in good condition.
Monitoring	Monitor the site for a minimum period of 5 years or longer as determined by the USACE.	Y	Comprehensive site monitoring has been ongoing for approximately 10 years, since the completion of construction activities in 2009.

Summary Data

Wetland Delineation – The total wetland acreage delineated in 2019, including preexisting wetland areas, was 12.29 acres (as shown on figures in Appendix A), which is a slight increase of 0.70 acre since 2018. The total wetland area at the site has remained fairly constant over the 10 years of monitoring and ranges from a low of 11.53 in the first of year of monitoring in 2010 to a high of 12.64 in 2014. Yearly fluctuations in wetland acreage can be directly attributed to wetland hydrology, which is a combination of elevated groundwater and supplemental irrigation water that is released onto the site each summer.

Functional Assessment — 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 a number of 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.

Vegetation – A total of 180 plant species were identified on the site from 2010 through 2019. Four new species were identified at the site in 2019. Vegetation plant communities were identified by plant composition and dominance. The following seven upland and ten wetland vegetation community types were identified in 2019:

- 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 pretense
- Upland Type 20 Lotus corniculatus/Populus balsamifera
- Wetland Type 3 Carex spp.
- Wetland Type 4 Salix drummondiana
- 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 19 Typha latifolia
- Wetland Type 21 Carex spp./Juncus spp.

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 on Figure A-3 (Appendix A).

Vegetation cover was measured along three transects in 2019 (Figure A-2, Appendix A). 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 2 summarizes the data for Transect T-1. T-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

community Types 1, 10, 16, 17, and 18 and wetland community Types 7, 11, 15, and 21. Eighty-one percent of the transect crossed wetland habitat, which is the same as 2018. Total vegetative cover has remained relatively constant at 85–89 percent from 2016 to 2019.

Table 2. Data Summary for T-1 From 2016 Through 2019 at the Easton Ranch Site

Monitoring Year	2016	2017	2018	2019
Transect Length (feet)	1,376	1,376	1,376	1,376
Vegetation Community Transitions Along Transect	14	14	12	12
Vegetation Communities Along Transect	6	6	8	10
Hydrophytic Vegetation Communities Along Transect	2	2	4	4
Total Vegetative Species	54	58	50	52
Total Hydrophytic Species	34	41	32	32
Total Upland Species	20	17	18	20
Estimated % Total Vegetative Cover	85	85	89	89
Estimated % Unvegetated	15	15	11	11
% Transect Length Comprising Hydrophytic Vegetation Communities	22.7	22.7	19.1	19.3
% Transect Length Comprising Upland Vegetation Communities	77.3	77.3	80.9	80.7
% Transect Length Comprising Unvegetated Open Water	0.0	0.0	0.0	0.0
% Transect Length Comprising of Mud Flat	0.0	0.0	0.0	0.0

Data collected on T-2 (Wetland Mitigation Site Monitoring form, Appendix B) are summarized in Table 3. T-2 is 1,333 feet long, runs north to south across the west side of the site, and intersects upland community Types 1, 13, and 18 and wetland community Types 3, 7, 11, 14, 15, and 21. Forty-six percent of the transect crossed wetland habitat in 2019 which is a 6 percent increase since 2018. Total vegetative cover along the transect was 95 percent in 2019.

Table 3. Data Summary for T-2 From 2016 Through 2019 at the Easton Ranch Site

Monitoring Year	2016	2017	2018	2019
Transect Length (feet)	1,333	1,333	1,333	1,333
Vegetation Community Transitions Along Transect	10	11	14	14
Vegetation Communities Along Transect	5	6	8	9
Hydrophytic Vegetation Communities Along Transect	3	4	5	6
Total Vegetative Species	61	58	54	59
Total Hydrophytic Species	41	45	44	46
Total Upland Species	20	13	10	13
Estimated % Total Vegetative Cover	85	85	87	90
Estimated % Unvegetated	15	15	13	10
% Transect Length Comprising Hydrophytic Vegetation Communities	40.4	40.5	40.9	46.1
% Transect Length Comprising Upland Vegetation Communities	59.6	59.5	59.1	53.9
% Transect Length Comprising Unvegetated Open Water	0.0	0.0	0.0	0.0
% Transect Length Comprising of Mud Flat	0.0	0.0	0.0	0.0

Data collected on T-3 (Wetland Mitigation Site Monitoring form, Appendix B) are summarized in Table 4. T-3 is 732 feet long, runs west to east across the south end of the site, and intersects upland community Types 1 and 13 and wetland community Types 11 and 14. Approximately 51 percent of the transect crossed wetland habitat in 2019 and total vegetative cover was 91 percent.

Table 4. Data Summary for T-3 From 2016 Through 2019 at the Easton Ranch Site

Monitoring Year	2016	2017	2018	2019
Transect Length (feet)	732	732	732	732
Vegetation Community Transitions Along Transect	4	4	6	6
Vegetation Communities Along Transect	3	3	4	4
Hydrophytic Vegetation Communities Along Transect	1	1	2	2
Total Vegetative Species	45	42	42	40
Total Hydrophytic Species	28	29	30	27
Total Upland Species	17	13	12	13
Estimated % Total Vegetative Cover	85	85	90	91
Estimated % Unvegetated	15	15	10	9
% Transect Length Comprising Hydrophytic Vegetation Communities	44.4	47.3	51.1	51.5
% Transect Length Comprising Upland Vegetation Communities	55.5	52.7	48.9	48.5
% Transect Length Comprising Unvegetated Open Water	0.0	0.0	0.0	0.0
% Transect Length Comprising of Mud Flat	0.0	0.0	0.0	0.0

Several hundred cuttings and containerized vegetative materials were planted along the constructed flood channel to increase channel stability. Consistent with monitoring activities of the past several years, a thorough survey of the project area was conducted in 2019 to locate and identify surviving cuttings and containerized saplings. Approximately 22 red-osier dogwood (*Cornus alba*), 48 sandbar willow (*Salix exigua*), 64 speckled alder (*Alnus incana*), and 65 willow cuttings were identified as surviving in 2019. The amount of woody volunteer species continues to increase, especially quaking aspen (*Populus tremuloides*) saplings along the northern and northeastern project boundaries in 2019. Volunteer thinleaf alder, sandbar willows, and cottonwoods were noted along the channel. All of the plants observed were well-established. Young cottonwoods were also observed along CT7, CT11, and CT18 (Transect 1). Thinleaf alder and red-osier dogwood were observed primarily along or within the channel. Additional volunteer cottonwoods were observed around the perimeter of CT5 located in the southern portion of the project.

During the July 2019 monitoring, seven small infestations of Canada thistle (*Cirsium arvense*), which is a Priority 2B noxious weed, were identified on site and were located primarily in uplands or along the site perimeter (Figure A-3, Appendix A). The cover classes ranged from a trace (< 1 percent), low (1–5 percent) to moderate (6–25 percent) cover. Canada thistle was observed in community Type 1 – *Phleum pratense/Poa pratensis*, Type 3– *Carex* spp., Type 5 – *Populus balsamifera*, Type 11 – *Juncus* spp., Type 13 – *Bromus inermis/Phleum pratense*, and Type 18 – *Lotus corniculatus/Phleum pratense*. One infestation of gypsy-flower (*Cynoglossum officinale*) was observed on site in community Type 1. One location of musk thistle (*Cardus nutas*) and common mullein (*Verbascum thapsus*), which are designated as noxious weeds by Park County, were also observed in community Types 18 and 11. Ongoing weed control/spraying has been very effective in reducing overall infestation size and density across the site, especially reducing the extent of gypsy-flower. Montana Department of Transportation (MDT) has an ongoing weed-control program and contractors sprayed weeds on July 2, 2019.

Hydrology – The hydrology for the site is supplied from multiple sources, including a shallow seasonal groundwater table, direct precipitation, surface runoff, flood flows from the adjacent Shields River, and surface-water diversion out of an irrigation canal. Approximately 25 percent of the site was inundated with surface water during the 2019 investigation at depths that ranged from 0 to 1.5 feet. A few of the wetland cells were saturated or inundated with shallow surface water during the July monitoring. Surface water was present in portions of the overflow channel and in a few other low areas across the site. However, surface-water levels were lower compared to 2018 as noted in depressions along Transects 1 and 2. Some signs of overland flow were noted along portions of Transect 2 with debris from high flows deposited along the stems/trunks of young trees and shrubs. Along Transect 3, signs of high flows were noted in the channel and included deposition and scour holes, but banks were generally well-vegetated and the channel bottom was stable and, in places, rocky.

Photographs – Photographs taken at photo points 1–7 (PP1 to PP7), transect endpoints, and data points are provided in Appendix C with comparisons between 2019 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.shtml).

Soils – Soil test pits were excavated at six locations and all were within what was originally mapped as the Meadowcreek soil series (Figure A-2, Appendix A). DP-1W, DP-2W, and DP-3W are located in areas that exhibited hydric soils. The soil at DP-1W, which is located within wetland community Type 14, consisted of a very dark gray (10YR 3/1) clay loam. This soil was disturbed during construction and is in the process of developing hydric characteristics. The paired upland soil test pit DP-1U revealed a very dark grayish-brown (10YR 3/2) silt loam and a dark brown (10YR 3/3) gravelly silt loam. The soil observed at this upland data point had no hydric soil indicators.

The profile at DP-2W, which is located within wetland community Type 11, revealed a very dark grayish-brown (10YR 3/2) silty clay loam with 2 percent dark yellowish-brown (10YR 4/6) redox concentrations at 6 inches. This soil did meet the criteria for redox dark surface (F6). The soils at DP-2W were saturated to the surface and groundwater was observed in the soil pit at 8 inches. The soil profile for DP-2U was also a very dark grayish-brown (10YR 3/2) silt loam, which lacked hydric soil indicators.

Soils at DP-3W, which is located within wetland community Type 4, were a very dark gray (10YR 3/1) silt loam in the upper 5 inches and a very dark grayish-brown (10YR 3/2) sandy silt loam to a depth of 20 inches with 3 percent dark yellowish-brown (10YR 4/6) redox concentrations that were noted at 5 inches. This soil did meet the criteria for the redox dark surface (F6). Primary hydrology indicators included saturation to the ground surface, water marks (scour), and sediment deposits. The paired upland data point DP-3U soils were very dark grayish-brown (10YR 3/2) silt loam, which lacked hydric soil or wetland hydrology indicators.

Wildlife — Sixteen bird species, three mammalian species, and one amphibian species were identified at the site in 2019 (Site Monitoring Form Appendix B). Bird boxes installed in 2017 were checked and appeared to be in good working condition. Of particular interest was the sighting of a black bear (*Ursus americanus*) near the mitigation site by MDT staff during a 2019 summer site visit.

Stream Bank Stabilization – During the 2013 high-flow event (spring 2013), significant bank erosion occurred immediately upstream of PP4B. This erosion exposed the riprap and undermined the riprap along an approximately 85-foot-long reconstructed bank and undermined the coir-wrapped soil lifts, which caused significant loss of soil and willow cuttings. Photo point PP4B, which is located on the southern side of the river, 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 section of bank remains exposed and vulnerable. The 2018 runoff period was supported by above-average precipitation in June. In 2019, bank erosion continues along the downstream or southern portion of the 85-foot-long bank and resulted in areas of undercutting or loss of finer textured subsoils.

Credit Summary — Table 5 summarizes the estimated wetland credits based on the USACE-approved credit ratios and the wetland delineation completed in July 2019. 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 preexisting 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 acre of impacts associated with constructing the mitigation wetland. The total mitigation credit estimated in 2019 totaled 13.1 credit acres, which is an increase of 0.7 acre since 2018. The site is still approximately 14.31 acres short of the original goal of 27.41 acres of credit.

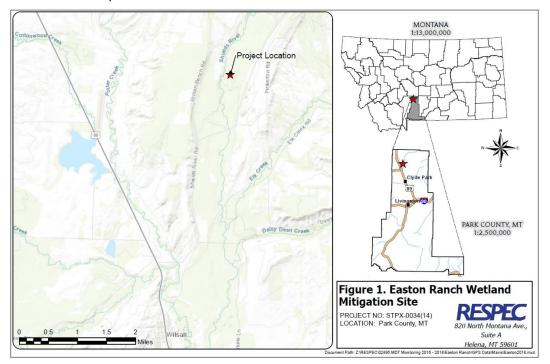
9

Table 5. Wetland Mitigation Credits Estimated for the Easton Ranch Site (2016–2019)

Proposed Mitigation Features	Compensatory Mitigation Type	USACE Mitigation Ratios	Anticipated Final Credit Acreages	Proposed Final Wetland Credits (Acres)	2016 Wetland Acreages	2016 Credit Estimated (Acres)	2017 Wetland Acreages	2017 Credit Estimated (Acres)	2018 Wetland Acreages	2018 Credit Estimated (Acres)	2019 Wetland Acreages	2019 Credit Estimated (Acres)
Creation of palustrine emergent wetland via shallow excavation	Creation	1:1	24.95	24.95	9.34	9.34	9.79	9.79	8.93	8.93	9.63	9.63
Reestablishment of relic flood channel	Restoration (Reestablishme nt)	1:1	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56
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	Upland Buffer	5:1	6.43	1.29	11.5	2.30	11.5	2.30	11.5	2.30	11.5	2.3
Project impacts			-0.67	-0.67	-0.67	-0.67	-0.67	-0.67	-0.67	-0.67	-0.67	-0.67
	Total			27.41		12.81		13.26		12.40		13.10

Maps, Plans, Photos

Site Location Map



Project Area Maps/Figures: See Appendix A

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

Photos: See Appendix C

Plans: See Appendix D of 2018 Monitoring Report

https://www.mdt.mt.gov/other/webdata/external/planning/wetlands/2018-REPORTS/2018-FINAL-

Easton-Ranch.PDF

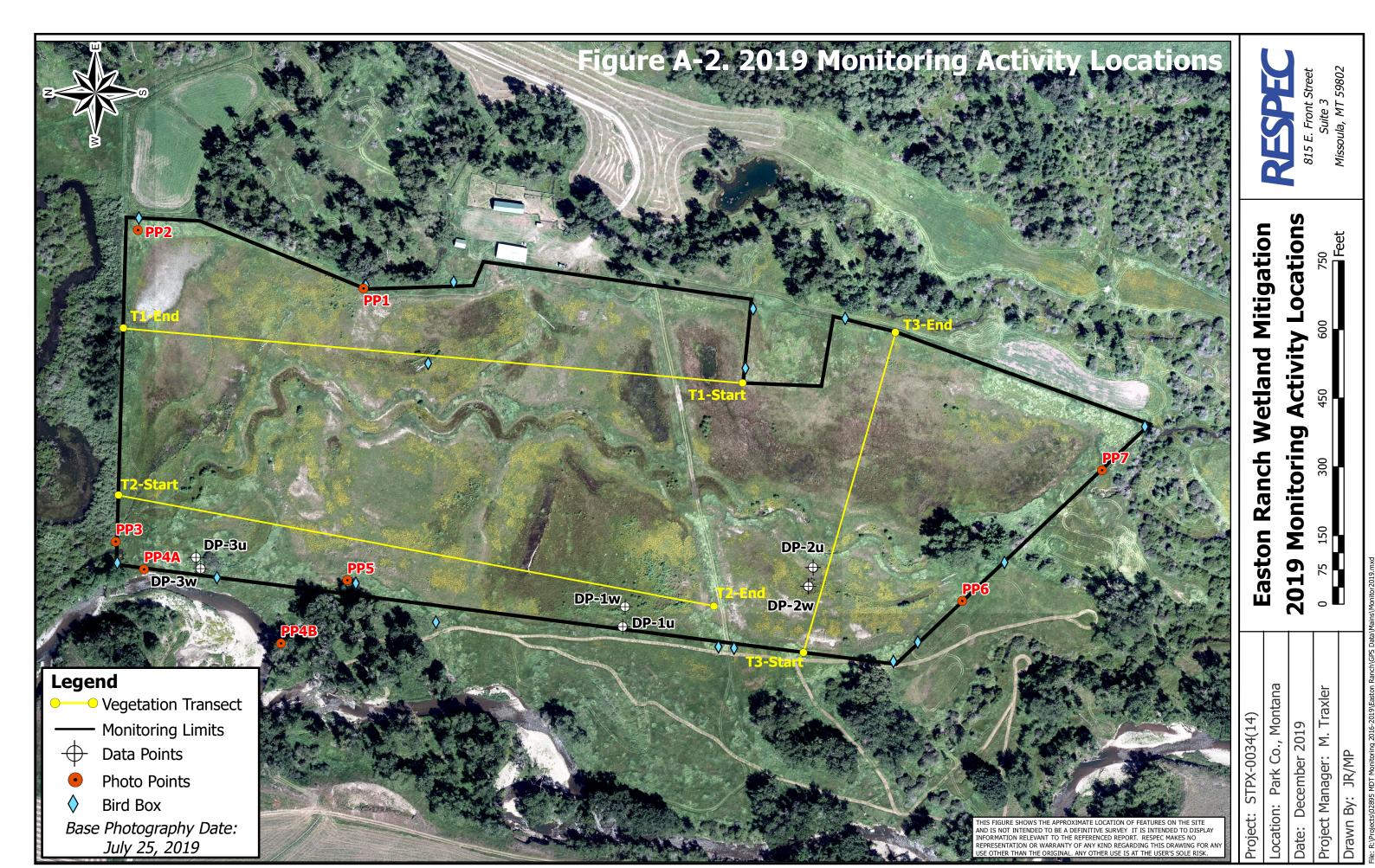
Conclusions

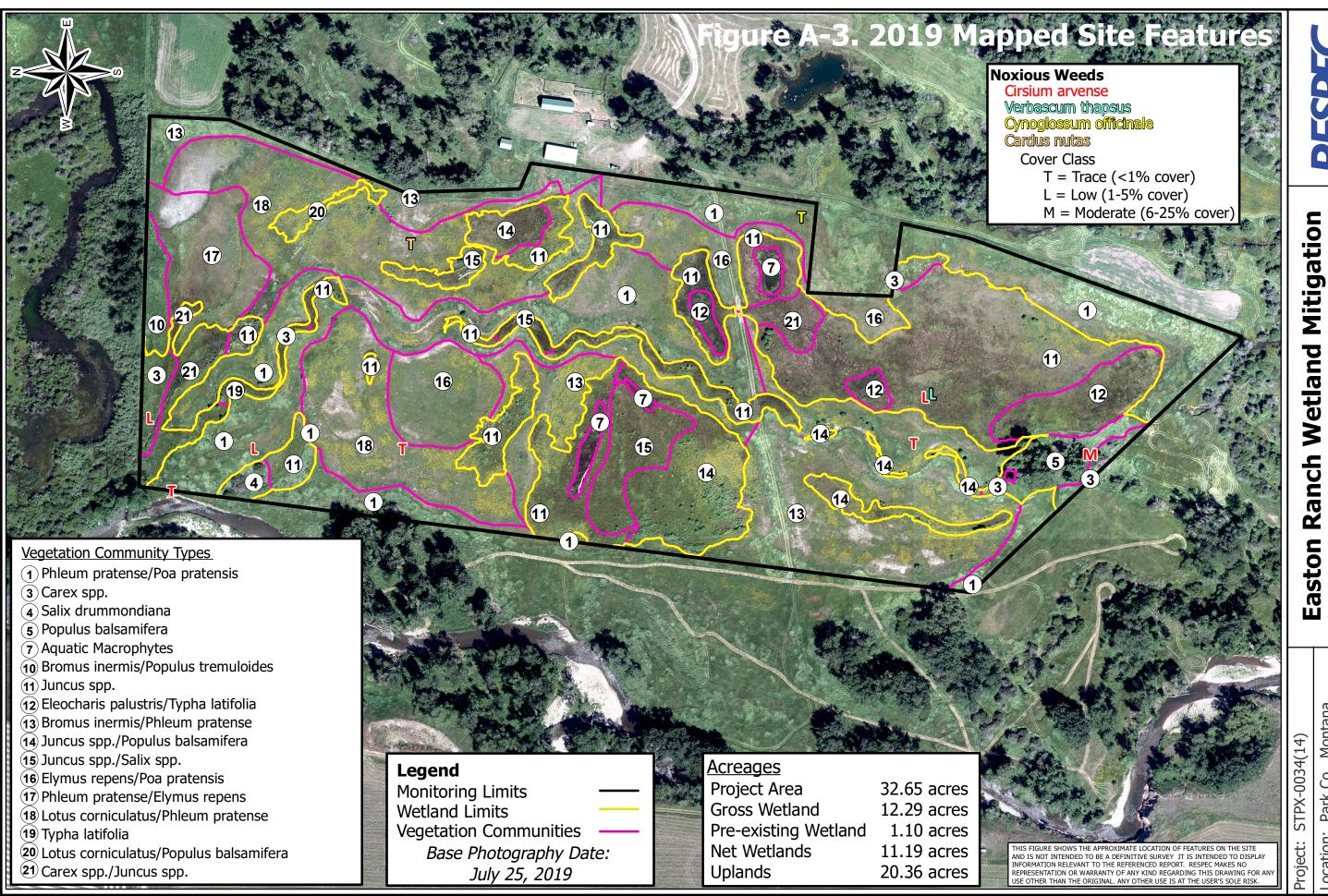
Based on the results of the tenth year of monitoring, the mitigation site is continuing an upward trend toward a diverse wetland ecosystem. The site is meeting all Performance Standards except for Wetland hydrology (groundwater wells), Wetland Acreage Development, Bank Stabilization (deep-rooting riparian vegetation establishment). Before the 2020 growing season, MDT will discuss the difficulties in meeting these performance standards and potential remedial actions to address the deficiencies. Depending on the outcome of this meeting, MDT may request amendments to these performance standards with the USACE.

APPENDIX A PROJECT AREA MAPS

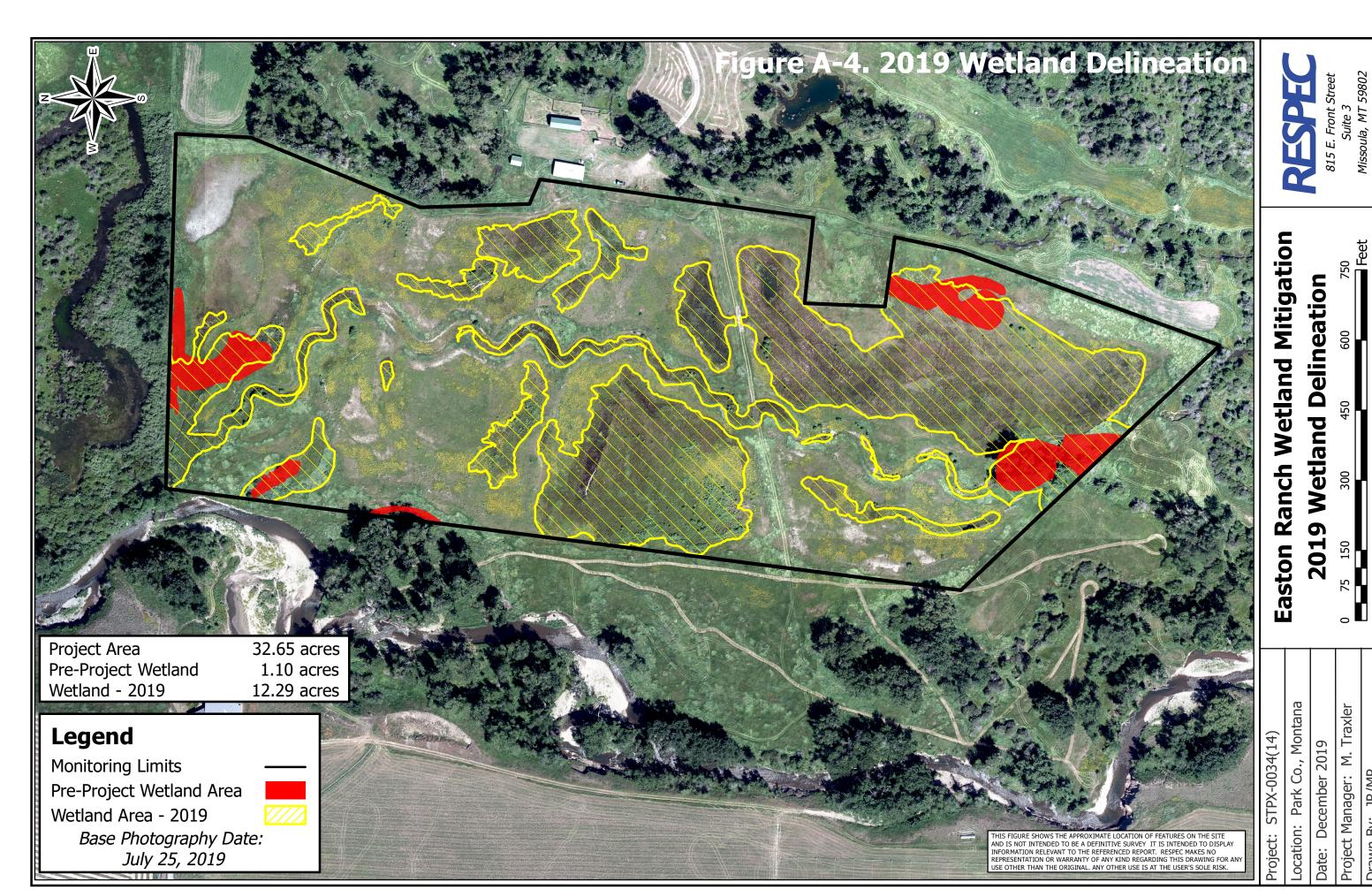
MDT Wetland Mitigation Monitoring Easton Ranch Park County, Montana

A-1 RSI-2977





2019 Mapped Site Features



APPENDIX B MONITORING FORMS

MDT Wetland Mitigation Monitoring Easton Ranch Park County, Montana

B-1 RSI-2977

RESPEC/MDT WETLAND MITIGATION SITE MONITORING FORM

Project Name: Easton Ranch Assessment Date: July 26, 20 Hoschouer, C. Seibert Location: Northeast of Wilsa Legal Description: T 4N Weather Conditions: Calm, C Initial Evaluation Date: Augus Size of evaluation area: 32.65 corridor	19 I <u>l</u> R <u>9E</u> Se <u>lear 60 F</u> st 25, 2010	Project Number: Person(s) conducting the assessment: T. Traxler, C. MDT District: Butte Milepost: NA Section 32 NW 1/4 0 Time of Day: 9 AM Monitoring Year: 9 # Visits in Year: 1 Land use surrounding wetland: Agriculture, riparian					
	Н	YDROLOG	GY				
Surface Water Source: High groundwater, periodic overbank flow from the Shields River. Inundation: Present Average Depth: 0.2 feet Range of Depths: 0 to 1.5 ft Percent of assessment area under inundation: 25% Depth at emergent vegetation-open water boundary: 0.5 feet If assessment area is not inundated then are the soils saturated within 12 inches of surface: Yes Other evidence of hydrology on the site (ex. – drift lines, erosion, stained vegetation, etc.): Sediment deposits, channel scour and deposition, debris left around the base of young trees and shrubs, geomorphic position, FAC-neutral test, surface water, saturation, and dry season water table. Groundwater Monitoring Wells: Absent							
Record depth of water below g Well Number Depth	Well Number	Depth	Well Number	Depth			
Additional Activities Checklis Map emergent vegetation— Observe extent of surface velevations (drift lines, eros) Use GPS to survey ground COMMENTS / PROBLEMS A few of the wetland cells we monitoring. Surface water verse areas across the site. However depressions along Transect 1	open water bound water during each sion, vegetation s water monitoring s: Exercise saturated or was present in page of surface water	h site visit and staining, etc. g well location in undated ortions of the revels wer	nd look for evidend) ons, if present. with shallow surfine overflow change lower compared	ace water d nel and in a d to 2018 as	luring the July few other low s noted in		
depressions along Transect 1 and 2. Some signs of overland flow were noted along portions of Transect 2 with debris from high flows deposited along the stems/trunks of young trees and shrubs.							

Along Transect 3, signs of high flows were noted in the channel and included deposition and scour holes but banks were generally well -vegetated and the channel bottom stable and in places rocky.

VEGETATION COMMUNITIES

Community Number: <u>1</u> Community Title (main spp): <u>Phleum pratense/Poa pratensis</u>

Dominant Species	% Cover	Dominant Species	% Cover
Phleum pratense	3 = 11-20%	Trifolium hybridum	1 = 1-5%
Poa pratensis	3 = 11-20%	Leymus cinereus	1 = 1-5%
Bromus inermis	3 = 11-20%	Carum carvi	1 = 1-5%
Poa palustris	2 = 6-10%	Salix spp.	1 = 1-5%
Elymus repens	2 = 6-10%	Agrostis stolonifera	1 = 1-5%
Trifolium pratense	2 = 6-10%	Populus balsamifera	1 = 1-5%

Comments / Problems: <u>In 2017, there is an increase in the cover by Lotus corniculatus and Trifolium species within this community. In 2018, starting to see more willow and cottonwood seedlings. In 2019, CT13 replaced CT1 along portions of the eastern boundary and along the road.</u>

Community Number: 3 Community Title (main spp): Carex spp.

Dominant Species	% Cover	Dominant Species	% Cover
Carex utriculata	3 = 11-20%	Equisetum arvense	1 = 1-5%
Carex nebrascensis	2 = 6-10%	Poa palustris	1 = 1-5%
Carex atherodes	4 = 21-50%	Stachys palustris	1 = 1-5%
Carex pellita	2 = 6-10%	Juncus longstylis	1 = 1-5%
Juneus balticus	2 = 6-10%	Calamagrostis canadensis	1 = 1-5%
Scirpus microcarpus	2 = 6-10%	Mentha arvensis	1 = 1-5%

Comments / Problems: This community type is diverse with a variety of species.

Community Number: 4 Community Title (main spp): Salix drummondiana

Dominant Species	% Cover	Dominant Species	% Cover
Salix drummondiana	4 = 21-50%	Elymus repens	2 = 6-10%
Salix lutea	1 = 1-5%	Phleum pratense	2 = 6-10%
Scirpus microcarpus	2 = 6-10%	Ribes lucustre	2 = 6-10%
Phalaris arundinacea	2 = 6-10%	Ribes inerme	2 = 6-10%
Carex nebrascensis	2 = 6-10%	Salix bebbiana	1 = 1-5%
Urtica dioica	2 = 6-10%	Mentha arvensis	1 = 1-5%

Comments / Problems: Scrub-shrub community along the banks of the Shield River.

Community Number: <u>5</u> Community Title (main spp): <u>Populus balsamifera</u>

Dominant Species	% Cover	Dominant Species	% Cover
Populus balsamifera	4 = 21-50%	Cirsium arvense	2 = 6-10%
Populus angustifolia	4 = 21-50%	Salix bebbiana	2 = 6-10%
Bromus inermis	2 = 6-10%	Scirpus microcarpus	2 = 6-10%
Glyceria striata	2 = 6-10%		
Salix lasiandra	2 = 6-10%		
Scutellaria lateriflora	2 = 6-10%		

Comments / Problems: **Small forested area along the southern project boundary.**

Community Number: 7 Community Title (main spp): Aquatic macrophytes

Dominant Species	% Cover	Dominant Species	% Cover
Open water: Aquatic Macrophyte	5 = > 50%	Mentha arvensis	1 = 1-5%
Carex utriculata	2 = 6-10%	Carex pellita	1 = 1-5%
Eleocharis palustris	2 = 6-10%	Glyceria grandis	1 = 1-5%
Juncus balticus, Juncus effusus	2 = 6-10%	Ruppia maritima	1 = 1-5%
Algae, green	3 = 11-20%	Salix lutea	1 = 1-5%
Typha latifolia	2 = 6-10%	Beckmannia syzigachne	1 = 1-5%

Comments / Problems: This community type is stable with shallow open water with aquatic macrophytes and a diverse border of hydrophytic vegetation similar to 2016. Several new areas were mapped in 2018.

Community Number: 8 Community Title (main spp): Bromus inermis/Trifolium spp.

Dominant Species	% Cover	Dominant Species	% Cover
Bromus inermis	3 = 11-20%	Lotus corniculatus	2 = 6-10%
Trifolium pratense	3 = 11-20%	Juncus balticus	2 = 6-10%
Trifolium hybridum	3 = 11-20%	Carex pachystachya	1 = 1-5%
Poa pratensis	3 = 11-20%	Potentilla gracilis	1 = 1-5%
Carum carvi	2 = 6-10%	Medicago lupulina	1 = 1-5%
Phleum pratense	2 = 6-10%	Salix lutea	+=<1%

Comments / Problems: <u>Small community type dominated by Bromus inermis and Trifolium but</u> <u>starting to see a shift toward more Poa pratensis and wetter species. In 2018, this CT was replaced by CT 18 due to the dominance of Lotus corniculatus and Phleum pratense.</u>

Community Number: **10** Community Title (main spp): **Bromus inermis/Populus tremuloides**

Dominant Species	% Cover	Dominant Species	% Cover
Bromus inermis	4 = 21-50%	Leymus cinereus	1 = 1-5%
Populus tremuloides	3 = 11-20%	Poa pratensis	1 = 1-5%
Phleum pratense	3 = 11-20%	Lotus corniculatus	1 = 1-5%
Trifolium pratense	1 = 1-5%	Taraxacum officinale	1 = 1-5%
Elymus repens	1 = 1-5%	Agrostis stolonifera	1 = 1-5%
Dactylis glomerata	2 = 6-10%	Cirsium arvense	+=<1%

Comments / Problems: **Small community type along the northern project boundary.**

Community Number: 11 Community Title (main spp): Juncus spp.

Dominant Species	% Cover	Dominant Species	% Cover
Juncus balticus	4 = 21-50%	Poa palustris	2 = 6-10%
Juncus effusus, J. ensifolius	2 = 6-10%	Mentha arvensis	1 = 1-5%
Juncus longistylis	1 = 1-5%	Carex nebrascensis	1 = 1-5%
Carex utriculata	2 = 6-10%	Lotus corniculatus	1 = 1-5%
Carex aquatilis	1 = 1-5%	Salix spp.	1 = 1-5%
Agrostis stolonifera	1 = 1-5%	Deschampsia caespitosa	1 = 1-5%

Comments / Problems: <u>Diverse wetland community type with many more species recorded with a cover value of less than 1 percent. In 2017, Glyceria spp. was removed as a codominant, Glyceria grandis and Glyceria striata are still present but represent a low percent cover. In 2018 and 2019, noted Salix spp., Alnus incana and Populus balsamifera seedlings across portions of CT 11.</u>

Community Number: <u>12</u> Community Title (main spp): <u>Eleocharis palustris/Typha latifolia</u>

Dominant Species	% Cover	Dominant Species	% Cover
Eleocharis palustris	3 = 11-20%	Carex aquatilis	1 = 1-5%
Typha latifolia	4 = 21-50%	Ruppia maritina	1 = 1-5%
Carex utriculata	2 = 6-10%	Glyceria elata	1 = 1-5%
Beckmannia syzigachne	1 = 1-5%	Juncus ensifolius	1 = 1-5%
Agrostis stolonifera	1 = 1-5%	Alopecurus pratensis	1 = 1-5%
Mentha arvensis	1 = 1-5%	Phalaris arundinacea	1 = 1-5%

Comments / Problems: <u>This community type was found in areas where surface water previously persisted for longer periods through the summer.</u>

Community Number: 13 Community Title (main spp): Bromus inermis/Phleum pratense

Dominant Species	% Cover	Dominant Species	% Cover
Bromus inermis	3 = 11-20%	Leymus cinereus	1 = 1-5%
Phleum pratense	3 = 11-20%	Carum carvi	1 = 1-5%
Poa pratensis	2 = 6-10%	Juneus balticus	1 = 1-5%
Elymus repens	1 = 1-5%	Lotus corniculatus	2 = 6-10%
Trifolium pratense	2 = 6-10%	Agrostis stolonifera	1 = 1-5%
Salix exigua	1 = 1-5%	Populus balsamifera	1 = 1-5%

Comments / Problems: In 2018, several areas previously mapped as CT 13 have transitioned to community types 16 or 18 due to the increase of Elymus repens or Lotus corniculatus and the reduction of Bromus inermis. In 2019, CT13 replaced a small portion of CT1 in the eastern portion of the property and along portions of the road.

Community Number: 14 Community Title (main spp): Juncus spp./Populus balsamifera

Dominant Species	% Cover	Dominant Species	% Cover
Juneus balticus	4 = 21-50%	Mentha arvensis	1 = 1-5%
Juncus effusus	2 = 6-10%	Salix bebbiana	1 = 1-5%
Populus balsamifera	4 = 21-50%	Agrostis stolonifera	1 = 1-5%
Populus angustifolia	2 = 6-10%	Carex nebrascensis	1 = 1-5%
Salix lutea	2 = 6-10%	Alnus incana	1 = 1-5%
Poa palustris	2 = 6-10%	Salix exigua	1 = 1-5%

Comments / Problems: New community type mapped in 2016 found mainly within portions of constructed wetland cell 3. Populus balsamifera seedlings were common across a portion of this cell, other young woody seedlings included Salix lutea, Salix exigua and Alnus incana.

Community Number: 15 Community Title (main spp): Juncus spp./Salix spp.

<u> </u>	· / · · · · · · · · · · · · · · · ·		
Dominant Species	% Cover	Dominant Species	% Cover
Juneus balticus	4 = 21-50%	Salix exigua	1 = 1-5%
Juncus effusus	1 = 1-5%	Populus balsamifera	2 = 6-10%
Juncus tenuis	1 = 1-5%	Carex utriculata	1 = 1-5%
Salix lutea	3 = 11-20%	Carex nebrascensis	2 = 6-10%
Salix bebbiana	2 = 6-10%	Potentilla anserina	1 = 1-5%
Salix drummondiana	1 = 1-5%	Cicuta douglasii, Alnus incana	1 = 1-5%

Comments / Problems: <u>In 2017, portions of community types 11 and 14 have transitioned into a dominance of young willow seedlings representing greater than 30 percent of the total cover.</u>

Community Number: 16 Community Title (main spp): Elymus repens/Poa pratensis

Dominant Species	% Cover	Dominant Species	% Cover
Elymus repens	3 = 11-20%	Bromus inermis	2 = 6-10%
Poa pratensis	3 = 11-20%	Taraxacum officinale	2 = 6-10%
Phleum pratense	2 = 6-10%	Elymus cinereus	1 = 1-5%
Carum carvi	2 = 6-10%	Ranunculus macounii	+ = < 1%
Lotus corniculatus	2 = 6-10%	Bromus ciliatus	+ = < 1%
Trifolium pratense	1 = 1-5%	Populus balsamifera	+ = < 1%

Comments / Problems: <u>A new community type in 2018, primarily along the northwestern portion of the project.</u> Noting a shift from Bromus inermis to more facultative species.

Community Number: <u>17</u> Community Title (main spp): <u>Phleum pratense/Elymus repens</u>

Dominant Species	% Cover	Dominant Species	% Cover
Phleum pratense	4 = 21-50%	Lotus corniculatus	1 = 1-5%
Elymus repens	3 = 11-20%	Taraxacum officinale	1 = 1-5%
Poa pratensis	2 = 6-10%	Trifolium pratense	1 = 1-5%
Schedonorus pratensis	2 = 6-10%	Leymus cinereus	1 = 1-5%
Carum carvi	2 = 6-10%	Equisetum arvense	1 = 1-5%
Bromus inermis	1 = 1-5%		

Comments / Problems: <u>A small, well-defined community along the northern end of Transect 1</u> <u>formerly CT 1. In 2019 this community expanded to the south.</u>

Community Number: 18 Community Title (main spp): Lotus corniculatus/Phleum pratense

Dominant Species	% Cover	Dominant Species	% Cover
Lotus corniculatus	4 = 21-50%	Juncus balticus	1 = 1-5%
Phleum pratense	3 = 11-20%	Populus balsamifera	1 = 1-5%
Poa pratensis, Carum carvi	2 = 6-10%	Medicago lupulina	1 = 1-5%
Trifolium hybridum	2 = 6-10%	Leymus cinereus	1 = 1-5%
Elymus repens	1 = 1-5%	Alnus incana	1 = 1-5%
Agrostis stolonifera	1 = 1-5%	Salix exigua	1 = 1-5%

Comments / Problems: New community type mapped in 2018 found mainly across the northeastern portion of project site indicating an increase in soil moisture. Cover and density by Lotus corniculatus has been increasing over the past couple of years across CT 8, CT 13 and CT16.

Community Number: **19** Community Title (main spp): **Typha latifolia**

Dominant Species	% Cover	Dominant Species	% Cover
Typha latifolia	5 = > 50%		
Carex utriculata	1 = 1-5%		
Water	4 = 21-50%		

Comments / Problems: New community type mapped in 2019 generally noted in low areas across the northwestern corner along portions of the overflow channel. Usually noted in shallow surface water.

Community Number: <u>20</u> Community Title (main spp): <u>Lotus corniculatus/Populus balsamifera</u>

Dominant Species	% Cover	Dominant Species	% Cover
Lotus corniculatus	4 = 21-50%	Agrostis stolonifera	1 = 1-5%
Populus balsamifera	3 = 11-20%		
Phleum pratense	3 = 11-20%		
Elymus repens	2 = 6-10%		
Equisetum arvense	1 = 1-5%		
Salix exigua	1 = 1-5%		

Comments / Problems: A new community type mapped in 2019 in the northeastern corner of the project area replacing a small area within CT18. This new community type is anticipated to expand in the future based on the number of young cottonwoods noticed in this general area.

Community Number: 21 Community Title (main spp): Carex spp./Juncus spp.

Dominant Species	% Cover	Dominant Species	% Cover
Carex pellita	3 = 11-20%	Agrostis stolonifera	2 = 6-10%
Carex pachystachya	3 = 11-20%	Equisetum arvense	1 = 1-5%
Carex nebrascensis	1 = 1-5%	Elymus repens	1 = 1-5%
Juneus balticus	4 = 21-50%	Poa pratensis	1 = 1-5%
Juncus longistylis	1 = 1-5%	Juncus effusus	1 = 1-5%
Juncus tenuis	1 = 1-5%	Bare ground/litter	3 = 11-20%

Comments / Problems: <u>A new community type mapped in 2019</u>, <u>within transects 1 and 2</u>. <u>Noting a shift or increase in Carex species within CT 11</u>.

Community Number: Community Title (main spp):

Dominant Species	% Cover	Dominant Species	% Cover

Comments / Problems:

Community Number: Community Title (main spp):

Dominant Species	% Cover	Dominant Species	% Cover

Comments / Problems:

Additional Activities Checklist	Addi	itional	Activ	rities	Check	list
---------------------------------	------	---------	-------	--------	-------	------

Record and map vegetative communities on aerial photograph.

PLANTED WOODY VEGETATION SURVIVAL

Plant Species	Number Originally Planted	Number Observed	Mortality Causes
Red-osier dogwood	250	22	
Sandbar willow	250	48	
Thinleaf alder	500	64	
Willow cuttings	200	65	

Comments / Problems: <u>During the 2019 monitoring there were increases in the number of live species noted</u>. The number of thinleaf alder continued to increase from 49 plants to 64 plants. Many of the larger thinleaf alder were 8 to 10 ft tall, robust and thriving where planted. The number of red-osier dogwoods observed also increased from 12 to 22. The dogwood were primarily along the channel with additional volunteer plants noted along Transect 2.

Volunteer thinleaf alder, sandbar willows and cottonwoods were noted along the channel. All of the plants observed were well established. In addition, young cottonwoods were observed along CT7, CT11, and CT18 (Transect 1). Thinleaf alder and red-osier dogwood were observed primarily along or within the channel. Additional volunteer cottonwoods were observed around the perimeter of CT5 located in the southern portion of the project.

Site: Easton Ranch Date: July 26, 2019 Examiner: C. Seibert, T. Traxler, C. Hoschouer

Transect Number: 1 Approximate Transect Length: 1376 feet Compass Direction from Start: 5° Note:

T 1 1 1 10 0 (1 10 0 (10 0)	
Transect Interval Length: 42 ft (station 0 to 42)	
Vegetation Community Type: Carex spp./Juncus spp.	
Plant Species	Cover
Carex pellita	3 = 11-20%
Carex pachystachya	3 = 11-20%
Carex nebrascensis	1 = 1-5%
Juneus balticus	4 = 21-50%
Juncus longistylis	2 = 6-10%
Juncus tenuis	2 = 6-10%
Juncus effusus	1 = 1-5%
Agrostis stolonifera	2 = 6-10%
Equisetum arvense	1 = 1-5%
Elymus repens	1 = 1-5%
Poa pratensis	1 = 1-5%
Total Vegetative Cover:	90%

Transect Interval Length: 22 ft (station 42 to 64)	
Vegetation Community Type: Juncus spp.	
Plant Species	Cover
Juncus balticus, Juncus effusus	5 = > 50%
Juncus ensifolius	1 = 1-5%
Salix bebbiana	1 = 1-5%
Carex nebrascensis	1 = 1-5%
Carex utriculata	1 = 1-5%
Carex pellita	1 = 1-5%
Equisetum arvense	1 = 1-5%
Phleum pratense	1 = 1-5%
Litter	2 = 6-10%
Ponded water	2 = 6-10%
Total Vegetative Cover:	90%

Transect Interval Length: 36 ft (station 64 to 100)			
Vegetation Community Type: Aquatic macrophytes			
Plant Species	Cover		
Open water	5 = > 50%		
Carex utriculata	2 = 6-10%		
Eleocharis palustris	2 = 6-10%		
Juncus balticus, Juncus effusus	2 = 6-10%		
Carex pellita	1 = 1-5%		
Typha latifolia	2 = 6-10%		
Juncus ensifolius	1 = 1-5%		
Algae, green	3 = 11-20%		
Salix lutea	1 = 1-5%		
Beckmannia syzigachne	1 = 1-5%		
Mentha arvensis	1 = 1-5%		
Glyceria grandis			
Total Vegetative Cover:	50%		

Transect Interval Length: 37 ft (station 100 to 137)		
Vegetation Community Type: Juncus spp.		
Plant Species	Cover	
Juncus balticus, Juncus effusus	5 = > 50%	
Carex utriculata, Carex aquatilis	2 = 6-10%	
Salix bebbiana, Salix lutea	1 = 1-5%	
Carex nebrascensis	1 = 1-5%	
Epilobium ciliatum	1 = 1-5%	
Agrostis stolonifera	+ = < 1%	
Poa pratensis	+ = < 1%	
Phleum pratensi	+ = < 1%	
Poa palustris	+ = < 1%	
Mentha arvensis	+ = < 1%	
Juncus ensifolius	+ = < 1%	
Ponded water	1 = 1-5%	
Total Vegetative Cover:	95%	

Site: Easton Ranch Date: July 26, 2019 Examiner: C. Seibert, T. Traxler, C. Hoschouer

Transect Number: 1 Approximate Transect Length: 1376 feet Compass Direction from Start: 5° Note:

Transect Interval Length: 56 ft (station 137 to 193)		
Vegetation Community Type: Elymus repens/Poa pratensis		
Plant Species	Cover	
Elymus repens	4 = 21-50%	
Poa pratensis	3 = 11-20%	
Phleum pratensis	2 = 6-10%	
Agrostis stolonifera	2 = 6-10%	
Lotus corniculatus	1 = 1-5%	
Cirsium arvense	+ = < 1%	
Poa palustris	+ = < 1%	
Stachys palustris	+ = < 1%	
Leymus cinereus	+ = < 1%	
Taraxcum officinale	+ = < 1%	
Litter	1 = 1-5%	
Total Vegetative Cover:	95%	

Transect Interval Length: 209 ft (station 263 to 472)			
Vegetation Community Type: Phleum pratense/Poa pratensis			
Plant Species	Cover		
Phleum pratense	3 = 11-20%		
Poa pratensis	3 = 11-20%		
Agrostis stolonifera	2 = 6-10%		
Carum carvi, Carex nebrascensis	2 = 6-10%		
Juneus balticus	1 = 1-5%		
Trifolium hybridum, Trifolium pratense	1 = 1-5%		
Populus trichocarpa	1 = 1-5%		
Elymus repens	1 = 1-5%		
Alopecurus arundinaceus, Deschampsia caespitosa	1 = 1-5%		
Leymus cinereus	1 = 1-5%		
Cirsium arvense, Taracum officinale	+=<1%		
Lotus corniculatus, Melilotus officinalis	+=<1%		
Total Vegetative Cover:	90%		

Transect Interval Length: 70 ft (station 193 to 263)				
Vegetation Community Type: Juncus spp.				
Plant Species	Cover			
Juneus balticus	4 = 21-50%			
Juncus effusus	2 = 6-10%			
Alopecurus arundinaceus	3 = 11-20%			
Open water	4 = 21-50%			
Salix lutea, Salix bebbiana, Salix exigua	3 = 11-20%			
Scirpus microcarpus, Glyceria grandis	2 = 6-10%			
Typha latifolia	2 = 6-10%			
Populus balsamifera	1 = 1-5%			
Carex utriculata, Carex aquatilis	2 = 6-10%			
Lotus corniculatus, Poa pratensis, Agrostis stolonifera	1 = 1-5%			
Total Vegetative Cover:	85%			

Transect Interval Length: 44 ft (station 472 to 516)	
Vegetation Community Type: Juncus spp.	
Plant Species	Cover
Juncus balticus, Juncus effusus, Juncus tenuis	4 = 21-50%
Juncus effusus, Juncus tenuis	3 = 11-20%
Poa pratensis	2 = 6-10%
Phleum pratense	1 = 1-5%
Carex pachystachya	1 = 1-5%
Schedonorus pratensis	1 = 1-5%
Stachys palustris	1 = 1-5%
Carex pachystachya	1 = 1-5%
Alopecurus arundinaceus	1 = 1-5%
Poa palustris	1 = 1-5%
Alopecurus pratensis	1 = 1-5%
Cirsium arvense	+ = < 1%
Total Vegetative Cover:	95%

Site: Easton Ranch Date: July 26, 2019 Examiner: C. Seibert, T. Traxler, C. Hoschouer

Transect Number: 1 Approximate Transect Length: 1376 feet Compass Direction from Start: 5° Note:

Transect Interval Length: 66 ft (station 516 to 582)	
Vegetation Community Type: Lotus corniculatus/Phleum pratense	
Plant Species	Cover
Lotus corniculatus	4 = 21-50%
Phleum pratense	3 = 11-20%
Alopecurus arundinaceus	3 = 11-20%
Poa pratensis, Poa palustris	3 = 11-20%
Carum carvi, Stachys palustris	1 = 1-5%
Elymus repens	1 = 1-5%
Rumex salicifolius	1 = 1-5%
Trifolium hybridum	1 = 1-5%
Carex pachystachya	1 = 1-5%
Agrostis stolonifera, Equisetum arvense	1 = 1-5%
Alnus incana, Populus balsamifera	1 = 1-5%
Total Vegetative Cover:	95%

č	
Transect Interval Length: 550 ft (station 597 to 1147)	
Vegetation Community Type: Lotus corniculatus/Phleum	pratense
Plant Species	Cover
Lotus corniculatus	4 = 21-50%
Phleum pratense	3 = 11-20%
Trifolium pratense, Trifolium hybridum	2 = 6-10%
Carum carvi	2 = 6-10%
Poa pratense	2 = 6-10%
Juneus balticus	2 = 6-10%
Alnus incana	1 = 1-5%
Leymus cinereus	1 = 1-5%
Populus balsamifera	1 = 1-5%
Medicago lupulina	1 = 1-5%
Rumex salicifolius	1 = 1-5%
Taraxacum officinale	+ = < 1%
Total Vegetative Cover:	90%

Transect Interval Length: 15 ft (station 582 to 597)	
Vegetation Community Type: Juncus spp./Salix spp.	
Plant Species	Cover
Juncus balticus, Juncus effusus	3 = 11-20%
Salix lutea, Salix exigua	3 = 11-20%
Agrostis stolonifera	3 = 11-20%
Lotus corniculatus	3 = 11-20%
Populus angustifolia	2 = 6-10%
Poa palustris	2 = 6-10%
Carex pellita, Carex pachystachya	1 = 1-5%
Poa pratensis	1 = 1-5%
Phleum pratense	1 = 1-5%
Alopecurus arundinaceus	1 = 1-5%
Bare soil	2 = 6-10%
Total Vegetative Cover:	90%

Transect Interval Length: 188 ft (station 1147 to 1335)	
Vegetation Community Type: Phleum pratense/Elymus repens	
Plant Species	Cover
Phleum pratense	4 = 21-50%
Elymus repens	3 = 11-20%
Carum carvi	3 = 11-20%
Schedonorus pratensis	2 = 6-10%
Lotus corniculatus	3 = 11-20%
Poa pratensis	1 = 1-5%
Leymus cinereus	1 = 1-5%
Taraxacum officinale	1 = 1-5%
Bromus inermis	1 = 1-5%
Cirsium arvense	+ = < 1%
Trifolium pratense	1 = 1-5%
Equisetum arvense	1 = 1-5%
Total Vegetative Cover:	95%

Site: <u>Easton Ranch</u> Date: <u>July 26, 2019</u> Examiner: <u>C. Seibert, T. Traxler, C. Hoschouer</u>

Transect Number: <u>1</u> Approximate Transect Length: <u>1376 feet</u> Compass Direction from Start: <u>5</u>° Note: _____

Transect Interval Length: 41 ft (station 1335 to 1376)	
Vegetation Community Type: Bromus inermis/Populus tremuloides	
Plant Species	Cover
Bromus inermis	4 = 21-50%
Populus tremuloides	3 = 11-20%
Phleum pratense	3 = 11-20%
Carum carvi	2 = 6-10%
Poa pratensis	2 = 6-10%
Taraxacum officinale	2 = 6-10%
Dactylis glomerata	2 = 6-10%
Leymus cinereus	1 = 1-5%
Agrostis stolonifera	1 = 1-5%
Elymus repens	1 = 1-5%
Lotus corniculatus	1 = 1-5%
Total Vegetative Cover:	95%

Transect Interval Length:	
Vegetation Community Type:	
Plant Species	Cover
Total Vegetative Cover:	%

Transect Interval Length:	
Vegetation Community Type:	
Plant Species	Cover
Total Vegetative Cover:	%

Transect Interval Length:	
Vegetation Community Type:	
Plant Species	Cover
	_
	_
Total Vegetative Cover:	%

Site: Easton Ranch Date: July 26, 2019 Examiner: C. Seibert, T. Traxler, C. Hoschouer

Transect Number: 2 Approximate Transect Length: 1333 feet Compass Direction from Start: 185° Note:

Transect Interval Length: 46 ft (station 0 to 46)	
Vegetation Community Type: Carex spp.	
Plant Species	Cover
Carex nebrascensis	2 = 6-10%
Carex atherodes	4 = 21-50%
Carex utriculata, Carex pellita	2 = 6-10%
Poa pratensis, Poa palustris	1 = 1-5%
Juneus balticus	1 = 1-5%
Scirpus microcarpus	2 = 6-10%
Stachys palustris	1 = 1-5%
Juncus longistylis	1 = 1-5%
Calamagrostis canadensis	1 = 1-5%
Salix exigua	+ = < 1%
Equisetum arvense	1 = 1-5%
Total Vegetative Cover:	95%

Transect Interval Length: 45 ft (station 68 to 113)	
Vegetation Community Type: Phleum pratense/Poa pratensis	
Plant Species	Cover
Phleum pratensis	3 = 11-20%
Poa pratensis	3 = 11-20%
Elymus repens	3 = 11-20%
Lotus corniculatus	2 = 6-10%
Stachys palustris	2 = 6-10%
Carex nebrascensis, Carex pellita	1 = 1-5%
Equisetum arvense	1 = 1-5%
Juneus balticus	1 = 1-5%
Cirsium arvense	1 = 1-5%
Taraxacum officinale	1 = 1-5%
Dactylis glomerata, Phalaris arundinacea	1 = 1-5%
Total Vegetative Cover:	95%

Transect Interval Length: 22 ft (station 46 to 68)	
Vegetation Community Type: Carex spp./Juncus spp.	
Plant Species	Cover
Juneus balticus	3 = 11-20%
Carex pellita, Carex atherodes, Carex bebbii	4 = 21-50%
Carex aquatilis	2 = 6-10%
Scirpus microcarpus	2 = 6-10%
Glyceria grandis	2 = 6-10%
Open water	3 = 11-20%
Typha latifolia	1 = 1-5%
Ranunculus macounii,	1 = 1-5%
Equisetum arvense, Poa palustris	1 = 1-5%
Salix bebbiana	1 = 1-5%
Salix lutea	1 = 1-5%
Total Vegetative Cover:	90%

Transect Interval Length: 23 ft (station 113 to 136)	
Vegetation Community Type: Carex spp./Juncus spp.	
Plant Species	Cover
Juneus balticus	3 = 11-20%
Carex utriculata, Carex nebrascensis	4 = 21-50%
Carex atherodes, Carex pellita	2 = 6-10%
Salix bebbiana	1 = 1-5%
Salix lutea	2 = 6-10%
Scirpus microcarpus	2 = 6-10%
Poa palustris	2 = 6-10%
Ranunculus macounii	1 = 1-5%
Deschampsia caespitosa	1 = 1-5%
Poa pratensis	1 = 1-5%
Equisetum arvense	1 = 1-5%
Stachys palustris, Lysimachia ciliata	1 = 1-5%
Total Vegetative Cover:	95%

Site: Easton Ranch Date: July 26, 2019 Examiner: C. Seibert, T. Traxler, C. Hoschouer

Transect Number: 2 Approximate Transect Length: 1333 feet Compass Direction from Start: 185° Note:

Transect Interval Length: 183 ft (station 136 to 319)	
Vegetation Community Type: Phleum pratense/Poa pratensis	
Plant Species	Cover
Phleum pratense	3 = 11-20%
Poa pratensis	3 = 11-20%
Elymus repens	2 = 6-10%
Lotus corniculatus, Medicago sativa	2 = 6-10%
Equisetum arvense	2 = 6-10%
Trifolium pratense	2 = 6-10%
Taraxacum officinale	2 = 6-10%
Carum carvi, Agrostis stolonifera	1 = 1-5%
Salix lutea, Populus balsamifera	1 = 1-5%
Leymus cinereus, Populus balsamifera	1 = 1-5%
Lysimacha ciliata, Stachys palustris	1 = 1-5%
Total Vegetative Cover:	90%

Transect Interval Length: 350 ft (station 358 to 708)	
Vegetation Community Type: Lotus corniculatus/Phleum pratense	
Plant Species	Cover
Lotus corniculatus	4 = 21-50%
Phleum pratense	3 = 11-20%
Elymus repens	2 = 6-10%
Carum carvi	2 = 6-10%
Bromus carinatus	1 = 1-5%
Trifolium hybridum	2 = 6-10%
Leymus cinereus	1 = 1-5%
Trifolium pratense	1 = 1-5%
Camelina microcarpus	1 = 1-5%
Medicago lupulina, Melilotus officinalis	1 = 1-5%
Bromus inermis	1 = 1-5%
Schedonorus pratensis, Equisetum arvense	1 = 1-5%
Total Vegetative Cover:	90%

Transect Interval Length: 39 ft (station 319 to 358)	
Vegetation Community Type: Juncus spp.	
Plant Species	Cover
Juneus balticus	3 = 11-20%
Juncus tenuis	1 = 1-5%
Poa palustris	2 = 6-10%
Poa pratensis, Phleum, pratense	1 = 1-5%
Salix bebbiana	1 = 1-5%
Salix lutea	2 = 6-10%
Lotus corniculatus	2 = 6-10%
Agrostis stolonifera, Populus balsamifera	2 = 6-10%
Scirpus microcarpus	1 = 1-5%
Carex microptera	1 = 1-5%
Lysimacha ciliata, Stachys palustris	1 = 1-5%
Total Vegetative Cover:	95%

Transect Interval Length: 75 ft (station 708 to 783)	
Vegetation Community Type: Juncus spp.	
Plant Species	Cover
Juneus balticus	3 = 11-20%
Juneus effusus	1 = 1-5%
Juncus tenuis	1 = 1-5%
Phleum pratense	1 = 1-5%
Poa pratensis	2 = 6-10%
Salix lutea, Populus balsamifera	2 = 6-10%
Typha latifolia	1 = 1-5%
Poa palustris	1 = 1-5%
Salix bebbiana	1 = 1-5%
Solidago gigantea	1 = 1-5%
Agrostis stolonifera, Lysimacha ciliata	1 = 1-5%
Carex bebbii, Mentha arvensis	1 = 1-5%
Total Vegetative Cover:	95%

Site: Easton Ranch Date: July 26, 2019 Examiner: C. Seibert, T. Traxler, C. Hoschouer

Transect Number: 2 Approximate Transect Length: 1333 feet Compass Direction from Start: 185° Note:

Transect Interval Length: 72 ft (station 783 to 855)	
Vegetation Community Type: Bromus inermis/Phleum pratense	
Plant Species	Cover
Bromus inermis	3 = 11-20%
Phleum pratense	3 = 11-20%
Trifolium pratense	2 = 6-10%
Elymus repens, Juncus balticus	1 = 1-5%
Poa pratensis	1 = 1-5%
Carum carvi	1 = 1-5%
Populus balsamifera	1 = 1-5%
Taraxacum officinale	1 = 1-5%
Lotus corniculatus	2 = 6-10%
Cirsium arvense	+ = < 1%
Salix exigua	+ = < 1%
Total Vegetative Cover:	85%

Transect Interval Length: 27 ft (station 930 to 957)	
Vegetation Community Type: Aquatic Macrophytes	
Plant Species	Cover
Open water	4 = 21-50%
Glyceria grandis	3 = 11-20%
Carex utriculata	2 = 6-10%
Carex pellita	1 = 1-5%
Alopecurus geniculatus	1 = 1-5%
Juneus balticus	1 = 1-5%
Juncus ensifolius	1 = 1-5%
Eleocharis palustris	2 = 6-10%
Schoenoplectus pungens	2 = 6-10%
Scirpus microcarpus	+=<1%
Cornus stolonifera	1 = 1-5%
Total Vegetative Cover:	60%

Transect Interval Length: 75 ft (station 855 to 930)	
Vegetation Community Type: Juncus spp.	
Plant Species	Cover
Juneus balticus	4 = 21-50%
Juneus effusus	2 = 6-10%
Lotus corniculatis	2 = 6-10%
Salix lutea	1 = 1-5%
Poa pratensis	1 = 1-5%
Poa palustris	2 = 6-10%
Schedonorus arundinacea	1 = 1-5%
Carex aquatilis	2 = 6-10%
Carex utriculata	1 = 1-5%
Mentha arvensis	1 = 1-5%
Cornus stolonifera	+=<1%
Total Vegetative Cover:	100%

Transect Interval Length: 21 ft (station 957 to 978)	
Vegetation Community Type: Juncus spp.	
Plant Species	Cover
Juneus balticus	4 = 21-50%
Juneus effusus	2 = 6-10%
Carex utriculata	2 = 6-10%
Carex aquatilis	2 = 6-10%
Deschampsia caespitosa	1 = 1-5%
Scirpus microcarpus	1 = 1-5%
Schoenoplectus pungens	1 = 1-5%
Mentha arvensis	+ = < 1%
Cicuta douglasii	1 = 1-5%
Agrostis stolonifera	2 = 6-10%
Salix lutea, Salix drummondiana	+ = < 1%
Phalaris arundinacea	+ = < 1%
Total Vegetative Cover:	100%

MDT WETLAND MONITORING - VEGETATION TRANSECT

Site: Easton Ranch Date: July 26, 2019 Examiner: C. Seibert, T. Traxler, C. Hoschouer

Transect Number: 2 Approximate Transect Length: 1333 feet Compass Direction from Start: 185° Note:

Transect Interval Length: 85 ft (station 978 to 1063)	
Vegetation Community Type: Juncus spp./Salix spp.	
Plant Species	Cover
Juncus balticus	4 = 21-50%
Juncus effusus	1 = 1-5%
Juncus tenuis	1 = 1-5%
Salix lutea	4 = 21-50%
Salix bebbiana	3 = 11-20%
Salix drummondiana	2 = 6-10%
Populus balsamifera	2 = 6-10%
Carex nebrascensis, Carex utriculata	1 = 1-5%
Mentha arvensis, Poa palustris	1 = 1-5%
Agrostis stolonifera	1 = 1-5%
Salix exigua, Potentilla anserina, Alnus incana	1 = 1-5%
Total Vegetative Cover:	90%

Transect Interval Length: 69 ft (station 1264 to 1333)	
Vegetation Community Type: Bromus inermis/Phleum pratensis	
Plant Species	Cover
Phleum pratense	3 = 11-20%
Bromus inermis	4 = 21-50%
Poa pratensis	2 = 6-10%
Lotus corniculatus	2 = 6-10%
Populus balsamifera	2 = 6-10%
Taraxacum officinale	2 = 6-10%
Elymus repens	1 = 1-5%
Schedonorus pratensis	1 = 1-5%
Trifolium pratense	1 = 1-5%
Leymus cinereus	1 = 1-5%
Total Vegetative Cover:	75%

Transect Interval Length: 201 ft (station 1063 to 1264)	
Vegetation Community Type: Juncus spp./ Populus balsamifera	
Plant Species	Cover
Juneus balticus	3 = 11-20%
Juneus effusus	2 = 6-10%
Populus balsamifera	4 = 21-50%
Salix lutea	3 = 11-20%
Poa palustris	3 = 11-20%
Salix drummondiana	2 = 6-10%
Agrostis stolonifera	2 = 6-10%
Salix bebbiana	2 = 6-10%
Lotus corniculatus	2 = 6-10%
Mentha arvensis	1 = 1-5%
Carex utriculata	1 = 1-5%
Total Vegetative Cover:	95%

Transect Interval Length:	
Vegetation Community Type:	
Plant Species	Cover
Track Version Comm	0/
Total Vegetative Cover:	%

Site: Easton Ranch Date: July 26, 2019 Examiner: C. Hoschouer, T. Traxler, S. Seibert

Transect Number: 3 Approximate Transect Length: 732 feet Compass Direction from Start: 95° Note:

Transect Interval Length: 114 ft (station 0 to 114)		
Vegetation Community Type: Bromus inermis/Phleum pratense		
Plant Species	Cover	
Bromus inermis	3 = 11-20%	
Phleum pratense	3 = 11-20%	
Carum carvi	3 = 11-20%	
Trifolium pratense	3 = 11-20%	
Poa pratensis	2 = 6-10%	
Lotus corniculatus	2 = 6-10%	
Elymus repens	1 = 1-5%	
Taraxacum officinale, Leymus cinerus	1 = 1-5%	
Leymus cinereus, Populus balsamifera	1 = 1-5%	
Trifolium hybridum, Camelina microcarpa	1 = 1-5%	
Bare ground	1 = 1-5%	
Total Vegetative Cover:	85%	

Transect Interval Length: 59 ft (station 149 to 208)		
Vegetation Community Type: Bromus inermis/Phleum pratense		
Plant Species	Cover	
Phleum pratense	3 = 11-20%	
Bromus inermis	3 = 11-20%	
Poa pratensis	2 = 6-10%	
Carum carvi	3 = 11-20%	
Taraxacum officinale	1 = 1-5%	
Elymus repens	1 = 1-5%	
Lotus corniculatus	2 = 6-10%	
Equisetum arvense	1 = 1-5%	
Leymus cinerus	1 = 1-5%	
Melilotus officinalis	1 = 1-5%	
Camelina microcarpa	1 = 1-5%	
Cirsium arvense	+ = < 1%	
Total Vegetative Cover:	85%	

Transect Interval Length: 35 ft (station 114 to 149)		
Vegetation Community Type: Juncus spp./ Populus balsamifera		
Plant Species	Cover	
Juneus balticus	4 = 21-50%	
Lotus corniculatus	3 = 11-20%	
Populus balsamifera	4 = 21-50%	
Salix lutea	1 = 1-5%	
Agrostis stolonifera	1 = 1-5%	
Salix bebbiana	1 = 1-5%	
Trifolium pratense	1 = 1-5%	
Deschampsia caespitosa	1 = 1-5%	
Equisetum arvense	1 = 1-5%	
Trifolium hydridum	1 = 1-5%	
Taraxacum officinale, Phleum pratense	1 = 1-5%	
Total Vegetative Cover:	95%	

Transect Interval Length: 15 ft (station 208 to 223)		
Vegetation Community Type: Juncus spp./Populus balsamifera		
Plant Species	Cover	
Juneus balticus	3 = 11-20%	
Populus balsamifera	4 = 21-50%	
Salix lutea	1 = 1-5%	
Phleum pratense	1 = 1-5%	
Poa pratensis	1 = 1-5%	
Phleum pratense	1 = 1-5%	
Sinapis arvensis	1 = 1-5%	
Glyceria striata	1 = 1-5%	
Mentha arvensis	1 = 1-5%	
Rock	3 = 11-20%	
Total Vegetative Cover:	90%	

Site: Easton Ranch Date: July 26, 2019 Examiner: C. Hoschouer, T. Traxler, C. Seibert

Transect Number: 3 Approximate Transect Length: 732 feet Compass Direction from Start: 95° Note:

Transect Interval Length: 125 ft (station 223 to 348)		
Vegetation Community Type: Bromus inermis/Phleum pratense		
Plant Species	Cover	
Phleum pratense	4 = 21-50%	
Bromus inermis	3 = 11-20%	
Carum carvi	2 = 6-10%	
Lotus corniculatus	1 = 1-5%	
Dactylis glomerata	1 = 1-5%	
Taraxacum officinale	1 = 1-5%	
Equisetum arvense	1 = 1-5%	
Juneus balticus	1 = 1-5%	
Trifolium pratense	1 = 1-5%	
Poa pratensis, Elymus repens	1 = 1-5%	
Alopecurus pratensis	+ = < 1%	
Total Vegetative Cover:	90%	

Total Vegetative Cover:	90%	
Transect Interval Length: 57 (station to 675 to 732)		
Vegetation Community Type: Phleum pratense/Poa praten	nsis	
Plant Species	Cover	
Phleum pratense	3 = 11-20%	
Poa pratensis	3 = 11-20%	
Bromus inermis	3 = 11-20%	
Taraxacum officinale	1 = 1-5%	
Carum carvi	1 = 1-5%	
Agrostis stolonifera	2 = 6-10%	
Dactylis glomerata	1 = 1-5%	
Lotus corniculatus	1 = 1-5%	
Trifolium pratense	1 = 1-5%	
Elymus repens	1 = 1-5%	
Juneus balticus	+ = < 1%	
Total Vegetative Cover:	95%	

Transect Interval Length: 327 ft (station 348 to 675)		
Vegetation Community Type: Juncus spp.		
Plant Species	Cover	
Juneus balticus	4 = 21-50%	
Juneus longistylis	1 = 1-5%	
Salix drummondiana	2 = 6-10%	
Salix bebbiana	1 = 1-5%	
Salix lutea, Cornus stolonifera	1 = 1-5%	
Carex utriculata	1 = 1-5%	
Populus balsamifera	1 = 1-5%	
Cirsium arvense	1 = 1-5%	
Solidago gigantea	+ = < 1%	
Carex nebrascensis	+ = < 1%	
Carex spp.	+ = < 1%	
Total Vegetative Cover:	95%	

Transect Interval Length:	
Vegetation Community Type:	
Plant Species	Cover
Total Vegetative Cover:	%

Cover Estima	te	Indicator Class	Source
+ = < 1%	3 = 11-10%	+ = Obligate	P = Planted
1 = 1-5%	4 = 21-50%	- = Facultative/Wet	V = Volunteer
2 = 6-10%	5 = > 50%	0 = Facultative	

Percent of perimeter developing wetland vegetation (excluding dam/berm structures): ____%

Establish transects perpendicular to the shoreline (or saturated perimeter). The transect should begin in the upland area. Permanently mark this location with a standard metal fencepost. Extend the imaginary transect line towards the center of the wetland, ending at the 3 foot depth (in open water), or at the point where water depths or saturation are maximized. Mark this location with another metal fencepost.

Estimate cover within a 10 foot wide "belt" along the transect length. At a minimum, establish a transect at the windward and leeward sides of the wetland. Remember that the purpose of this sampling is to monitor, not inventory, representative portions of the wetland site.

Comments: <u>During the transect monitoring</u>, a comprehensive list of all species noted within the different community types were recorded (along with a cover estimate value). Species with a rating of 1 or greater were generally included on the previous transect forms, species with less than 1 percent were generally not listed on the previous transect forms.

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:
--------------	------------

ding the wetland.
etland. If more than one upland
tland.
ing the transect.
(

Location	Photograph Frame #	Photograph Description & Lat/Long	Compass Reading (°)	
PP1	1	East boundary 46.059727 /-110.637505	250	
PP2	1	Northeast corner 46.061028 /-110.637207	200	
PP3	1	Northeast corner 46.061188 /-100.639848	100	
PP4	1A	Shields bank 46.060993 /-110.640121	170	
PP4	1B	Shields bank 46.050705 /-110.640434	20	
PP5	1	West boundary 46.059883 /-110.640404	90	
PP6	1	Southwest corner 46.056175 /-110.64048	0	
PP7	1	Southeast corner 46.055286 /-110.639137	340	
T-1 Start	1	View of CT 11 and 7 46.057281 /-110.638306	5	
T-1 End	1	View of CT 10 and 18 46.060627 /-110.637779	185	
T-2 Start	1	View of CT 3 46.060139 /-110.639229	185	
T-2 End	1	View of CT 1 46.057594 /-110.640343	0	
T-3 Start	1	View of CT 13 46.056984 /-110.640656	95	
T-3 End	1	View of CT 1 and 11 46.056114 /-110.637924	265	
DP-1U	1	46.329611 /-110.382625		
DP-1W	1	46.32942 /-110.382480		
DP-2U	1	46.324991 /-110.382425		
DP-2W	1	46.32600 /-110.382440		
DP-3U	1	46.338212 / -110.382360		
DP-3W	1	46.338024 / -110.382414		

Comments /	/ Problems:	
------------	-------------	--

GPS SURVEYING

Using a resource grade GPS survey the items on the checklist below. Collect at least 3 location points set at a 5 second recording rate. Record file numbers for site in designated GPS field notebook.

 GPS Checklist: □ Upland/wetland boundary. □ 4-6 landmarks that are recognizable on the aerial photograph. □ Start and End points of vegetation transect(s). □ Photograph reference points. □ Groundwater monitoring well locations. □ Bird nest boxes. 						
Comments / Problems:						
WETLAND DELINEATION (attach COE delineation forms)						
At each site conduct these checklist items: Delineate wetlands according to the 1987 Army COE manual and regional supplement. Delineate wetland – upland boundary onto aerial photograph.						
Comments / Problems:						
FUNCTIONAL ASSESSMENT Complete and attach full MDT Montana Wetland Assessment Method field forms.						
Comments / Problems:						
MAINTENANCE						
Were man-made nesting structure installed at this site? <u>Yes</u> If yes, do they need to be repaired? <u>No</u> 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? <u>NA</u> If yes, are the structures working properly and in good working order? <u>NA</u> If no, describe the problems below.						
Comments / Problems:						

WILDLIFE

Birds

Were man-made nesting structures installed? <u>Yes</u>
If yes, type of structure: <u>Bird boxes</u> How many? <u>17</u>
Are the nesting structures being used? <u>Yes</u>
Do the nesting structures need repairs? **No**

Mammals and Herptiles

Mammal and Hamtile Species	Number	Indirect Indication of Use			
Mammal and Herptile Species	Observed	Tracks	Scat	Burrows	Other
White-tailed Deer	3				
Frog	1				
Muskrat	1	\boxtimes			
Elk			\boxtimes		

Additional Activities Checklist:

NA Macroinvertebrate Sampling (if required)

Comments / Problems: <u>Several new bird boxes were installed and surveyed in 2017. Boxes were checked in 2019 and all appeared to be in good condition. Some are full of nesting materials and could be cleaned out.</u>

BIRD SURVEY - FIELD DATA SHEET

Site: <u>Easton Ranch</u> Date: <u>7/26/19</u> Survey Time: <u>8:30 AM</u> to <u>5 PM</u>

Bird Species	#	Behavior	Habitat	Bird Species	#	Behavior	Habitat
American Goldfinch	2	F	WM UP				
American Robin	2	BD	WM				
Bald Eagle	1	FO	WM				
Common Yellowthroat	1	F	SS				
Golden Eagle	1	FO	WM				
Great Blue Heron	1	FO	WM				
Red-Winged Blackbirds	14	L	WM SS				
Sandhill Crane	2	FO	UP				
Wilson's Snipe	6	F	WM MA				
Wild Turkey	2	F	UP				
Brewer's Blackbird	4	L	WM SS				
Yellow-headed	4	L	WM SS				
Blackbird							
Mallard	1	FO	WM				
Mourning Dove	1	FO	WM UP				
Northern Flicker	1	FO	WM UP				
Killdeer	1	FO	WM				

BEHAVIOR CODES

BP = One of a breeding pair **BD** = Breeding display

F = ForagingFO = FlyoverL = LoafingN = Nesting

Notes:

Weather:	

HABITAT CODES

AB = Aquatic bed
FO = Forested
I = Island
WM = Wet meadow
WA = Marsh
US = Unconsolidated shore

MF = Mud Flat **OW** = Open Water

Easton Ranch Plant list (2010-2019)

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	NL
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	FAC
Bromus tectorum	Cheatgrass	UPL
Calamagrostis canadensis	Bluejoint	FACW
Carduus nutans	Nodding Plumeless-Thistle	UPL
Carex aquatilis	Leafy Tussock Sedge	OBL
Carex atherodes	Wheat Sedge	OBL
Carex aurea	Golden-Fruit Sedge	FACW
Carex bebbii	Bebb's Sedge	OBL
Carex limosa	Mud Sedge	OBL
Carex microptera	Small-winged Sedge	FACU
Carex nebrascensis	Nebraska Sedge	OBL
Carex pachystachya	Thick-Head Sedge	FAC
Carex parryana	Parry's Sedge	FACW
Carex pellita	Woolly Sedge	OBL
Carex praegracilis	Clustered Field Sedge	FACW
Carex rostrata	Swollen Beaked Sedge	OBL
Carex scoparia	Pointed Broom Sedge	FACW
Carex sp.	Sedge	NA
Carex stipata	Stalk-Grain Sedge	OBL
Carex utriculata	Northwest Territory Sedge	OBL

Scientific Names	Common Names	WMVC Indicator Status ¹
Carex vesicaria	Lesser Bladder Sedge	OBL
Carum carvi	Caraway	FACU
Cassiope mertensiana	Western Moss-Heather	FACU
Chenopodium album	Lamb's-Quarters	FACU
Chenopodium leptophyllum	Narrow-Leaf Goosefoot	FACU
Cicuta douglasii	Western Water-Hemlock	OBL
Cirsium arvense	Canadian Thistle	FAC
Cirsium douglasii	Douglas' Thistle	OBL
Cirsium vulgare	Bull Thistle	FACU
Conium maculatum	Poison-Hemlock	FAC
Convolvulus arvensis	Field Bindweed	UPL
Cornus alba	Red Osier	FACW
Cynoglossum officinale	Gypsy-Flower	FACU
Dactylis glomerata	Orchard Grass	FACU
Dasiphora fruticosa	Golden-Hardhack	FAC
Deschampsia caespitosa	Tufted Hair Grass	FACW
Descurainia sophia	Herb Sophia	UPL
Dracocephalum sp.	Dragonhead	UPL
Eleocharis palustris	Common Spike-Rush	OBL
Elodea sp.	Waterweed	NA
Elymus cinereus	Great Basin Wildrye	UPL
Elymus repens	Creeping Wild Rye	FAC
Elymus sp.	Wild Rye	NA
Elymus trachycaulus	Slender Wild Rye	FAC
Epilobium ciliatum	Fringed Willowherb	FACW
Equisetum arvense	Field Horsetail	FAC
Equisetum hyemale	Tall Scouring-Rush	FACW
Equisetum laevigatum	Smooth Scouring-Rush	FACW
Fragaria virginiana	Virginia Strawberry	FACU
Galium palustre	Common Marsh Bedstraw	OBL
Geum macrophyllum	Large-Leaf Avens	FAC
Glyceria elata	Tall Manna Grass	FACW
Glyceria grandis	American Manna Grass	OBL
Glyceria striata	Fowl Manna Grass	OBL
Glycyrrhiza lepidota	American Licorice	FAC
Helianthus annuus	Common Sunflower	FACU
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

Scientific Names	Common Names	WMVC Indicator Status ¹
Larix occidentalis	Western Larch	FACU
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 macounii	Macoun's Buttercup	OBL
Rhamnus alnifolia	Alder-Leaf Buckthorn	FACW
Ribes lacustre	Bristly Black Gooseberry	FAC
Rosa woodsii	Woods' Rose	FACU
Rumex crispus	Curly Dock	FAC
Rumex salicifolius	Willow Dock	FACW
Ruppia maritima	Beaked Ditch-Grass	OBL
Salix amygdaloides	Peach-Leaf Willow	FACW

Scientific Names	Common Names	WMVC Indicator Status ¹
Salix bebbiana	Gray Willow	FACW
Salix boothii	Booth's Willow	FACW
Salix drummondiana	Drummond's Willow	FACW
Salix exigua	Narrow-Leaf Willow	FACW
Salix lasiandra	Pacific Willow	FACW
Salix lutea	Yellow Willow	OBL
Schedonorus arundinaceus	Tall False Rye Grass	FAC
Schedonorus pratensis	Meadow False Rye Grass	FACU
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 palustris	Hairy Hedge-Nettle	FACW
Stellaria graminea	Grass-Leaf Starwort	FACU
Symphoricarpos albus	Common Snowberry	FACU
Symphyotrichum	Leafy-Bract American-	
subspicatum	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
Vicia americana	American Purple Vetch	FAC
Xanthium strumarium	Rough Cockleburr	FAC

¹ 2016 NWPL (Lichvar *et al.*)

New species identified in 2019 are bolded.

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

Project/Site: Easton	C	ity/County:	Park	Sampling Date: 26-Jul-19
Applicant/Owner: MDT				State: MT Sampling Point: DP-1U
Investigator(s): Cindy Hoschouer, Tanner Traxler		Section, To	wnship, Ra	ange: S 32
Landform (hillslope, terrace, etc.): Floodplain		Local relief	(concave, c	convex, none): none Slope: 0.0 % / 0.0
Subregion (LRR): LRR E	Lat.: 46.	.329611		Long.: -110.382625
Goil Map Unit Name: Meadowcreek, rarely flooded-Nesda con	nplex, 0 to 2	2% slopes		NWI classification: Upland
e climatic/hydrologic conditions on the site typical for this t			s ● No C	
	gnificantly o		Are "N	Iormal Circumstances" present? Yes No
Are Vegetation . , Soil . , or Hydrology . n.	aturally prol	blematic?		eded, explain any answers in Remarks.)
Summary of Findings - Attach site map sho			-	
Hydrophytic Vegetation Present? Yes No		To Alba	CII A	
Hydric Soil Present? Yes ○ No ●			Sampled A	Vaa O Na 📵
Wetland Hydrology Present? Yes ○ No ●		within	a Wetland	1? 1es U NO U
Remarks:				
Upland sample point located near the western project bour	ndary.			
VEGETATION - Use scientific names of plant	s.	Dominant		
(0)			Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 Foot Radius)	% Cover		Status	Number of Dominant Species
1 2	0 0	0.0%		That are OBL, FACW, or FAC:3(A)
3		0.0%		Total Number of Dominant
4.		0.0%		Species Across All Strata:3(B)
Sapling/Shrub Stratum (Plot size: 15 Foot Radius)		= Total Cove	er	Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
1,	0	0.0%		Prevalence Index worksheet:
2	0	0.0%		Total % Cover of: Multiply by:
3	0	0.0%		OBL species 0 x 1 = 0
4	0	0.0%		FACW species0 x 2 =0
5	0	0.0%		FAC species $70 \times 3 = 210$
Herb Stratum (Plot size: 5 Foot Radius)	0	= Total Cove	er	FACU species $\frac{10}{}$ x 4 = $\frac{40}{}$
1 Elymus repens	20	✓ 22.2%	FAC	UPL species $\frac{10}{}$ x 5 = $\frac{50}{}$
Poa pratensis	20	✓ 22.2%	FAC	Column Totals:90 (A)300 (B)
3 Phleum pratense	20	✓ 22.2%	FAC	Prevalence Index = B/A =3.333
4 Bromus inermis	10	11.1%	UPL	
5. Taraxacum officinale	5	5.6%	FACU	Hydrophytic Vegetation Indicators:
6. Carum carvi	5	5.6%	FACU	☐ 1 - Rapid Test for Hydrologic Vegetation ☐ 2 - Dominance Test is > 50%
7 _. Agrostis stolonifera	5	5.6%	FAC	3 - Prevalence Index is ≤ 3.0 ¹
8. Lotus corniculatus		5.6%	FAC	
9		0.0%		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
10.—	_	0.0%		5 - Wetland Non-Vascular Plants 1
11.———		= Total Cove		Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 30 Foot Radius)		- Total Cove	51	¹ Indicators of hydric soil and wetland hydrology must
1	0	0.0%		be present, unless disturbed or problematic.
2	0	0.0%		Hydrophytic
		= Total Cove	er	Vegetation Present? Yes No
				Tradent.
% Bare Ground in Herb Stratum: 10				

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

efilo Docer	intion: (Doc	cribo to tho	donth noo	dad ta dasumani	+ +ha indi			absonce of indi	catore \			
			аертп пее	ded to document			onfirm the	absence or indi	cators.)			
Depth	Color (n	Matrix	%	Color (moist)	lox Featu %	res Type 1	Loc2	Texture			Remarks	
(inches)	-			Color (Illoist)	<u>-70</u>	Туре	LUC-	Silt Loam	-	roots, li		
0-4	10YR	3/2	100					SIIL LOGIII				
4-14	10YR	3/2	100					Silt Loam				
14-18	10YR	3/3	100					Silt Loam		5% small	rocks	
								-	_			
T		D. J. P. B	M D d	Mali: 66 6						4-1-1		
· ·				Matrix, CS=Covere			ains ²Loc					
<u>-</u>	,	Applicable	to all LRRs	, unless otherwis		.)		Indicators 1		ematic Hyd	ric Soils ³ :	
Histosol (/	•			Sandy Redox	. ,				ıck (A10)			
	pedon (A2)			Stripped Matri	` '	E1) (ovecant	in MIDA 1\		ent Materi	, ,		
Black Hist	. ,			Loamy Mucky Loamy Gleyed	•	, , ,	III MLKA 1)	☐ Other (E	Explain in	Remarks)		
_ ′ ັ	Sulfide (A4)	urface (A11)		Depleted Matr	•	۷)						
	Below Dark S	, ,		Redox Dark S	. ,	5)		2				
_	k Surface (A1	•		Depleted Dark				³ Indicators of		ic vegetation ust be prese		
– '	ck Mineral (S	•		Redox depres				unless dist			:11,	
	yed Matrix (S				3.01.5 (1.0)	<u> </u>						
	ayer (if pres	ent):										
Type:										Yes 🔾	No 💿	
								Hydric Soil Di				
Depth (incl Remarks: ydric soil inc		e not obser	ved within	 this data point.				Hydric Soil Pi	esent?	res 🔾	NO ©	
Remarks:		e not obser	ved within	this data point.				Hydric Soil Pi	esent?	res 🔾		
Remarks:	licators wer	e not obser	ved within	this data point.				Hydric Soil Pi	esent?	ies C		
Remarks: ydric soil inc	licators wer		ved within	this data point.				Hydric Soil Pi	esent?	Tes C		
Remarks: ydric soil inc ydrology Ydrology Vetland Hyd	dicators were	cators:			volución (viaco							reau
Remarks: ydric soil ind ydrology Vetland Hyd Primary Indi	dicators were / rology Indicators (mini	cators:		check all that ap		s (B9) (exce	ot MI RA	Second	ary Indic	ators (mini	mum of two	
Remarks: ydric soil ind ydrology Vetland Hyd Primary Indi Surface V	dicators were rology Indicators (mini	cators:			ed Leaves	s (B9) (exce	ot MLRA	Second	ary Indic	ators (mini		
Remarks: ydric soil ind ydrology Vetland Hyd Primary Indi Surface V High Wat	dicators were rology Indic cators (mini Vater (A1) er Table (A2)	cators:		check all that and Water-Stain 1, 2, 4A, and	ed Leaves d 4B)	s (B9) (exce	ot MLRA	_Second	ary Indic ter-Staine and 4B)	ators (mini d Leaves (B	mum of two	
ydrology Yetland Hyd Surface V High Wat	rology Indicators (minivater (A1) er Table (A2)	cators:		check all that and Water-Stain 1, 2, 4A, and Salt Crust (E	ed Leaves d 4B) 311)		ot MLRA	Second Wa 4A	ary Indic tter-Staine and 4B) ainage Pat	ators (mini d Leaves (B! terns (B10)	mum of two 9) (MLRA 1, 2,	
ydrology Yetland Hyd Surface V High Wat Saturation Water Ma	rology Indic cators (mini Vater (A1) er Table (A2) n (A3) urks (B1)	ators: mum of one		check all that ar Water-Stain 1, 2, 4A, and Salt Crust (E	ed Leaves d 4B) 311) ertebrates	s (B13)	ot MLRA	Second Wa 4A	ary Indic iter-Staine and 4B) ainage Pat y Season V	ators (mini d Leaves (B terns (B10) Vater Table	mum of two 9) (MLRA 1, 2,	
ydrology Yetland Hyd Surface V High Wat Saturatio Water Ma Sediment	rology Indicators (minivater (A1)) er Table (A2) in (A3) irks (B1) Deposits (B2	ators: mum of one		check all that ap Water-Stain 1, 2, 4A, and Salt Crust (E Aquatic Inve	ed Leaves d 4B) 311) ertebrates ulfide Odd	s (B13) or (C1)		Second Wa 4A	ary Indic iter-Staine and 4B) ainage Pat y Season V	ators (mini d Leaves (B terns (B10) Vater Table	mum of two 9) (MLRA 1, 2,	
ydrology Yetland Hyd Surface V High Wat Saturation Water Ma	rology Indicators (minivater (A1)) er Table (A2) in (A3) irks (B1) Deposits (B2	ators: mum of one		check all that ar Water-Stain 1, 2, 4A, and Salt Crust (E	ed Leaves d 4B) 311) ertebrates ulfide Odd	s (B13) or (C1)		Second Wa 4A Dra Dry Sat	ary Indic ter-Staine, and 4B) ainage Pat r Season V	ators (mini d Leaves (B terns (B10) Vater Table	mum of two 9) (MLRA 1, 2, (C2) al Imagery (C	
ydrology ydrology Vetland Hyd Surface V High Wat Saturation Water Ma Sediment Drift depo	rology Indicators (minivater (A1)) er Table (A2) in (A3) irks (B1) Deposits (B2	cators: mum of one		check all that ap Water-Stain 1, 2, 4A, and Salt Crust (E Aquatic Inve	ed Leaves d 4B) B11) ertebrates ulfide Odd izosphere	s (B13) or (C1) s on Living I		Second Wa 4A Dra Dra Sal	ary Indic ter-Staine, and 4B) ainage Pat r Season V	ators (mini d Leaves (B9 terns (B10) Vater Table Sible on Aeri Position (D2)	mum of two 9) (MLRA 1, 2, (C2) al Imagery (C	
ydrology ydrology Vetland Hyd Surface V High Wat Saturation Water Ma Sediment Drift depo	rology Indicators (minivater (A1) er Table (A2) in (A3) irks (B1) ir Deposits (B2) oosits (B3) or Crust (B4)	cators: mum of one		check all that ap Water-Stain 1, 2, 4A, and Salt Crust (E Aquatic Inve	ed Leaves d 4B) B11) ertebrates ulfide Odd izosphere Reduced	s (B13) or (C1) s on Living I Iron (C4)	Roots (C3)	Second Wa 4A, Dra Dry Sat Ge	ary Indic iter-Staine and 4B) ainage Pat y Season V curation Vi omorphic	ators (mini d Leaves (B9 terns (B10) Vater Table sible on Aeri Position (D2) tard (D3)	mum of two 9) (MLRA 1, 2, (C2) al Imagery (C	
ydrology Vetland Hyd Primary Indi Surface V High Wate Ma Sediment Drift depo	rology Indicators (minivater (A1) er Table (A2) in (A3) irks (B1) ir Deposits (B2) oosits (B3) or Crust (B4)	cators: mum of one		check all that and Water-Stain 1, 2, 4A, and Salt Crust (Eagle Aquatic Investigation of Control Adjusted Rham Presence of Recent Iron	ed Leaves d 4B) 311) ertebrates ulfide Odd izosphere Reduced Reduction	s (B13) or (C1) s on Living I Iron (C4) n in Tilled So	Roots (C3)	Second Wa 4A Dra Dry Sal Ge Sh.	ary Indic iter-Staine and 4B) ainage Pat y Season V curation Vi omorphic allow Aqui C-neutral	ators (mini d Leaves (B10) Vater Table sible on Aeri Position (D2) tard (D3) Fest (D5)	mum of two 9) (MLRA 1, 2, (C2) al Imagery (C	
ydrology Vetland Hyd Primary Indi Surface V High Water Ma Sediment Drift depo Algal Mat Iron Depo Surface S	rology Indic cators (mini Vater (A1) er Table (A2) n (A3) arks (B1) de Deposits (B2) posits (B3) or Crust (B4) posits (B5)	eators: mum of one	e required;	Check all that an Water-Stain 1, 2, 4A, and Salt Crust (E Aquatic Inversion Oxidized Rh Presence of Recent Iron Stunted or S	ed Leaves d 4B) 311) ertebrates ulfide Odd izosphere: Reduced Reduction Stressed P	s (B13) or (C1) s on Living I Iron (C4) n in Tilled So Plants (D1) (Roots (C3)	Second Wa 4A Dra Dry Sat Ge Sha Rai	ary Indicater-Staine, and 4B) sinage Pater Season Vecuration Vicuration Vicur	ators (mini d Leaves (B10) Vater Table sible on Aeri Position (D2) tard (D3) Fest (D5) ounds (D6)	mum of two 9) (MLRA 1, 2, (C2) al Imagery (C)	
ydrology Yetland Hyd Surface V High Water Ma Sediment Drift depo Algal Mat Iron Depo Surface S Inundatio	rology Indicators (Mini Vater (A1) er Table (A2) in (A3) irks (B1) Deposits (B2) or Crust (B4) posits (B5) ioil Cracks (B6 in Visible on A	eators: mum of one))) Aerial Imager	e required; y (B7)	check all that and Water-Stain 1, 2, 4A, and Salt Crust (Eagle Aquatic Investigation of Control Adjusted Rham Presence of Recent Iron	ed Leaves d 4B) 311) ertebrates ulfide Odd izosphere: Reduced Reduction Stressed P	s (B13) or (C1) s on Living I Iron (C4) n in Tilled So Plants (D1) (Roots (C3)	Second Wa 4A Dra Dry Sat Ge Sha Rai	ary Indicater-Staine, and 4B) sinage Pater Season Vecuration Vicuration Vicur	ators (mini d Leaves (B10) Vater Table sible on Aeri Position (D2) tard (D3) Fest (D5)	mum of two 9) (MLRA 1, 2, (C2) al Imagery (C)	
ydrology Yetland Hyd Surface V High Water Ma Sediment Drift depo Algal Mat Iron Depo Surface S Inundatio	rology Indic cators (mini Vater (A1) er Table (A2) n (A3) arks (B1) de Deposits (B2) posits (B3) or Crust (B4) posits (B5)	eators: mum of one))) Aerial Imager	e required; y (B7)	Check all that an Water-Stain 1, 2, 4A, and Salt Crust (E Aquatic Inversion Oxidized Rh Presence of Recent Iron Stunted or S	ed Leaves d 4B) 311) ertebrates ulfide Odd izosphere: Reduced Reduction Stressed P	s (B13) or (C1) s on Living I Iron (C4) n in Tilled So Plants (D1) (Roots (C3)	Second Wa 4A Dra Dry Sat Ge Sha Rai	ary Indicater-Staine, and 4B) sinage Pater Season Vecuration Vicuration Vicur	ators (mini d Leaves (B10) Vater Table sible on Aeri Position (D2) tard (D3) Fest (D5) ounds (D6)	mum of two 9) (MLRA 1, 2, (C2) al Imagery (C)	
ydrology Yetland Hyd Surface V High Water Ma Sediment Drift depo Algal Mat Iron Depo Surface S Inundatio	rology Indic cators (mini Vater (A1) er Table (A2) in (A3) arks (B1) Deposits (B2) posits (B3) or Crust (B4) posits (B5) foil Cracks (B6 on Visible on A	mum of one) Aerial Imager	e required; y (B7) e (B8)	Check all that an Water-Stain 1, 2, 4A, and Salt Crust (E Aquatic Inversion Oxidized Rh Presence of Recent Iron Stunted or S	ed Leaves d 4B) 311) ertebrates ulfide Odd izosphere: Reduced Reduction Stressed P	s (B13) or (C1) s on Living I Iron (C4) n in Tilled So Plants (D1) (Roots (C3)	Second Wa 4A Dra Dry Sat Ge Sha Rai	ary Indicater-Staine, and 4B) sinage Pater Season Vecuration Vicuration Vicur	ators (mini d Leaves (B10) Vater Table sible on Aeri Position (D2) tard (D3) Fest (D5) ounds (D6)	mum of two 9) (MLRA 1, 2, (C2) al Imagery (C)	
ydrology Vetland Hyd Surface V High Water Ma Sediment Drift depo Algal Mat Iron Depo Surface S Inundatio	rology Indicators (minicators	eators: mum of one))) Aerial Imager	e required; y (B7)	Check all that an Water-Stain 1, 2, 4A, and Salt Crust (E Aquatic Inversion Oxidized Rh Presence of Recent Iron Stunted or S	ed Leaves d 4B) B11) ertebrates ulfide Odc izosphere: Reduced Reduction Stressed P	s (B13) or (C1) s on Living I Iron (C4) n in Tilled So Plants (D1) (Roots (C3)	Second Wa 4A Dra Dry Sat Ge Sha Rai	ary Indicater-Staine, and 4B) sinage Pater Season Vecuration Vicuration Vicur	ators (mini d Leaves (B10) Vater Table sible on Aeri Position (D2) tard (D3) Fest (D5) ounds (D6)	mum of two 9) (MLRA 1, 2, (C2) al Imagery (C)	
ydrology ydrology yetland Hyd Primary Indi Surface V High Wate Ma Sediment Drift depo Algal Mat Iron Depo Surface S Inundation Sparsely	rology Indicators were rology Indicators (minivater (A1) er Table (A2) er Table (A3) erks (B1) Deposits (B2) or Crust (B4) esits (B5) even visible on Aave Vegetated Coations:	mum of one i) iverial Imager incave Surface	y (B7) e (B8)	check all that ap Water-Stain 1, 2, 4A, and Salt Crust (E Aquatic Inve Hydrogen St Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leaves d 4B) B11) ertebrates ulfide Odc izosphere Reduced Reduction Stressed P ain in Rem	s (B13) or (C1) s on Living I Iron (C4) n in Tilled So Plants (D1) (Roots (C3)	Second Wa 4A Dra Dry Sat Ge Sha Rai	ary Indicater-Staine, and 4B) sinage Pater Season Vecuration Vicuration Vicur	ators (mini d Leaves (B10) Vater Table sible on Aeri Position (D2) tard (D3) Fest (D5) ounds (D6)	mum of two 9) (MLRA 1, 2, (C2) al Imagery (C)	
ydrology ydrology Yetland Hyd Primary Indi Surface V High Wat Saturation Water Ma Sediment Drift depo Algal Mat Iron Depo Surface S Inundatic Sparsely	rology Indicators were rology Indicators (minimater (A1) er Table (A2) er Table (A2) er Table (B3) er Crust (B4) er Crust (B4) er Crust (B5) e	cators: mum of one) Aerial Imager ncave Surfac Yes Yes Yes	y (B7) e (B8) No No	check all that ar Water-Stain 1, 2, 4A, and Salt Crust (E Aquatic Inve Hydrogen St Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leaves d 4B) B11) ertebrates ulfide Odc izosphere Reduced Reduction Stressed P ain in Rem	s (B13) or (C1) s on Living I Iron (C4) n in Tilled So Plants (D1) (Roots (C3) Dils (C6) LRR A)	Second Wa 4A Dra Dry Sal Ge Sh. FA	ary Indicater-Staine, and 4B) ainage Pater Season Vituration Vituration Vituration Vituration Aquit C-neutral Seed Ant Most Heave	ators (mini d Leaves (B10) Vater Table sible on Aeri Position (D2) tard (D3) Fest (D5) ounds (D6)	(C2) al Imagery (C) (LRR A) D7)	
ydrology ydrology yetland Hyd Primary Indi Surface V High Water Ma Sediment Drift depo Algal Mat Iron Depo Surface S Inundatio Sparsely vield Observation	rology Indicators were rology Indicators (minivater (A1) er Table (A2) er Table (A3) er table (B3) er table (B3) er table (B5) er table (B5) er table (B6) e	mum of one i) iverial Imager incave Surface	y (B7) e (B8)	check all that ap Water-Stain 1, 2, 4A, and Salt Crust (E Aquatic Inve Hydrogen St Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leaves d 4B) B11) ertebrates ulfide Odc izosphere: Reduced Reduction Stressed P ain in Rem hhes):	s (B13) or (C1) s on Living I Iron (C4) n in Tilled So Plants (D1) (Roots (C3) Dils (C6) LRR A)	Second Wa 4A Dra Dry Sat Ge Sha Rai	ary Indicater-Staine, and 4B) ainage Pater Season Vituration Vituration Vituration Vituration Aquit C-neutral Seed Ant Most Heave	ators (mini d Leaves (B10) Vater Table sible on Aeri Position (D2) tard (D3) Fest (D5) ounds (D6) Hummocks (mum of two 9) (MLRA 1, 2, (C2) al Imagery (C) (LRR A) D7)	
ydrology ydrology yetland Hyd Primary Indi Surface V High Water Ma Sediment Drift depo Algal Mat Iron Depo Surface S Inundation Sparsely vierlace Water Table Production Presidudes capil	rology Indicators were rology Indicators (minital Vater (A1) er Table (A2) er Table (A3) er Table (B3) er Crust (B4) er Crust (B4) er Crust (B5) er Crust (B	cators: mum of one) ionical Imager ncave Surfact Yes O Yes O Yes O	y (B7) e (B8) No No No No No	check all that ap Water-Stain 1, 2, 4A, and Salt Crust (E Aquatic Inve Hydrogen Si Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leaves d 4B) B11) ertebrates ulfide Odc izosphere: Reduced Reduction Stressed P ain in Rem hes): hes):	s (B13) or (C1) s on Living I Iron (C4) n in Tilled So Plants (D1) (narks)	Roots (C3) Dils (C6) LRR A) Wetla	Second Wa 4A Dra Dry Sal Ge Sh. FAI Fro	ary Indicater-Staine, and 4B) ainage Pater Season Vituration Vituration Vituration Vituration Aquit C-neutral Seed Ant Most Heave	ators (mini d Leaves (B10) Vater Table sible on Aeri Position (D2) tard (D3) Fest (D5) ounds (D6) Hummocks (mum of two 9) (MLRA 1, 2, (C2) al Imagery (C) (LRR A) D7)	
ydrology ydrology yetland Hyd Primary Indi Surface V High Water Ma Sediment Drift depo Algal Mat Iron Depo Surface S Inundation Sparsely vierlace Water Table Production Presidudes capil	rology Indicators were rology Indicators (minital Vater (A1) er Table (A2) er Table (A3) er Table (B3) er Crust (B4) er Crust (B4) er Crust (B5) er Crust (B	cators: mum of one) ionical Imager ncave Surfact Yes O Yes O Yes O	y (B7) e (B8) No No No No No	Check all that an Water-Stain 1, 2, 4A, and Salt Crust (E Aquatic Inve Oxidized Rh Presence of Recent Iron Stunted or SOCIO Other (Explain Depth (incode)	ed Leaves d 4B) B11) ertebrates ulfide Odc izosphere: Reduced Reduction Stressed P ain in Rem hes): hes):	s (B13) or (C1) s on Living I Iron (C4) n in Tilled So Plants (D1) (narks)	Roots (C3) Dils (C6) LRR A) Wetla	Second Wa 4A Dra Dry Sal Ge Sh. FAI Fro	ary Indicater-Staine, and 4B) ainage Pater Season Vituration Vituration Vituration Vituration Aquit C-neutral Seed Ant Most Heave	ators (mini d Leaves (B10) Vater Table sible on Aeri Position (D2) tard (D3) Fest (D5) ounds (D6) Hummocks (mum of two 9) (MLRA 1, 2, (C2) al Imagery (C) (LRR A) D7)	
ydrology ydrology yetland Hyd Primary Indi Surface V High Water Ma Sediment Drift depo Algal Mat Iron Depo Surface S Inundation Sparsely vierlace Water Table Production Presidudes capil	rology Indicators were rology Indicators (minital Vater (A1) er Table (A2) er Table (A3) er Table (B3) er Crust (B4) er Crust (B4) er Crust (B5) er Crust (B	cators: mum of one) ionical Imager ncave Surfact Yes O Yes O Yes O	y (B7) e (B8) No No No No No	check all that ap Water-Stain 1, 2, 4A, and Salt Crust (E Aquatic Inve Hydrogen Si Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	ed Leaves d 4B) B11) ertebrates ulfide Odc izosphere: Reduced Reduction Stressed P ain in Rem hes): hes):	s (B13) or (C1) s on Living I Iron (C4) n in Tilled So Plants (D1) (narks)	Roots (C3) Dils (C6) LRR A) Wetla	Second Wa 4A Dra Dry Sal Ge Sh. FAI Fro	ary Indicater-Staine, and 4B) ainage Pater Season Vituration Vituration Vituration Vituration Aquit C-neutral Seed Ant Most Heave	ators (mini d Leaves (B10) Vater Table sible on Aeri Position (D2) tard (D3) Fest (D5) ounds (D6) Hummocks (mum of two 9) (MLRA 1, 2, (C2) al Imagery (C) (LRR A) D7)	

US Army Corps of Engineers

Western Mountains, Valleys, and Coast - Version 2.0

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

Project/Site: Easton		ty/County: _	Park	Sampling Date: 26-Jul-19
Applicant/Owner: MDT				State: MT Sampling Point: DP-1W
Investigator(s): Cindy Hoschouer, Tanner Traxler		Section, To	wnship, Ra	ange: S 32
Landform (hillslope, terrace, etc.): Floodplain	ı	Local relief (concave, c	convex, none): concave Slope:0.0 % /0.0
Subregion (LRR): LRR E	Lat.: 46.3	32942		Long.: -110.38248 Datum: NAD83
Soil Map Unit Name: Meadowcreek, rarely flooded-Nesda co				NWI classification: Upland
re climatic/hydrologic conditions on the site typical for this			● No C	
	ignificantly di		Are "N	lormal Circumstances" present? Yes ● No ○
	aturally prob			eded, explain any answers in Remarks.)
Summary of Findings - Attach site map sho			•	, , , ,
Hydrophytic Vegetation Present? Yes • No		Tatha	Campled A	1
Hydric Soil Present? Yes No			Sampled A	Vac (a) No (
Wetland Hydrology Present? Yes ● No ○		within	a Wetland	19 165 0 110 0
Remarks:				
Sample point located in a shallow depression near the wes	stern project b	ooundary. Si	gns of ove	erland flooding were observed in 2019.
VEGETATION - Use scientific names of plant		Dominant		
(0)	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 Foot Radius)	% Cover		Status	Number of Dominant Species
1		0.0%		That are OBL, FACW, or FAC: (A)
3	Г	0.0%		Total Number of Dominant
4.	0 [0.0%		Species Across All Strata: (B)
		= Total Cove	r	Percent of dominant Species That Are OBL, FACW, or FAC:100.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15 Foot Radius)		_		That are obt., Facw, or Fac.
1 Populus balsamifera		83.3%	FAC	Prevalence Index worksheet:
2. Salix lutea		13.9%	OBL	Total % Cover of: Multiply by:
3. Salix drummondiana		2.8%	FACW	OBL species 25 x 1 = 25
4 5.		0.0%		FACW species $\underline{53}$ x 2 = $\underline{106}$
J				FAC species $43 \times 3 = 129$
Herb Stratum (Plot size: 5 Foot Radius)	=	= Total Cove	r	FACU species $0 \times 4 = 0$
1. Juncus balticus	50	✓ 58.8%	FACW	ore species
2. Poa palustris	10	11.8%	FAC	Column Totals: <u>121</u> (A) <u>260</u> (B)
3. Carex aquatilis	10	11.8%	OBL	Prevalence Index = B/A = 2.149
4. Carex nebrascensis		5.9%	OBL	Hydrophytic Vegetation Indicators:
5. Carex utriculata		5.9%	OBL	1 - Rapid Test for Hydrologic Vegetation
6. Agrostis stolonifera		3.5%	FAC	✓ 2 - Dominance Test is > 50%
7. Mentha arvensis Q. Deschampsia cespitosa	$-\frac{1}{1}$	1.2%	FACW FACW	✓ 3 - Prevalence Index is ≤3.0 ¹
Beschampsia cespitosa 9		0.0%	TACW	4 - Morphological Adaptations ¹ (Provide supporting
10		0.0%		data in Remarks or on a separate sheet)
11.	_ [0.0%		5 - Wetland Non-Vascular Plants 1
	85=	= Total Cove	r	Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 30 Foot Radius)				¹ Indicators of hydric soil and wetland hydrology must
1		0.0%		be present, unless disturbed or problematic.
2		0.0%		Hydrophytic Vegetation
	=	= Total Cove	r	Present? Yes • No
% Bare Ground in Herb Stratum: <u>15</u>				

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

									<i></i>
Profile Desc	ription: (Desc	ribe to the	depth need	ed to documen	t the indicator	or confirm the	e absence of indicators	i.)	
Depth		latrix			lox Features			,	
(inches)	Color (m		%	Color (moist)	% Typ	e Loc²	Texture	Remarks	
0-14	10YR	3/1	.00				Clay Loam	small gravel at botto pit	om of
Гуре: C=Cor	centration. D=I	Depletion. RI	1=Reduced	Matrix, CS=Cover	ed or Coated Sa	nd Grains ² Lo	cation: PL=Pore Lining. I	√=Matrix	
lydric Soil	Indicators: (A	Applicable t	o all LRRs,	unless otherwi	se noted.)		Indicators for Pro	blematic Hydric Soils ³ :	
Histosol (•		l	Sandy Redox			2 cm Muck (A1	•	
	pedon (A2)		l [Stripped Matr	ix (56) Mineral (F1) (ex	cent in MIDA 1	Red Parent Ma	` '	
Black His	n Sulfide (A4)		[Loamy Gleyed		ccept iii MLKA 1	Other (Explain	in Remarks)	
	Below Dark Su	rface (A11)	[Depleted Mat					
	k Surface (A12	. ,		Redox Dark S	. ,		³ Indicators of hydrop	shytic vegetation and	
_	uck Mineral (S1)	,		Depleted Dar	k Surface (F7)		wetland hydrolog	must be present,	
	eyed Matrix (S4		[Redox depres	sions (F8)		unless disturbed	or problematic.	
estrictive L	ayer (if prese	nt):							
Type:									
							Hydric Soil Present	? Yes 💿 No 🔾	
o hydric soi	l indicators ob			e construction r s. Recently Dev			<u> </u>	ains, hydric soil may develo	p in
Remarks: o hydric soi ee future (Ii	l indicators ob ndicators for F						<u> </u>		op in
Remarks: o hydric soine future (In	I indicators ob ndicators for F	Problematic					<u> </u>		op in
Remarks: o hydric soi ne future (In ydrolog Vetland Hyd	l indicators ob ndicators for F Y drology Indica	Problematic	Hydric Soi	s. Recently Dev	veloped Wetlar		e and if hydrology rem	ains, hydric soil may develc	
Remarks: o hydric soi le future (Ii ydrolog Vetland Hyd Primary Ind	l indicators ob ndicators for F Y drology Indica icators (minin	Problematic	Hydric Soi	s. Recently Dev	veloped Wetlar	nd).	e and if hydrology rem	ains, hydric soil may develo	
Remarks: o hydric soi ne future (In ydrolog Vetland Hyd Primary Ind Surface V	l indicators ob ndicators for F Y drology Indica	Problematic	Hydric Soi	s. Recently Dev	veloped Wetlar pply) led Leaves (B9) (nd).	e and if hydrology rem	ains, hydric soil may develo	
Remarks: o hydric soi e future (In ydrolog Vetland Hyd Primary Ind Surface V High Wa	I indicators ob indicators for F Y Irology Indicaticators (minin Water (A1) ter Table (A2)	Problematic	Hydric Soi	s. Recently Dev	pply) ed Leaves (B9) (d 4B)	nd).	Secondary In Water-Sta 4A, and 4	ains, hydric soil may develo	
Remarks: o hydric soi e future (In ydrolog Vetland Hyd Primary Ind Surface V High Wa Saturatio	I indicators ob indicators for F Y Irology Indicaticators (minin Water (A1) ter Table (A2) on (A3)	Problematic	Hydric Soi	check all that a Water-Stair 1, 2, 4A, an Salt Crust (pply) ed Leaves (B9) (d 4B)	(except MLRA	Secondary In Water-Sta 4A, and 4	dicators (minimum of two rined Leaves (B9) (MLRA 1, 2, B) Patterns (B10)	
Remarks: o hydric soi e future (In ydrolog /etland Hyd Primary Ind Surface ' High Wa Saturatic Water M	I indicators ob indicators for F Y Irology Indicaticators (minin Water (A1) ter Table (A2)	Problematic	Hydric Soi	check all that a Water-Stair 1, 2, 4A, an Salt Crust (Aquatic Inv	oply) ed Leaves (B9) (d 4B) B11) ertebrates (B13)	(except MLRA	Secondary In Secondary In AA, and 4 Drainage Dry Seaso	dicators (minimum of two rined Leaves (B9) (MLRA 1, 2, B) Patterns (B10) on Water Table (C2)	eguire
ydrolog Vetland Hyd Surface V High Wa Saturatic Water M Sedimen	y Indicators of a process of the control of the co	Problematic	Hydric Soi	check all that a Water-Stair 1, 2, 4A, an Salt Crust (I) Aquatic Inv	pply)ed Leaves (B9) (d 4B)	(except MLRA	Secondary In Secondary In AA, and 4 Drainage Dry Seaso	dicators (minimum of two rined Leaves (B9) (MLRA 1, 2, B) Patterns (B10) In Water Table (C2) In Visible on Aerial Imagery (C9)	eguire
ydrolog ydrolog yetland Hyd Surface High Wa Saturatic Water M Sedimen Drift dep	y Indicators of a dicators for F Indicators for F Indicators Indicators (mining Mater (A1) (A2) (A3) (A3) (A3) (A3) (A3) (A3) (A3) (A3	Problematic	Hydric Soi	check all that a Water-Stair 1, 2, 4A, an Salt Crust (Aquatic Inv Hydrogen S Oxidized Rh	oply) led Leaves (B9) (d 4B) B11) ertebrates (B13) ulfide Odor (C1)	(except MLRA	Secondary In Secondary In Water-Sta 4A, and 4 Drainage Dry Seaso Saturation Geomorpi	dicators (minimum of two rined Leaves (B9) (MLRA 1, 2, B) Patterns (B10) In Water Table (C2) In Visible on Aerial Imagery (C9) Inic Position (D2)	eguire
Remarks: o hydric soi e future (In ydrolog Vetland Hyd Primary Ind Surface High Wa Saturatic Water M Sedimen Drift dep Algal Ma	y Indicators ob a dicators for F Indicators for F Indicators for F Indicators (mining for factors (min	Problematic	Hydric Soi	check all that a Water-Stair 1, 2, 4A, an Salt Crust (Aquatic Inv Hydrogen S Oxidized Rh	poly) led Leaves (B9) (d 4B) B11) lertebrates (B13) ulfide Odor (C1) izospheres on Li	(except MLRA ving Roots (C3)	Secondary In Secondary In Water-Sta 4A, and 4 Drainage Dry Sease Saturation Geomorpi Shallow A	dicators (minimum of two rined Leaves (B9) (MLRA 1, 2, B) Patterns (B10) In Water Table (C2) In Visible on Aerial Imagery (C9) Inic Position (D2) In Quitard (D3)	eguire
Remarks: o hydric soine future (In ydrolog Vetland Hyd Primary Ind Surface High Wa Saturatio Water M Sedimen Drift dep Algal Ma Iron Dep	y drology Indicators (minin Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) oosits (B3) t or Crust (B4)	etors:	Hydric Soi	check all that a Water-Stair 1, 2, 4A, an Salt Crust (Aquatic Inv Hydrogen S Oxidized Rh Presence of Recent Iron	oply) ed Leaves (B9) (d 4B) B11) ertebrates (B13) ulfide Odor (C1) izospheres on Lit Reduced Iron (G Reduction in Til	(except MLRA ving Roots (C3) C4) led Soils (C6)	Secondary In Water-Sta 4A, and 4 Drainage Dry Seasc Saturation Geomorpi Shallow A	dicators (minimum of two rined Leaves (B9) (MLRA 1, 2, B) Patterns (B10) In Water Table (C2) In Visible on Aerial Imagery (C9) Inc Position (D2) In Visible on Inc Position (D3) Inc I Test (D5)	eguire
ydrolog ydrolog ydrolog Vetland Hyd Primary Ind Surface High Wa Saturatic Water M Sedimen Drift dep Algal Ma Iron Dep Surface S	y Indicators of adicators for F y Irology Indicaticators (minin Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)	ntors:	Hydric Soi	check all that a Water-Stair 1, 2, 4A, an Salt Crust (I Aquatic Inv Hydrogen S Oxidized RH Presence of Recent Iron Stunted or	oply) ed Leaves (B9) (d 4B) B11) ertebrates (B13) ulfide Odor (C1) izospheres on Lite Reduced Iron (C) Reduction in Till Stressed Plants ((except MLRA ving Roots (C3) C4) led Soils (C6)	Secondary In Water-Sta 4A, and 4 Drainage Dry Seasc Saturation Geomorpi Shallow A FAC-neut Raised Ar	dicators (minimum of two rined Leaves (B9) (MLRA 1, 2, B) Patterns (B10) In Water Table (C2) In Visible on Aerial Imagery (C9) Inic Position (D2) In Quitard (D3)	eguire
ydrolog ydrolog yetland Hyd Surface V High Wa Sedimen Drift dep Algal Ma Iron Dep Surface S Inundati	y Indicators of adicators for F Indicators for	erial Imagery	required; (B7)	check all that a Water-Stair 1, 2, 4A, an Salt Crust (I Aquatic Inv Hydrogen S Oxidized RH Presence of Recent Iron Stunted or	oply) ed Leaves (B9) (d 4B) B11) ertebrates (B13) ulfide Odor (C1) izospheres on Lit Reduced Iron (G Reduction in Til	(except MLRA ving Roots (C3) C4) led Soils (C6)	Secondary In Water-Sta 4A, and 4 Drainage Dry Seasc Saturation Geomorpi Shallow A FAC-neut Raised Ar	dicators (minimum of two rined Leaves (B9) (MLRA 1, 2, B) Patterns (B10) In Water Table (C2) In Visible on Aerial Imagery (C9) Inic Position (D2) In Visible on Aerial Imagery (C9) Inic Position (D2) Inic Position (D3) In I Test (D5) It Mounds (D6) (LRR A)	eguir
Remarks: o hydric soi ne future (In ydrolog Vetland Hyd Primary Ind Surface V High Wa Saturatic Water M Sedimen Drift dep Algal Ma Iron Dep Surface Sparsely	y Indicators of adicators for F Indicators for	erial Imagery	required; (B7)	check all that a Water-Stair 1, 2, 4A, an Salt Crust (I Aquatic Inv Hydrogen S Oxidized RH Presence of Recent Iron Stunted or	oply) ed Leaves (B9) (d 4B) B11) ertebrates (B13) ulfide Odor (C1) izospheres on Lite Reduced Iron (C) Reduction in Till Stressed Plants ((except MLRA ving Roots (C3) C4) led Soils (C6)	Secondary In Water-Sta 4A, and 4 Drainage Dry Seasc Saturation Geomorpi Shallow A FAC-neut Raised Ar	dicators (minimum of two rined Leaves (B9) (MLRA 1, 2, B) Patterns (B10) In Water Table (C2) In Visible on Aerial Imagery (C9) Inic Position (D2) In Visible on Aerial Imagery (C9) Inic Position (D2) Inic Position (D3) In I Test (D5) It Mounds (D6) (LRR A)	eguire
Remarks: o hydric soine future (Information of the future) lydrolog Netland Hyd Primary Ind Surface High Wa Saturation Water M Sedimen Drift dep Algal Ma Iron Dep Surface: Inundati Sparsely	y Indicators of adicators for F Indicators for	erial Imagery	required; (B7)	check all that a Water-Stair 1, 2, 4A, an Salt Crust (I Aquatic Inv Hydrogen S Oxidized RH Presence of Recent Iron Stunted or	pply) ed Leaves (B9) (d 4B) B11) ertebrates (B13) ulfide Odor (C1) izospheres on Li Reduced Iron (C Reduction in Til Stressed Plants (ain in Remarks)	(except MLRA ving Roots (C3) C4) led Soils (C6)	Secondary In Water-Sta 4A, and 4 Drainage Dry Seasc Saturation Geomorpi Shallow A FAC-neut Raised Ar	dicators (minimum of two rined Leaves (B9) (MLRA 1, 2, B) Patterns (B10) In Water Table (C2) In Visible on Aerial Imagery (C9) Inic Position (D2) In Visible on Aerial Imagery (C9) Inic Position (D2) Inic Position (D3) In I Test (D5) It Mounds (D6) (LRR A)	eguire
Remarks: lo hydric soine future (In lydrolog Netland Hyd Primary Ind Surface \(^1\) High Wa Saturatio Water M Sedimen Drift dep Algal Ma Iron Dep Surface \(^1\) Inundati Sparsely Field Observ Surface Wate	y Indicators of adicators for F Indicators for	erial Imagery cave Surface	required; (B7) (B8)	check all that a Water-Stair 1, 2, 4A, an Salt Crust (i Aquatic Inv Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or Other (Expl	poly) led Leaves (B9) (d 4B) B11) lettebrates (B13) ulfide Odor (C1) lizospheres on Life Reduced Iron (C) Reduction in Tile Stressed Plants (lain in Remarks)	(except MLRA ving Roots (C3) C4) led Soils (C6)	Secondary In Water-Sta 4A, and 4 Drainage Dry Seasc Saturation Geomorpi Shallow A FAC-neut Raised Ar	dicators (minimum of two rined Leaves (B9) (MLRA 1, 2, B) Patterns (B10) In Water Table (C2) In Visible on Aerial Imagery (C9) Inic Position (D2) In Visible on Aerial Imagery (C9) Inic Position (D2) Inic Position (D3) In I Test (D5) It Mounds (D6) (LRR A)	eguire
Remarks: lo hydric soine future (In lydrolog Wetland Hyd Primary Ind Surface V High Wa V Saturatic Water M Sedimen Drift dep Algal Ma Iron Dep Surface Sur	I indicators ob indicators for F Irology Indicaticators (minin Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) iosits (B5) Soil Cracks (B6) on Visible on Ae Vegetated Con	erial Imagery cave Surface Yes Yes	required; (B7) (B8)	check all that a water-Stair 1, 2, 4A, an Salt Crust (i Aquatic Inv Hydrogen S Oxidized RH Presence of Recent Iron Stunted or Other (Expl	poly) ed Leaves (B9) (d 4B) B11) ertebrates (B13) ulfide Odor (C1) izospheres on Li Reduced Iron (C Reduction in Til Stressed Plants (ain in Remarks)	(except MLRA ving Roots (C3) C4) led Soils (C6) D1) (LRR A) Wet	Secondary In Water-Sta 4A, and 4 Drainage Dry Seasc Saturation Geomorpi Shallow A FAC-neut Raised Ar	dicators (minimum of two rined Leaves (B9) (MLRA 1, 2, B) Patterns (B10) In Water Table (C2) In Visible on Aerial Imagery (C9) Inic Position (D2) quitard (D3) Ial Test (D5) It Mounds (D6) (LRR A) Ive Hummocks (D7)	eguire
Remarks: o hydric soine future (Information Information Informatio	I indicators of indicators for Formal Indicators for Formal Indicators for Formal Indicators (mining Indicat	erial Imagery cave Surface Yes Yes Yes Yes Yes	(B7) (B8) No No No No No No No No	check all that a water-Stair 1, 2, 4A, an Salt Crust (i Aquatic Inv Hydrogen S Oxidized Ri Presence of Recent Iron Stunted or i Other (Expl	poply) ded Leaves (B9) (d 4B) B11) ertebrates (B13) ulfide Odor (C1) izospheres on Lir Reduced Iron (C Reduction in Till Stressed Plants (ain in Remarks) ches): ches):	(except MLRA ving Roots (C3) C4) led Soils (C6) D1) (LRR A) Wet	Secondary In Water-Sta 4A, and 4 Drainage Dry Seaso Saturation Geomorp Shallow A FAC-neute Raised Ar Frost Hea	dicators (minimum of two rined Leaves (B9) (MLRA 1, 2, B) Patterns (B10) In Water Table (C2) In Visible on Aerial Imagery (C9) Inic Position (D2) quitard (D3) Ial Test (D5) It Mounds (D6) (LRR A) Ive Hummocks (D7)	eguire
Remarks: o hydric soine future (Independent of the future of t	I indicators of indicators for Formal Indicators for Formal Indicators for Formal Indicators (mining Indicat	erial Imagery cave Surface Yes Yes Yes Yes Yes	(B7) (B8) No No No No No No No No	check all that a water-Stair 1, 2, 4A, an Salt Crust (i Aquatic Inv Hydrogen S Oxidized RH Presence of Recent Iron Stunted or Other (Expl	poply) ded Leaves (B9) (d 4B) B11) ertebrates (B13) ulfide Odor (C1) izospheres on Lir Reduced Iron (C Reduction in Till Stressed Plants (ain in Remarks) ches): ches):	(except MLRA ving Roots (C3) C4) led Soils (C6) D1) (LRR A) Wet	Secondary In Water-Sta 4A, and 4 Drainage Dry Seaso Saturation Geomorp Shallow A FAC-neute Raised Ar Frost Hea	dicators (minimum of two rined Leaves (B9) (MLRA 1, 2, B) Patterns (B10) In Water Table (C2) In Visible on Aerial Imagery (C9) Inic Position (D2) quitard (D3) Ial Test (D5) It Mounds (D6) (LRR A) Ive Hummocks (D7)	eguire
Remarks: o hydric soine future (Interpretation of the future) Wetland Hyder Primary Ind Surface High Wa Saturation Water M Sedimen Drift dep Algal Ma Iron Dep Surface Surface Inundati Sparsely Field Observiourface Water Water Table Footback Surface Water Water Table Footback Surface	I indicators of indicators for Formal Indicators for Formal Indicators for Formal Indicators (mining Indicat	erial Imagery cave Surface Yes Yes Yes Yes Yes	(B7) (B8) No No No No No No No No	check all that a water-Stair 1, 2, 4A, an Salt Crust (i Aquatic Inv Hydrogen S Oxidized Ri Presence of Recent Iron Stunted or i Other (Expl	poply) ded Leaves (B9) (d 4B) B11) ertebrates (B13) ulfide Odor (C1) izospheres on Lir Reduced Iron (C Reduction in Till Stressed Plants (ain in Remarks) ches): ches):	(except MLRA ving Roots (C3) C4) led Soils (C6) D1) (LRR A) Wet	Secondary In Water-Sta 4A, and 4 Drainage Dry Seaso Saturation Geomorp Shallow A FAC-neute Raised Ar Frost Hea	dicators (minimum of two rined Leaves (B9) (MLRA 1, 2, B) Patterns (B10) In Water Table (C2) In Visible on Aerial Imagery (C9) Inic Position (D2) quitard (D3) Ial Test (D5) It Mounds (D6) (LRR A) Ive Hummocks (D7)	eguire
Remarks: o hydric soi ne future (In ydrolog Vetland Hyd Primary Ind High Wa Saturatic Water M Sedimen Drift dep Algal Ma Iron Dep Surface s Inundati Sparsely Field Observ Surface Water Vater Table Field Gaturation Presincludes capi Describe Recester Semarks:	y Indicators of adicators for F Indicators for F Indicators for F Indicators (mining of the content of the cont	erial Imagery cave Surface Yes O Yes O Stream gau	(B7) (B8) No No See, monito	check all that a Water-Stair 1, 2, 4A, an Salt Crust (i Aquatic Inv Hydrogen S Oxidized RH Presence of Recent Iron Stunted or Other (Expl	poly) ed Leaves (B9) (d 4B) B11) ertebrates (B13) ulfide Odor (C1) izospheres on Li Reduced Iron (C Reduction in Til Stressed Plants (ain in Remarks) ches): ches): thes): thes): thes): 12 otos, previous	(except MLRA ving Roots (C3) C4) led Soils (C6) D1) (LRR A) wet	Secondary In Water-Sta 4A, and 4 Drainage Dry Seaso Saturation Geomorp Shallow A FAC-neute Raised Ar Frost Hea	dicators (minimum of two rined Leaves (B9) (MLRA 1, 2, B) Patterns (B10) In Water Table (C2) In Visible on Aerial Imagery (C9) Inic Position (D2) Iquitard (D3) It Mounds (D6) (LRR A) Ive Hummocks (D7) The second of the secon	eguire

US Army Corps of Engineers

Western Mountains, Valleys, and Coast - Version 2.0

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

roject/Site: Easton		ity/County:	Park		Sampling Date	: 26-Jul-19	
pplicant/Owner: MDT				State: MT	Sampling Po	oint: D	P-2U
nvestigator(s): Cindy Hoschouer, Tanner Traxler		Section, To	wnship, Ra	ange: S 32 T	4N R 9E		
Landform (hillslope, terrace, etc.): Terrace		Local relief	(concave, c	convex, none): flat	Slope	e: <u>0.0</u> %	o/0.0_°
ubregion (LRR): LRR E	Lat.: 46	.324991		Long.: -110.382425		Datum: W	GS84
pil Map Unit Name: Meadowcreek, rarely flooded-Nesda co	mplex, 0 to 2	2% slopes		NWI class	ification: Upland		
e climatic/hydrologic conditions on the site typical for this			o No			<u> </u>	
	ignificantly		Are "N	ormal Circumstances"	•	o No	\bigcirc
	naturally pro			eded, explain any answ	•		
Summary of Findings - Attach site map sh			-			-	es, etc.
Hydrophytic Vegetation Present? Yes O No 💿		Te the	Sampled A	Aroa			
Hydric Soil Present? Yes No 💿			•	V O N- O			
Wetland Hydrology Present? Yes O No 💿		withir	a Wetland	17 163 0 160 0			
Remarks:		•					
Sample point established west of the channel on an uplan	d bench bety	ween wetland	ds.				
ALECETATION III II III II III II III II III II III II II II III II							
VEGETATION - Use scientific names of plan	ts.	DominantSpecies? .					
Tree Stratum (Plot size: 30 Foot Radius)	Absolute % Cover	Rel.Strat. Cover	Indicator Status	Dominance Test wor	ksheet:		
1,		0.0%		Number of Dominant S That are OBL, FACW, o		1	(A)
2.		0.0%					(-)
3		0.0%		Total Number of Domin Species Across All Strat		2	(B)
4	0	0.0%					()
Sapling/Shrub Stratum (Plot size: 15 Foot Radius)	0	= Total Cove	er	Percent of dominant That Are OBL, FACW		50.0%	(A/B)
1	0	0.0%		Prevalence Index wo	rksheet:		
2		0.0%		Total % Cover	of: Multipl	y by:	_
3		0.0%		OBL species	0 x 1 =	0	
4		0.0%			0 x 2 =	0	
5		0.0%		FAC species	64 x 3 =	192	
Herb Stratum (Plot size: 5 Foot Radius)	0	= Total Cove	er	FACU species —	0 x 4 =	0	
1 Elymus repens	30	✓ 33.7%	FAC	UPL species —	25 x 5 =	125	
2 Bromus inermis	25	28.1%	UPL	Column Totals: _	89 (A)	317	(B)
3. Poa pratensis	15	16.9%	FAC	Prevalence Inde	x = B/A =	3.562	
4. Phleum pratense	15	16.9%	FAC	Hydrophytic Vegetati	ion Indicators		
5_Leymus cinereus	2	2.2%	FAC	1 - Rapid Test for		etation	
6. Equisetum arvense		1.1%	FAC	2 - Dominance Te		etation	
7_Agrostis stolonifera		1.1%	FAC	3 - Prevalence Inc			
8.		0.0%		4 - Morphological	Adaptations 1 (Provide sun	norting
9. 10.		0.0%			ks or on a separa		porting
11.	_	0.0%		5 - Wetland Non-	Vascular Plants	1	
11.	89	= Total Cove		Problematic Hydro	ophytic Vegetati	on ¹ (Expla	in)
Woody Vine Stratum (Plot size: 30 Foot Radius)				1 Indicators of hydric	soil and wetlan	d hydrolog	y must
1	0	0.0%		be present, unless di	sturbed or prob	lematic.	
2.		0.0%		Hydrophytic			
	0	= Total Cov	er	Vegetation Present? Yes	O No •		
	•				- 110		

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil									
Profile Desc	ription: (Desc	ribe to the	depth need	ed to document	the ind	icator or c	onfirm the	absence of indicato	ors.)
Depth	M	latrix		Red	ox Featı				
(inches)	Color (m	oist)	<u>%</u> _ (Color (moist)	<u>%</u>	Type 1	Loc ²	Texture	Remarks
0-14	10YR	3/2	100					Silt Loam	
14-18	10YR	3/2	100					Silt Loam	with 10% rocks
					-				
Type: C-Cor	econtration D-	Depletion D	M-Paducad I	Matrix, CS=Covere	ad or Coa	ted Sand G	rains 21 oc	cation: PL=Pore Lining	
		•		unless otherwis			Tallis Loc		Problematic Hydric Soils ³ :
Histosol (-	приношьно п] [Sandy Redox (.,		2 cm Muck (•
	pedon (A2)		[Stripped Matri	. ,			_ `	Material (TF2)
Black His	tic (A3)			Loamy Mucky	Mineral (F1) (except	in MLRA 1)	=	in in Remarks)
L Hydroger	Sulfide (A4)		Ĺ	Loamy Gleyed	•	=2)			
Depleted	Below Dark Su	rface (A11)	[Depleted Matr	. ,				
	rk Surface (A12	•	l [Redox Dark SubstitutionDepleted Dark	•	•			ophytic vegetation and
	uck Mineral (S1	•	[Redox depress		. ,			ogy must be present, d or problematic.
-	eyed Matrix (S4		L	Redox depress	510113 (1 0)	<u>'</u>		4555 4.554.55	a or problematic.
	ayer (if prese	-							
Type:								Hydric Soil Prese	nt? Yes O No 💿
Depth (inc	ines):			_				•	165 5 116 5
lydric soil in	dicators were	not observ	ed within t	nis data point. T	his area	ı was subj	ected to hi	storic plowing with	the potential for a plow zone
Hydric soil in	dicators were	not observ	ed within t	nis data point. T	his area	ı was subj	ected to hi	storic plowing with	the potential for a plow zone
Hydric soil in profile.		not observ	ed within t	nis data point. T	his area	ı was subj	ected to hi	storic plowing with	the potential for a plow zone
rofile.			ed within t	nis data point. T	his area	ı was subj	ected to hi	storic plowing with	the potential for a plow zone
Hydric soil in orofile. Hydrolog Wetland Hyd	y drology Indica	ators:		nis data point. T		ı was subj	ected to hi		the potential for a plow zone Indicators (minimum of two requi
Hydric soil in orofile. Hydrolog Wetland Hyd Primary Ind Surface N	y drology Indica icators (minin Water (A1)	ators:		theck all that ap	oply)ed Leaves			Secondary Water-5	Indicators (minimum of two requi Stained Leaves (B9) (MLRA 1, 2,
Hydric soil in rofile. Hydrolog Wetland Hyd Primary Ind Surface V High Wa	y drology Indica icators (minin Water (A1) ter Table (A2)	ators:		heck all that ap Water-Stain 1, 2, 4A, and	oply) ed Leaves d 4B)			Secondary Water-S 4A, and	Indicators (minimum of two requi Stained Leaves (B9) (MLRA 1, 2, 14B)
Hydric soil in orofile. Hydrolog Wetland Hyd Primary Ind Surface N	y drology Indica icators (minin Water (A1) ter Table (A2)	ators:		check all that ap Water-Stain 1, 2, 4A, and Salt Crust (E	oply)ed Leavesti 4B)	s (B9) (exce		Secondary Water-S 4A, and	Indicators (minimum of two requi Stained Leaves (B9) (MLRA 1, 2,
Hydric soil in profile. Hydrolog Wetland Hyd Primary Ind Surface V High Wa Saturatic Water M	y drology Indica icators (minin Water (A1) ter Table (A2) on (A3) arks (B1)	ators:		check all that ap Water-Stain 1, 2, 4A, and Salt Crust (E	oply) ed Leaves 1 4B) 311) ertebrates	s (B9) (exce		Secondary Water-s 4A, and Drainag Dry Sea	Indicators (minimum of two requi Stained Leaves (B9) (MLRA 1, 2, 1 4B) ge Patterns (B10) gson Water Table (C2)
Hydric soil in profile. Hydrolog Wetland Hyd Primary Ind Surface V High Wa Saturatic Water M Sedimen	y drology Indica icators (minin Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2)	ators:		check all that ap Water-Staine 1, 2, 4A, and Salt Crust (E Aquatic Inve	oply) ed Leaves 1 4B) 111) ertebrates ulfide Odd	s (B9) (exce s (B13) or (C1)	pt MLRA	Secondary Water 4A, and Drainag Dry Sea	Indicators (minimum of two requirectained Leaves (B9) (MLRA 1, 2, 14B) Justine Patterns (B10) Justines on Water Table (C2) Justines on Aerial Imagery (C9)
Hydric soil in orrofile. Hydrolog Wetland Hyd Primary Ind Surface V High Wa Saturatic Water M. Sedimen Drift dep	y drology Indicaticators (mining Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) posits (B3)	ators:		check all that ap Water-Staine 1, 2, 4A, and Salt Crust (E Aquatic Inve	oply) ed Leaves 1 4B) 311) ertebrates ulfide Odo zosphere	s (B9) (exce s (B13) or (C1) s on Living	pt MLRA	Secondary Water-S 4A, and Drainag Dry Sea Saturat Geomo	Indicators (minimum of two requirectained Leaves (B9) (MLRA 1, 2, 14B) Justine Patterns (B10) Justines Sand Water Table (C2) Justines Sand Sand Sand Sand Sand Sand Sand Sand
Hydric soil in profile. Hydrolog Wetland Hyd Primary Ind Surface V High Wa Saturatic Water M. Sedimen Drift dep Algal Ma	y drology Indicaticators (mining Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) dosits (B3) t or Crust (B4)	ators:		check all that ag Water-Staine 1, 2, 4A, and Salt Crust (E Aquatic Inve Hydrogen St Oxidized Rhi	oply) ed Leaves 1 4B) 311) ertebrates ulfide Odo zosphere Reduced	s (B9) (exce s (B13) or (C1) s on Living Iron (C4)	ept MLRA Roots (C3)	Secondary Water-9 4A, and Drainag Dry Sea Saturat Geomoi	Indicators (minimum of two requirestained Leaves (B9) (MLRA 1, 2, 14B) ge Patterns (B10) geson Water Table (C2) gion Visible on Aerial Imagery (C9) graphic Position (D2)
Hydric soil in profile. Hydrolog Wetland Hyd Primary Ind Surface V High Wa Saturatic Water M. Sedimen Drift dep Algal Ma Iron Dep	y drology Indicaticators (mining Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) vosits (B3) t or Crust (B4) vosits (B5)	ators: num of one		check all that ap Water-Staine 1, 2, 4A, and Salt Crust (E Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron	oply) ed Leaves d 4B) B11) ertebrates ulfide Odd zosphere Reduced Reductio	s (B9) (exce s (B13) or (C1) s on Living Iron (C4) n in Tilled S	ppt MLRA Roots (C3) oils (C6)	Secondary Water-9 4A, and Drainag Dry Sea Saturat Geomon Shallow FAC-ne	Indicators (minimum of two requirestained Leaves (B9) (MLRA 1, 2, 14B) ge Patterns (B10) geson Water Table (C2) gion Visible on Aerial Imagery (C9) graphic Position (D2) graphic Aquitard (D3) gutral Test (D5)
Hydrolog Hydrolog Wetland Hyd Surface V High Wa Saturatic Water M. Sedimen Drift dep Algal Ma Iron Dep	ydrology Indicaticators (mining Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) toosits (B3) t or Crust (B4) cosits (B5) Soil Cracks (B6)	ators: num of one	e required; o	check all that ag Water-Staine 1, 2, 4A, and Salt Crust (E Aquatic Inve Hydrogen St Oxidized Rhi	oply) ed Leaves d 4B) B11) ertebrates ulfide Odd zosphere Reduced Reductio	s (B9) (exce s (B13) or (C1) s on Living Iron (C4) n in Tilled S	ppt MLRA Roots (C3) oils (C6)	Secondary Water-S 4A, and Drainag Dry Sea Saturat Geomoi Shallow FAC-ne Raised	Indicators (minimum of two requirestained Leaves (B9) (MLRA 1, 2, 14B) De Patterns (B10) Deson Water Table (C2) Deson Visible on Aerial Imagery (C9) Desorreptic Position (D2) Desorreptic Aquitard (D3) Desorreptic (D5) Ant Mounds (D6) (LRR A)
Hydric soil in rofile. Hydrolog Wetland Hyd Surface V High Wa Saturatic Water M. Sedimen Drift dep Algal Ma Iron Dep Surface S	y drology Indicaticators (mining Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) vosits (B3) t or Crust (B4) vosits (B5)	ators: num of one	e required; o	check all that ap Water-Staine 1, 2, 4A, and Salt Crust (E Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron	oply) ed Leaves 1 4B) 811) ertebrates ulfide Odd zosphere Reduced Reductio stressed F	s (B9) (exce s (B13) or (C1) s on Living Iron (C4) n in Tilled S Plants (D1) (ppt MLRA Roots (C3) oils (C6)	Secondary Water-S 4A, and Drainag Dry Sea Saturat Geomoi Shallow FAC-ne Raised	Indicators (minimum of two requirestained Leaves (B9) (MLRA 1, 2, 14B) ge Patterns (B10) geson Water Table (C2) gion Visible on Aerial Imagery (C9) graphic Position (D2) graphic Aquitard (D3) gutral Test (D5)
Hydric soil in profile. Hydrolog Wetland Hyd Primary Ind Surface V High Wa Saturatic Water M Sedimen Drift dep Algal Ma Iron Dep Surface S Inundati	ydrology Indicaticators (mining Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) toosits (B3) t or Crust (B4) cosits (B5) Soil Cracks (B6)	ators: num of one	e required; o	check all that ap Water-Stain 1, 2, 4A, and Salt Crust (E Aquatic Inve Hydrogen Si Oxidized Rhi Presence of Recent Iron Stunted or S	oply) ed Leaves 1 4B) 811) ertebrates ulfide Odd zosphere Reduced Reductio stressed F	s (B9) (exce s (B13) or (C1) s on Living Iron (C4) n in Tilled S Plants (D1) (ppt MLRA Roots (C3) oils (C6)	Secondary Water-S 4A, and Drainag Dry Sea Saturat Geomoi Shallow FAC-ne Raised	Indicators (minimum of two requirestained Leaves (B9) (MLRA 1, 2, 14B) De Patterns (B10) Deson Water Table (C2) Deson Visible on Aerial Imagery (C9) Desorreptic Position (D2) Desorreptic Aquitard (D3) Desorreptic (D5) Ant Mounds (D6) (LRR A)
Hydric soil in profile. Hydrolog Wetland Hyd Surface V High Wa Saturatic Water M Sedimen Drift dep Algal Ma Iron Dep Surface S Inundatic Sparsely	y drology Indicaticators (mining Water (A1)) ter Table (A2) on (A3) arks (B1) t Deposits (B2) posits (B3) t or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Ae Vegetated Con	ators: num of one erial Imagery cave Surface	e required; of the required; of (B7) to (B8)	check all that ap Water-Stain 1, 2, 4A, and Salt Crust (E Aquatic Inve Hydrogen Si Oxidized Rhi Presence of Recent Iron Stunted or S	oply) ed Leaves 1 4B) s11) ertebrates ulfide Odd zosphere Reduced Reductio stressed F	s (B9) (exce s (B13) or (C1) s on Living Iron (C4) n in Tilled S Plants (D1) (ppt MLRA Roots (C3) oils (C6)	Secondary Water-S 4A, and Drainag Dry Sea Saturat Geomoi Shallow FAC-ne Raised	Indicators (minimum of two requirestained Leaves (B9) (MLRA 1, 2, 14B) De Patterns (B10) Deson Water Table (C2) Deson Visible on Aerial Imagery (C9) Desorreptic Position (D2) Desorreptic Aquitard (D3) Desorreptic (D5) Ant Mounds (D6) (LRR A)
Hydric soil in profile. Hydrolog Wetland Hyd Surface V High Wa Saturatic Water M Sedimen Drift dep Algal Ma Iron Dep Surface S Inundatic Sparsely	y drology Indicaticators (mining Water (A1)) ter Table (A2) on (A3) arks (B1) t Deposits (B2) sosits (B3) t or Crust (B4) sosits (B5) Soil Cracks (B6) on Visible on Active Vegetated Contractions:	erial Imagery cave Surface	e required; o	check all that ap Water-Stain 1, 2, 4A, and Salt Crust (E Aquatic Inve Hydrogen Si Oxidized Rhi Presence of Recent Iron Stunted or S	oply) ed Leaves 1 4B) stebrates ulfide Odd zosphere Reduced Reductio Stressed F sin in Ren	s (B9) (exce s (B13) or (C1) s on Living Iron (C4) n in Tilled S Plants (D1) (ppt MLRA Roots (C3) oils (C6)	Secondary Water-S 4A, and Drainag Dry Sea Saturat Geomoi Shallow FAC-ne Raised	Indicators (minimum of two requirestained Leaves (B9) (MLRA 1, 2, 14B) De Patterns (B10) Deson Water Table (C2) Deson Visible on Aerial Imagery (C9) Desorreptic Position (D2) Desorreptic Aquitard (D3) Desorreptic (D5) Ant Mounds (D6) (LRR A)
Hydric soil in profile. Hydrolog Wetland Hyd Primary Ind Surface V High Wa Saturatic Water M. Sedimen Drift dep Algal Ma Iron Dep Surface Sparsely Field Observ Surface Water	y drology Indicaticators (mining Water (A1)) ter Table (A2) on (A3) arks (B1) t Deposits (B2) dosits (B3) t or Crust (B4) dosits (B5) Soil Cracks (B6) on Visible on Active (B6) Vegetated Contractions: r Present?	ators: num of one erial Imagery cave Surface	e required; of the required; of (B7) to (B8)	check all that ap Water-Stain 1, 2, 4A, and Salt Crust (E Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron Stunted or S Other (Explain	oply) ed Leaves 1 4B) 811) ertebrates ulfide Odo zosphere Reduced Reductio Stressed F hin in Ren	s (B9) (exce s (B13) or (C1) s on Living Iron (C4) n in Tilled S Plants (D1) (ept MLRA Roots (C3) oils (C6) (LRR A)	Secondary Water-S 4A, and Drainag Dry Sea Saturat Geomo Shallow FAC-ne Raised Frost H	Indicators (minimum of two requirestained Leaves (B9) (MLRA 1, 2, 14B) Be Patterns (B10) Be Patterns (B10) Be Patterns (B10) Be Patterns (B10) Be Patterns (B2) Be Patterns (D2) Be Patterns (D2) Be Patterns (D3) Be Patterns (D4) Be Patte
Hydric soil incorofile. Hydrolog Wetland Hyd Surface M High Wa Saturatio Water M Sedimen Drift dep Algal Ma Iron Dep Surface S Inundation	y drology Indicaticators (mining water (A1)) ter Table (A2) on (A3) arks (B1) t Deposits (B2) dosits (B3) t or Crust (B4) dosits (B5) Soil Cracks (B6) on Visible on Active Vegetated Contractions: r Present? ersent?	erial Imagery cave Surface	required; of (B7) e (B8)	check all that ap Water-Staine 1, 2, 4A, and Salt Crust (E Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron Stunted or S Other (Explain	oply) ed Leaves d 4B) st11) ertebrates ulfide Odd zosphere Reduced Reductio Stressed F ain in Ren hes):	s (B9) (exce s (B13) or (C1) s on Living Iron (C4) n in Tilled S Plants (D1) (ept MLRA Roots (C3) oils (C6) (LRR A)	Secondary Water-S 4A, and Drainag Dry Sea Saturat Geomoi Shallow FAC-ne Raised	Indicators (minimum of two requirestained Leaves (B9) (MLRA 1, 2, 14B) Be Patterns (B10) Be Patterns (B10) Be Patterns (B10) Be Patterns (B10) Be Patterns (B2) Be Patterns (D2) Be Patterns (D2) Be Patterns (D3) Be Patterns (D4) Be Patte
Hydric soil incorofile. Hydrolog Wetland Hyd Primary Ind Surface V High Wa Saturatio Water M. Sedimen Drift dep Algal Ma Iron Dep Surface S Inundatio Sparsely Field Observ Surface Water Table F Saturation Pre (includes capi	y drology Indicaticators (mining Water (A1)) ter Table (A2) on (A3) arks (B1) t Deposits (B2) posits (B3) t or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Active Vegetated Contractions: ar Present? present? present? present? present? present?	erial Imagery cave Surface Yes O Yes O Yes O	(B7) (B8) No No No No No No No No	check all that ap Water-Staine 1, 2, 4A, and Salt Crust (E Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron Stunted or S Other (Explain	oply) ed Leaves 1 4B) 311) ertebrates ulfide Odd zosphere Reduced Reductio Stressed F hin in Ren hes):	s (B9) (exce s (B13) or (C1) s on Living Iron (C4) n in Tilled S Plants (D1) (ept MLRA Roots (C3) oils (C6) (LRR A) Wetla	Secondary Water-S 4A, and Drainag Dry Sea Saturat Geomo Shallow FAC-ne Raised Frost H	Indicators (minimum of two requirestained Leaves (B9) (MLRA 1, 2, 14B) Be Patterns (B10) Be Patterns (B10) Be Patterns (B10) Be Patterns (B10) Be Patterns (B2) Be Patterns (D2) Be Patterns (D2) Be Patterns (D3) Be Patterns (D4) Be Patte
Hydric soil in profile. Hydrolog Wetland Hyd Primary Ind Surface V High Wa Saturatic Water M. Sedimen Drift dep Algal Ma Iron Dep Surface S Inundatic Sparsely Field Observ Surface Water Table F Saturation Pre(includes capi	y drology Indicaticators (mining Water (A1)) ter Table (A2) on (A3) arks (B1) t Deposits (B2) posits (B3) t or Crust (B4) posits (B5) Soil Cracks (B6) on Visible on Active Vegetated Contractions: ar Present? present? present? present? present? present?	erial Imagery cave Surface Yes O Yes O Yes O	(B7) (B8) No No No No No No No No	check all that ap Water-Staine 1, 2, 4A, and Salt Crust (E Aquatic Inve Hydrogen St Oxidized Rhi Presence of Recent Iron Stunted or S Other (Explain	oply) ed Leaves 1 4B) 311) ertebrates ulfide Odd zosphere Reduced Reductio Stressed F hin in Ren hes):	s (B9) (exce s (B13) or (C1) s on Living Iron (C4) n in Tilled S Plants (D1) (ept MLRA Roots (C3) oils (C6) (LRR A) Wetla	Secondary Water-S 4A, and Drainag Dry Sea Saturat Geomo Shallow FAC-ne Raised Frost H	Indicators (minimum of two requirestained Leaves (B9) (MLRA 1, 2, 14B) Be Patterns (B10) Be Patterns (B10) Be Patterns (B10) Be Patterns (B10) Be Patterns (B2) Be Patterns (D2) Be Patterns (D2) Be Patterns (D3) Be Patterns (D4) Be Patte

US Army Corps of Engineers

Western Mountains, Valleys, and Coast - Version 2.0

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

Project/Site: Easton	(ity/County:	Park	Sampling Date: 26-Jul-19
Applicant/Owner: MDT				State: MT Sampling Point: DP-2W
Investigator(s): Cindy Hoschouer, Tanner Traxler		Section, To	wnship, Ra	ange: S 32
Landform (hillslope, terrace, etc.): Floodplain		Local relief	(concave, c	convex, none): concave Slope: 0.0 % / 0.0 c
Subregion (LRR): LRR E	Lat.: 46	.32600		Long.: -110.38244 Datum: WGS84
Soil Map Unit Name: Meadowcreek, rarely flooded-Nesda cor	mplex, 0 to 2	2% slopes		NWI classification: Upland
re climatic/hydrologic conditions on the site typical for this t	ime of year	? Yes	s • No C	
	ignificantly		Are "N	ormal Circumstances" present? Yes No
	aturally pro			eded, explain any answers in Remarks.)
Summary of Findings - Attach site map sho			•	
Hydrophytic Vegetation Present? Yes No O		Tatha	Campled A	N
Hydric Soil Present? Yes No			Sampled A	Vac A Na
Wetland Hydrology Present? Yes ● No ○		withir	n a Wetland	17 165 0 140 0
Remarks:		II.		
Wetland data point within a shallow depression near the so	outhwestern	project bou	ndary.	
VEGETATION - Use scientific names of plant	:S.	Dominant		
			Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30 Foot Radius</u>)	% Cover		Status	Number of Dominant Species
1		0.0%		That are OBL, FACW, or FAC:3 (A)
2. 3.		0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata:3(B)
4.		= Total Cove		Percent of dominant Species
Sapling/Shrub Stratum (Plot size: 15 Foot Radius)	0	- Total Cov	EI	That Are OBL, FACW, or FAC: 100.0% (A/B)
1. Alnus incana	10	✓ 100.0%	FACW	Prevalence Index worksheet:
2	0	0.0%		Total % Cover of: Multiply by:
3	0	0.0%		OBL species <u>25</u> x 1 = <u>25</u>
4	0	0.0%		FACW species <u>60</u> x 2 = <u>120</u>
5	0	0.0%		FAC species15
(5)	10	= Total Cov	er	FACU species $0 \times 4 = 0$
Herb Stratum (Plot size: 5 Foot Radius)	25	20.004	5. O. /	UPL species $0 \times 5 = 0$
1 Juncus balticus	35	38.9%	FACW	Column Totals: 100 (A) 190 (B)
Carex pellita Populus angustifolia		✓ 22.2%	OBL FACW	Prevalence Index = B/A = 1.900
△ Equisetum arvense	5	5.6%	FAC	,
5 Salix lutea	5	5.6%	OBL	Hydrophytic Vegetation Indicators:
6. Phleum pratense	5	5.6%	FAC	✓ 1 - Rapid Test for Hydrologic Vegetation
7_Salix drummondiana	5	5.6%	FACW	2 - Dominance Test is > 50%
8. Lotus corniculatus	5	5.6%	FAC	✓ 3 - Prevalence Index is ≤3.0 ¹
9. Deschampsia cespitosa	5	5.6%	FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
10.—		0.0%		5 - Wetland Non-Vascular Plants 1
11.————		0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
Wood Was Charles (Diet size, 20 Feet Pedius)	90	= Total Cov	er	Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size: 30 Foot Radius)	0	0.0%		be present, unless disturbed or problematic.
12.	0	0.0%		Hydrophytic
۷	0	= Total Cove		Vegetation V A N-
		- Total Cov	EI	Present? Yes VO
% Bare Ground in Herb Stratum: 10				

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil									Sampling Poi	nt: DP-2W
Profile Descr	iption: (Desc	ribe to the	depth nee	ded to documen	t the indi	cator or co	onfirm the	absence of indicato	ors.)	
Depth	N	latrix		Red	dox Featu	ires				
(inches)	Color (m	oist)	%	Color (moist)	%	Type 1	Loc ²	Texture	<u>R</u>	emarks
0-6	10YR	3/2	100					Silt Loam		
6-12	10YR	3/2	98	10YR 4/6	2	RM	М	Silty Clay Loam		
12+									60% gravels	3" or less
								-		
 ¹ Type: C=Con	centration. D=	Depletion, R	M=Reduced	Matrix, CS=Cover	ed or Coat	ed Sand Gr	ains ² Loc	cation: PL=Pore Lining	ı. M=Matrix	
				, unless otherwis					Problematic Hydric	Soils ³ :
Histosol (•			Sandy Redox		,		2 cm Muck (•	
_ `	pedon (A2)			Stripped Matr	. ,			`	Material (TF2)	
Black Hist	tic (A3)			Loamy Mucky	Mineral (I	=1) (except	in MLRA 1)		in in Remarks)	
	Sulfide (A4)			Loamy Gleyed	•	2)				
_ '	Below Dark Su	` ,		Depleted Mati	` ,					
	k Surface (A12	•		Redox Dark S Depleted Dark	•	,			rophytic vegetation a	
_ `	ick Mineral (S1	•		Redox depres					ogy must be present, d or problematic.	
	eyed Matrix (Sa ayer (if prese	-								
	ayer (ir prese	ent):								
Type:	d= ==\.							Hydric Soil Prese	nt? Yes •	No O
	.nes)									
Depth (inc Remarks: Hydric soil inc	dicators were	observed	within this	data point. Redo	ox noted	at 6".				
Remarks:	dicators were	observed v	within this	data point. Redo	ox noted	at 6".				
Remarks: Hydric soil ind		observed v	within this	data point. Redo	ox noted	at 6".				
Remarks: Hydric soil ind			within this	data point. Redo	ox noted	at 6".				
Remarks: Hydric soil ind Hydrology Wetland Hyd	Y Irology Indic	ators:		data point. Redo		at 6".		Secondary	Indicators (minimi	um of two require
Remarks: Hydric soil ind Hydrolog Wetland Hyd Primary Indi	Y Irology Indic	ators:		check all that a	pply) ned Leaves		pt MLRA	Water-9	Stained Leaves (B9)	
Remarks: Hydric soil ind Hydrology Wetland Hyd Primary Indi Surface V High Wat	y Irology Indicaticators (minin Water (A1) ter Table (A2)	ators:		check all that a	pply) ned Leaves		pt MLRA		Stained Leaves (B9)	
Remarks: Hydric soil ind Hydrology Wetland Hyd Primary Indi Surface V High Wat	y Irology Indicaticators (minin Water (A1) ter Table (A2)	ators:		check all that and water-Stain 1, 2, 4A, an Salt Crust (I	pply) led Leaves d 4B) B11)	s (B9) (exce	pt MLRA	Water-S 4A, and Drainag	Stained Leaves (B9) I 4B) ge Patterns (B10)	(MLRA 1, 2,
Hydrology Wetland Hyd Primary Indi Surface V High Wat Water Ma	y Irology Indica icators (minin Water (A1) ter Table (A2) on (A3) arks (B1)	ators: num of one		check all that ap Water-Stain 1, 2, 4A, an	pply) led Leaves d 4B) B11)	s (B9) (exce	pt MLRA	Water-S 4A, and Drainag Dry Sea	Stained Leaves (B9) I 4B) ge Patterns (B10) ason Water Table (C2	(MLRA 1, 2,
Hydrology Wetland Hyd Primary Indi Surface N High Wat V Saturatio Water Ma	y Irology Indicaticators (mining Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2)	ators: num of one		check all that and water-Stain 1, 2, 4A, an Salt Crust (I	pply) led Leaves d 4B) B11) ertebrates	(B9) (exce	pt MLRA	Water-S 4A, and Drainag Dry Sea	Stained Leaves (B9) I 4B) ge Patterns (B10)	(MLRA 1, 2,
Hydrolog Wetland Hyd Surface V High Wat Saturatio Water Ma Sediment Drift dep	y Irology Indicaticators (mining Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3)	ators: num of one		check all that ap Water-Stain 1, 2, 4A, an Salt Crust (I Aquatic Inve	pply) ned Leaves d 4B) B11) ertebrates julfide Odo	(B9) (exce (B13) or (C1) s on Living I		Water-9 4A, and Drainag Dry Sea	Stained Leaves (B9) I 4B) ge Patterns (B10) ason Water Table (C2	(MLRA 1, 2,
Hydrolog Wetland Hyd Primary Indi Surface V High Wat Saturatio Water Ma Sediment Drift dep	y Irology Indicaticators (mining Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2)	ators: num of one		check all that ap Water-Stain 1, 2, 4A, an Salt Crust (I Aquatic Invo	pply) ned Leaves d 4B) B11) ertebrates julfide Odo	(B9) (exce (B13) or (C1) s on Living I		Water-5 4A, and Drainag Dry Sea Saturat Geomo	Stained Leaves (B9) I 4B) ge Patterns (B10) ason Water Table (C2 ion Visible on Aerial	(MLRA 1, 2,
Hydrology Wetland Hyd Saturatio Water Ma Sediment Algal Mat	y Irology Indicaticators (mining Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3)	ators: num of one		check all that ap Water-Stain 1, 2, 4A, an Salt Crust (I Aquatic Inve	pply) led Leaves d 4B) B11) ertebrates ulfide Odo iziosphere:	(B9) (exce (B13) or (C1) s on Living I Iron (C4)	Roots (C3)	Water-5 4A, and □ Drainag □ Dry Sea □ Saturat ☑ Geomol □ Shallow	Stained Leaves (B9) I 4B) ge Patterns (B10) ason Water Table (Ca ion Visible on Aerial rphic Position (D2)	(MLRA 1, 2,
Hydrology Wetland Hyd Primary Indi Surface V High Wat V Saturatio Water Ma Sediment Drift dep Algal Mat	y Irology Indicaticators (mining Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)	ators: num of one		check all that ap Water-Stain 1, 2, 4A, an Salt Crust (I Aquatic Invo Hydrogen S Oxidized Rh Presence of	pply) led Leaves d 4B) B11) ertebrates ulfide Odo lizosphere: Reduced Reduction	(B13) or (C1) s on Living I Iron (C4) n in Tilled Se	Roots (C3)	Water-5 4A, and Drainag Dry Sea Saturat Geomoi Shallow FAC-ne	Stained Leaves (B9) (1 4B) ge Patterns (B10) ason Water Table (C2 ion Visible on Aerial rphic Position (D2) v Aquitard (D3)	(MLRA 1, 2, 2) Imagery (C9)
Hydrology Wetland Hyd Primary Ind Surface N High Wat Water Ma Sediment Drift dep Algal Mat Iron Dep Surface S	y Irology Indicaticators (mining Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)	ators: num of one	e required;	check all that ap Water-Stain 1, 2, 4A, an Salt Crust (I Aquatic Invu Hydrogen S Oxidized Rh Presence of Recent Iron	pply) led Leaves d 4B) B11) ertebrates fulfide Odc lizospheres Reduced Reduction Stressed P	(B13) or (C1) s on Living I Iron (C4) n in Tilled Solants (D1) (Roots (C3)	Water-5 4A, and □ Drainag □ Dry Sea □ Saturat ☑ Geomoi □ Shallow ☑ FAC-ne □ Raised	Stained Leaves (B9) (1 4B) ge Patterns (B10) geson Water Table (C2 ion Visible on Aerial rphic Position (D2) r Aquitard (D3) utral Test (D5)	(MLRA 1, 2, 2) Imagery (C9)
Remarks: Aydric soil ind Aydrology Wetland Hyd Primary Indi Surface N High Wat V Saturatio Water Ma Sediment Drift dep Algal Mat Iron Dep Surface S Inundation	y Irology Indicaticators (mining Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6)	ators: num of one	e required;	check all that and the second of the second	pply) led Leaves d 4B) B11) ertebrates fulfide Odc lizospheres Reduced Reduction Stressed P	(B13) or (C1) s on Living I Iron (C4) n in Tilled Solants (D1) (Roots (C3)	Water-5 4A, and □ Drainag □ Dry Sea □ Saturat ☑ Geomoi □ Shallow ☑ FAC-ne □ Raised	Stained Leaves (B9) (14B) ge Patterns (B10) ason Water Table (C2) ion Visible on Aerial (C2) rephic Position (D2) rephic Aquitard (D3) utral Test (D5) Ant Mounds (D6) (LF	(MLRA 1, 2, 2) Imagery (C9)
Remarks: Hydric soil ind Hydrology Wetland Hyd Primary Indi Surface N High Wat V Saturatio Water Ma Sediment Drift dep Algal Mat Iron Dep Surface S Inundatio Sparsely	y Irology Indicaticators (mining Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Av	ators: num of one	e required;	check all that and the second of the second	pply) led Leaves d 4B) B11) ertebrates fulfide Odc lizospheres Reduced Reduction Stressed P	(B13) or (C1) s on Living I Iron (C4) n in Tilled Solants (D1) (Roots (C3)	Water-5 4A, and □ Drainag □ Dry Sea □ Saturat ☑ Geomoi □ Shallow ☑ FAC-ne □ Raised	Stained Leaves (B9) (14B) ge Patterns (B10) ason Water Table (C2) ion Visible on Aerial (C2) rephic Position (D2) rephic Aquitard (D3) utral Test (D5) Ant Mounds (D6) (LF	(MLRA 1, 2, 2) Imagery (C9)
Remarks: Hydric soil ind Hydrology Wetland Hyd Primary Indi Surface N High Wat Saturatio Water Ma Sediment Drift dep Algal Mat Iron Dep Surface S Inundatic Sparsely	y Irology Indicaticators (mining Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on An Vegetated Cor	ators: num of one	e required;	check all that and the second of the second	pply) led Leaves d 4B) B11) ertebrates ulfide Odc lizospheres Reduced Reductior Stressed P ain in Rem	(B13) or (C1) s on Living I Iron (C4) n in Tilled Solants (D1) (Roots (C3)	Water-5 4A, and □ Drainag □ Dry Sea □ Saturat ☑ Geomoi □ Shallow ☑ FAC-ne □ Raised	Stained Leaves (B9) (14B) ge Patterns (B10) ason Water Table (C2) ion Visible on Aerial (C2) rephic Position (D2) rephic Aquitard (D3) utral Test (D5) Ant Mounds (D6) (LF	(MLRA 1, 2, 2) Imagery (C9)
Hydrology Wetland Hyd Primary Indi Surface V High Wat Saturatio Water Ma Sediment Drift dep Algal Mat Iron Dep Surface S Inundatio Sparsely Field Observ Surface Water	y Irology Indicators (mining Nater (A1)) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on And Vegetated Corestations:	ators: num of one erial Imagen	required; (B7) (B8)	check all that ap Water-Stain 1, 2, 4A, an Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	pply) led Leaves d 4B) B11) ertebrates ulfide Odc izospheres Reduced Reduction Stressed P ain in Rem	(B13) or (C1) s on Living I Iron (C4) n in Tilled Solants (D1) (Roots (C3)	Water-5 4A, and □ Drainag □ Dry Sea □ Saturat ☑ Geomoi □ Shallow ☑ FAC-ne □ Raised	Stained Leaves (B9) (14B) ge Patterns (B10) ason Water Table (C2) ion Visible on Aerial (C2) rephic Position (D2) rephic Aquitard (D3) utral Test (D5) Ant Mounds (D6) (LF	(MLRA 1, 2, 2) Imagery (C9)
Hydrology Wetland Hyd Primary Indi Surface V High Wat Saturatio Water Ma Sediment Drift dep Algal Mat Iron Dep Surface S Inundatic Sparsely Field Observ Surface Water	y Irology Indicators (mining Nater (A1)) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Active (B6) on Visible on Active (B6) or Visible on Active (B6)	num of one num of one erial Imagery cave Surface Yes O	required; (B7) (B8) No No No	check all that and the water-Stain 1, 2, 4A, and Salt Crust (I Aquatic Involuments Advised Rham Presence of Recent Iron Stunted or Stunted or Stunted Other (Explain	pply) led Leaves d 4B) B11) ertebrates ulfide Odc izospheres Reduced Reduction Stressed P ain in Rem	(B13) or (C1) s on Living I Iron (C4) n in Tilled Solants (D1) (Roots (C3) poils (C6) LRR A)	Water-5 4A, and □ Drainag □ Dry Sea □ Saturat ☑ Geomon □ Shallow ☑ FAC-ne □ Raised □ Frost H	Stained Leaves (B9) (14B) ge Patterns (B10) geon Water Table (Calion Visible on Aerial rephic Position (D2) (14 Aquitard (D3)) geon Art Mounds (D6) (LF) geon East (D5) Ant Mounds (D6) (LF) geon East (D7)	(MLRA 1, 2, 2) Imagery (C9)
Remarks: -lydric soil ind -lydrology Wetland Hyd Primary Indi Surface N High Wat Saturatio Water Ma Sediment Drift dep Algal Mat Iron Dep Surface S Inundation	y Irology Indicators (mining Nater (A1)) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on And Vegetated Corrections: Present?	ators: num of one erial Imagen	required; (B7) (B8)	check all that ap Water-Stain 1, 2, 4A, an Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	pply) led Leaves d 4B) B11) ertebrates sulfide Odc lizospheres Reduced Reductior Stressed P ain in Rem	(B13) or (C1) s on Living I Iron (C4) n in Tilled Solants (D1) (Roots (C3) poils (C6) LRR A)	Water-5 4A, and □ Drainag □ Dry Sea □ Saturat ☑ Geomoi □ Shallow ☑ FAC-ne □ Raised	Stained Leaves (B9) (14B) ge Patterns (B10) geon Water Table (Calion Visible on Aerial rephic Position (D2) (14 Aquitard (D3)) geon Art Mounds (D6) (LF) geon East (D5) Ant Mounds (D6) (LF) geon East (D7)	(MLRA 1, 2, 2) Imagery (C9) RR A)
Remarks: Alydric soil ind Alydrology Wetland Hyd Primary Indi Surface N High Wat Saturatio Water Ma Sediment Drift dep Algal Mat Iron Dep Surface S Inundatio Sparsely Field Observ Surface Water Water Table P Saturation Pre (includes capil	y Irology Indicators (mining Nater (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on And Vegetated Corrections: artions: articons: ar	num of one num of one perial Imagery cave Surface Yes Yes Yes Yes	required; (B7) e (B8) No No No No	check all that and the state of the control of the	pply) ned Leaves d 4B) B11) ertebrates iulfide Odc nizospheres Reduced Reduction Stressed P ain in Rem ches):	(B13) or (C1) s on Living I Iron (C4) n in Tilled Solants (D1) (narks)	Roots (C3) poils (C6) LRR A) Wetla	Water-5 4A, and □ Drainag □ Dry Sea □ Saturat ☑ Geomon □ Shallow ☑ FAC-ne □ Raised □ Frost H	Stained Leaves (B9) (14B) ge Patterns (B10) geon Water Table (Calion Visible on Aerial rephic Position (D2) (14 Aquitard (D3)) geon Art Mounds (D6) (LF) geon East (D5) Ant Mounds (D6) (LF) geon East (D7)	(MLRA 1, 2, 2) Imagery (C9) RR A)
Remarks: Alydric soil ind Alydrology Wetland Hyd Primary Indi Surface N High Wat Saturatio Water Ma Sediment Drift dep Algal Mat Iron Dep Surface S Inundatio Sparsely Field Observ Surface Water Water Table P Saturation Pre (includes capil	y Irology Indicators (mining Nater (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on And Vegetated Corrections: artions: articons: ar	num of one num of one perial Imagery cave Surface Yes Yes Yes Yes	required; (B7) e (B8) No No No No	check all that ap Water-Stain 1, 2, 4A, an Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	pply) ned Leaves d 4B) B11) ertebrates iulfide Odc nizospheres Reduced Reduction Stressed P ain in Rem ches):	(B13) or (C1) s on Living I Iron (C4) n in Tilled Solants (D1) (narks)	Roots (C3) poils (C6) LRR A) Wetla	Water-5 4A, and □ Drainag □ Dry Sea □ Saturat ☑ Geomon □ Shallow ☑ FAC-ne □ Raised □ Frost H	Stained Leaves (B9) (14B) ge Patterns (B10) geon Water Table (Calion Visible on Aerial rephic Position (D2) (14 Aquitard (D3)) geon Art Mounds (D6) (LF) geon East (D5) Ant Mounds (D6) (LF) geon East (D7)	(MLRA 1, 2, 2) Imagery (C9) RR A)
Remarks: Hydric soil ind Hydrology Wetland Hyd Primary Indi Surface V High Wat Saturatio Water Ma Sediment Drift dep Algal Mat Iron Dep Surface S Inundatio Sparsely Field Observ Surface Water Table P Saturation Pre (includes capil	y Irology Indicators (mining Nater (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on And Vegetated Corrections: artions: articons: ar	num of one num of one perial Imagery cave Surface Yes Yes Yes Yes	required; (B7) e (B8) No No No No	check all that ap Water-Stain 1, 2, 4A, an Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Explain	pply) ned Leaves d 4B) B11) ertebrates iulfide Odc nizospheres Reduced Reduction Stressed P ain in Rem ches):	(B13) or (C1) s on Living I Iron (C4) n in Tilled Solants (D1) (narks)	Roots (C3) poils (C6) LRR A) Wetla	Water-5 4A, and □ Drainag □ Dry Sea □ Saturat ☑ Geomon □ Shallow ☑ FAC-ne □ Raised □ Frost H	Stained Leaves (B9) (14B) ge Patterns (B10) geon Water Table (Calion Visible on Aerial rephic Position (D2) (14 Aquitard (D3)) geon Art Mounds (D6) (LF) geon East (D5) Ant Mounds (D6) (LF) geon East (D7)	(MLRA 1, 2, 2) Imagery (C9) RR A)

US Army Corps of Engineers

Western Mountains, Valleys, and Coast - Version 2.0

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

Project/Site: Easton		ity/County: P	ark	Sampling Date: 26-Jul-19
Applicant/Owner: MDT				State: MT Sampling Point: DP-3U
investigator(s): Cindy Hoschouer, Tanner Traxler		Section, Tow	nship, Ra	ange: S 32 T 4N R 9E
Landform (hillslope, terrace, etc.): Terrace		Local relief (c	oncave, c	convex, none): CONVEX Slope: 0.0 % / 0.0
Subregion (LRR): LRR E	Lat.: 46	.338212		Long.: -110.382360 Datum: WGS84
oil Map Unit Name: Meadowcreek, rarely flooded-Nesda cor				NWI classification: Upland
e climatic/hydrologic conditions on the site typical for this			● No C	
	ignificantly		Are "N	Iormal Circumstances" present? Yes No ○
Are Vegetation , Soil , or Hydrology n	aturally pro	blematic?		eded, explain any answers in Remarks.)
Summary of Findings - Attach site map sho			-	
Hydrophytic Vegetation Present? Yes No		To the G	ampled A	Avea
Hydric Soil Present? Yes ○ No ●			Sampled A	Vac O Na 📵
Wetland Hydrology Present? Yes ○ No ●		within a	a Wetland	d? 165 C NO C
Remarks:		•		
Dense vegetation in 2019.				
VEGETATION - Use scientific names of plant	S.	Dominant _Species?		
Tree Stratum (Plot size: 30 Foot Radius)	Absolute % Cover	Rel.Strat. I	ndicator Status	Dominance Test worksheet:
1		0.0%	rtutus	Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)
2		0.0%		(i)
3.		0.0%		Total Number of Dominant Species Across All Strata: 3 (B)
4		0.0%		Species Across Air Strata.
Sapling/Shrub Stratum (Plot size: 15 Foot Radius)	0	= Total Cover	'	Percent of dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)
1,	0	0.0%		Prevalence Index worksheet:
2	0	0.0%		Total % Cover of: Multiply by:
3	0	0.0%		OBL species 0 x 1 = 0
4	0	0.0%		FACW species
5	0	0.0%		FAC species <u>65</u> x 3 = <u>195</u>
(0) (1) (55 (10))	0	= Total Cover		FACU species $\frac{5}{}$ x 4 = $\frac{20}{}$
Herb Stratum (Plot size: 5 Foot Radius)	40	40.000	F4.0	UPL species $\frac{30}{}$ x 5 = $\frac{150}{}$
1_Elymus repens	40		FAC	Column Totals: <u>100</u> (A) <u>365</u> (B)
2_Bromus inermis 3 Poa pratensis	<u>30</u> 20		UPL FAC	Prevalence Index = B/A = 3.650
△ Phleum pratense	5		FAC	,
5 Dactylis glomerata	5	5.0%	FACU	Hydrophytic Vegetation Indicators:
6	0	0.0%		1 - Rapid Test for Hydrologic Vegetation
7	•	0.0%		✓ 2 - Dominance Test is > 50%
8.	0	0.0%		3 - Prevalence Index is ≤3.0 ¹
9	-	0.0%		4 - Morphological Adaptations 1 (Provide supporting data in Remarks or on a separate sheet)
10.————————————————————————————————————				5 - Wetland Non-Vascular Plants ¹
11.————————————————————————————————————		0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
(0) (1) (20 5 (10 1)	100	= Total Cover	'	
Woody Vine Stratum (Plot size: 30 Foot Radius)	0	0.00/		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1	0 0	0.0%		Hydrophytic
2	0			Vegetation Var A Na O
		= Total Cover		Present? Yes S NO C
% Bare Ground in Herb Stratum: ()				

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

ce: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains Location: PL=Pore Lining, M=Matrix sit Loam dense roots, Titter sit Load dense roots, Tit	Color (moist)				pan necu	ed to document the in		or marce	,
107R 3/1 100 Silt Loam Gense roots, 11tter	Silt Learn Dense Protest No Silt Learn Dense Protest No Depth (Inches) Dense Protest No Depth (Inches) Depth (Depth			<u> </u>				Remarks
Let B 109'R 3/2 100 Silt Loam Silt Loam Silt Loam	Sit Loam Sit Loam Sit Loam Sit Loam Sit Loam		-			70	TYPE LOC		
e: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains **Location: PL=Pore Lining. M=Matrix **Indicators: (Applicable to all LRRs, unless otherwise noted.)	e: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains **Lifts Suit Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators: (Applicable to all LRRs, unless otherwise noted.) Historic Epiped Matrix (SD)								
Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils 3: Isidosoi (A1) Isidosoi (A2)	inc Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			5/2 1				- Silt Loain	
ric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	inc Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)								
Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Histosol (A2) Histosol (A2) Black Histic (A3) Bepleted Below Dark Surface (A11) Bepleted Dark Surface (A12) Bepleted Dark Surface (A12) Bepleted Dark Surface (A11) Bepleted Dark Surface (A12) Bepleted Dark Su	Histosol (AL) Black Histos (AS) Black Histo (AS) Black Histo (AS) Black Histo (AS) Black Histo (AS) Black Histosol (AS) Black H								
Histosol (A1) Histosol (A2) Histosol (A1) H	Histosol (A1) Sandy Redox (S5) Sandy Redox (S5) Red Redox (S5) Red Redox (S5) Red Redox (S5) Red Redox (S5)								
Histosol (A1) Sandy Redox (S5) 2 cm Muck (A10) Red Parent Material (TF2) Black Histic (A3) Loany Mucky Mineral (F1) (except in MLRA 1) Thick (A3) Loany Gleyed Matrix (F2) Depleted Block Histic (A3) Depleted Block Histic (A3) Depleted Block Histic (A3) Depleted Block Histic (A3) Depleted Matrix (F2) Redox Dark Surface (A11) Depleted Matrix (F2) Redox Dark Surface (F6) Redox Dark Surface (F7) Redox Dark Surface (F8) Redox Dark Surface (F7) Redox Dark Surface (F8) Redox Dark Surface (F7) Redox Dark Surface (F8) Redox Dark Surface (F8) Redox Dark Surface (F8) Redox Dark Surface (F8) Redox Dark Surface (F7) Redox Dark Surface (F8) Redox Dark Surface (F7) Redox Dark Surface (F8) Redox Dark Surface (F8) Redox Dark Surface (F8) Redox Dark Surface (F8) Redox Dark Surface (F7) Redox	Histosel (A1)			•					
Histic Epipedon (A2)	Histic Epipedon (A2)		-	pplicable t	o all LRRs,	_	d.)		•
Black Histic (A3)	Black Histic (A3)	•	•		L [¬ ' ' '			` '
Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Sandy Muck Mineral (S1) Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Redox Dark Surface (F7) Redox Dark Surface (F7) Wethand Hydrology must be present, unless disturbed or problematic. Wethand hydrology must be present, unless disturbed or problematic. Wethand Hydrology Indicators: marks: ric soil indicators were not observed within this data point. ### Hydric Soil Present? Yes No ● ### Depth (inches): ### Wetland Hydrology Present? Yes No ● ### Depth (inches): ### Depth (inches): ### No ● ### Depth (inches): ### No ● ### Depth (inches): ### Wetland Hydrology Present? Yes No ● ### Depth (inches): ### Depth (inches): ### Wetland Hydrology Present? Yes No ● ### Depth (inches): ### Wetland Hydrology Present? Yes No ● ### Depth (inches): ### Wetland Hydrology Present? Yes No ● ### Depth (inches): ### Wetland Hydrology Present? Yes No ● ### Depth (inches): ### Wetland Hydrology Present? Yes No ● ### Depth (inches): ### Wetland Hydrology Present? Yes No ● ### Depth (inches): ### Wetland Hydrology Present? Yes No ● ### Depth (inches): ### Wetland Hydrology Present? Yes No ● ### Depth (inches): #### Wetland Hydrology Present? Yes No ● ### Depth (inches): #### Wetland Hydrology Present? Yes No ● ### Depth (inches): #### Wetland Hydrology Present? Yes No ● ### Depth (inches): #### Wetland Hydrology Present? Yes No ● ### Depth (inches): #### Depth (inches): #### Wetland Hydrology Present? Yes No ● #### Depth (inches): #### Wetland Hydrology Present? Yes No ● #### Depth (inches): #### De	Hydrogen Sulfide (A4)		,		[(F1) (except in MLPA		` ,
Depleted Below Dark Surface (A11)	Depleted Below Dark Surface (A11)		. ,		Ī	_ ' '	. ,	-) Utner (Exp	лані ні кеттагкs <i>)</i>
Thick Dark Surface (A12)	Thick Dark Surface (A12)			face (A11)	Ţ	_ ' '	,		
Sandy Muck Mineral (S1)	Sandy Muck Mineral (S1)			` ,	Ī	= ' ' '	=6)	3 Indicators of h	drophytic vegetation and
Sandy Gleyed Matrix (S4)	Sandy Gleyed Matrix (S4)	1	, ,			_ `	•	wetland hvdr	ology must be present,
strictive Layer (if present): Type: Depth (inches): Branks: Idric soil indicators were not observed within this data point. Part	Secondary Indicators (minimum of two required; check all that apply) Settand Hydrology Indicators: Imary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Salt Crust (B11) Water Marks (B1) Aquatic Invertebrates (B13) Drift deposits (B2) Hydrogon Sulfide Odor (C1) Drift deposits (B2) Algal Mat or Crust (B4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) Surface Soil Cracks (B6) Surface S	1 '	` ,			Redox depressions (F	3)		
Type:	Type:								
drology stland Hydrology Indicators: imary Indicators (minimum of one required; check all that apply) Secondary Indicators (minimum of two required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Sediment Deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Jalgal Mat or Crust (B4) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Metland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Unificators Secondary Indicators (minimum of two req Water-Stained Leaves (B9) (MLRA 1, 2, 44, and 4B) Advantadion Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches):	drology stand hydrology Indicators: imary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Satt Crust (B11) Water-Stained Leaves (B9) (except MLRA 4A, and 4B) Drainage Patterns (B10) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Sediment Deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-neutral Test (D5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Sed Observations: fface Water Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Scribe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:		, , ,						
drology tland Hydrology Indicators: mary Indicators (minimum of one required; check all that apply) Secondary Indicators (minimum of two required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) (except MLRA Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Water Table (A2) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Water Marks (B1) Aquatic Invertebrates (B13) Dry Season Water Table (C2) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Sediment Deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Sulface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Recent Iron Reduction in Tilled Soils (C6) FAC-neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Id Observations: face Water Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Depth (inches): Unation Present? Pr	drology Indicators were not observed within this data point. Application Comparison Comp		hes).					Hydric Soil Pres	sent? Voc Alo
taland Hydrology Indicators: mary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) (except MLRA High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3) Aquatic Invertebrates (B13) Algal Mat or Crust (B4) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Id Observations: face Water Present? Yes No Depth (inches):	tland Hydrology Indicators: mary Indicators (minimum of one required; check all that apply) Secondary Indicators (minimum of two required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3) Drift deposits (B3) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Ind Observations: face Water Present? Yes No Depth (inches): Drevides Agriculture Agree (Ba) Depth (inches): Destine Inches): Destine Inches (B1) Secondary Indicators (minimum of two required; check all that apply) Secondary Indicators (minimum of two required; check all that apply) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Drainage Patterns (B10) Drainage Patterns (B10) Drainage Patterns (B10) Dry Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Depth (inches): Depth (inches): Wetland Hydrology Present? Yes No No Depth (inches): Uration Present? Yes No No Depth (inches): Surface Soil Cracks (B6) Depth (inches): Surface Soil Cracks (B6) Depth (inches): Depth (inches	marks:		not observ	ed within th	- nis data point.		nyane son ries	res O NO O
Secondary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Salt Crust (B11) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Surface Water (Cate (B1)) Drainage Patterns (B10) Saturation Visible on Aerial Imagery (C9) Saturation Nisible on Aerial Imagery (C9) Shallow Aquitard (D3) Frost Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Sediment Deposits (B5) Depth (inches): The Country (C4) Drainage Patterns (B10)	Imary Indicators (minimum of one required; check all that apply) Secondary Indicators (minimum of two required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Salt Crust (B11) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3) Drift deposits (B3) Drift deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Sedimont Deposits (B8) Wetland Hydrology Present? Yes No Depth (inches): Depth (inches): Depth (inches): Depth (inches): Secondary Indicators (minimum of two req Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Water-Stained Leaves (B9) (MERA 1, 2, 4A, and 4B) Water-Stained Leaves (B9) (MERA 1, 2, 4A, and 4B) Water-Stained Leaves (B9) (MERA 1, 2, 4A, and 4B) Water-Stained Leaves (B9) (MERA 1, 2, 4A, and 4B) Water-Stained Leaves (B9) (MERA 1, 2, 4A, and 4B) Drift devosits (B1) Drift devosits (B1) Drift deposits (B1) Dry Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-neutral Test (D5) FAC-neutral Test (D5) Frost Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Wetland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Depth (inches): Saturation Present? Yes No Depth (inches): Dept	marks:	dicators were	not observ	ed within tl	- nis data point.		nyane son ries	res O NU O
Surface Water (A1)	Surface Water (A1)	emarks: dric soil ind	dicators were		ed within tl	- nis data point.		nyane son me.	res O NU O
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) High Water Table (A2) 1, 2, 4A, and 4B) 4A, and 4B) Drainage Patterns (B10) Drainage Patterns (B10) Dry Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Doxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-neutral Test (D5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Eld Observations: Inface Water Present? Yes No Depth (inches):	High Water Table (A2) Saturation (A3) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) High Water Table (A2) 1, 2, 4A, and 4B) Aquatic Invertebrates (B13) Aquatic Invertebrates (B13) Dry Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Drift deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Pepth (inches): Depth (inches): Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Under CEXPLAIN Inches): Depth (inches): Depth (inch	emarks: dric soil ind dric soil ind drology etland Hyd	dicators were Y Irology Indica	tors:					
Saturation (A3) Water Marks (B1) Aquatic Invertebrates (B13) Dry Season Water Table (C2) Hydrogen Sulfide Odor (C1) Drift deposits (B2) Drift deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Saturation (B10) Aquatic Invertebrates (B13) Aquatic Invertebrates (B13) Dry Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Doxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-neutral Test (D5) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Tront Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) Peth (inches): Depth (inches): Depth (inches): Depth (inches): Depth (inches): Depth (inches): Depth (inches):	Saturation (A3) Saturation (A3) Naturation (A3) Saturation (A3) Naturation (C2) Saturation (C2) Saturation (Visible on Aerial Imagery (C9) Oxidized Rhizospheres on Living Roots (C3) Geomorphic Position (D2) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Peld Observations: Inface Water Present? Yes No Depth (inches): Depth (inches): Sturtation Present? Yes No Depth (inches): Surface Water Present? Yes No Depth (inches): Sturtation Present? Yes No Depth (inches): Surface Water Present? Yes No Depth (inches): Surface Water Present? Yes No Depth (inches): Surface Water Present? Yes No No No No No Depth (inches): Surface Water Present? Yes No No No No No Depth (inches): Surface Water Present? Yes No No No No No No No No No N	emarks: dric soil ind dric soil ind drolog etland Hyd imary Indi	dicators were Y Irology Indica icators (minim	tors:		theck all that apply)		Secondar	y Indicators (minimum of two reg
Water Marks (B1)	Water Marks (B1)	emarks: dric soil ind rdrology etland Hyd imary Indi	dicators were Y Irology Indicaticators (minim Water (A1)	tors:		theck all that apply) Water-Stained Leav	es (B9) (except MLRA	Secondar Wate	y Indicators (minimum of two req r-Stained Leaves (B9) (MLRA 1, 2,
Sediment Deposits (B2)	Sediment Deposits (B2)	emarks: dric soil ind drology etland Hyd imary Indi Surface \ High Wat	y Irology Indicaticators (minim Nater (A1) ter Table (A2)	tors:		theck all that apply) Water-Stained Leave 1, 2, 4A, and 4B)	es (B9) (except MLRA	Secondar Wate 4A, a	y Indicators (minimum of two req r-Stained Leaves (B9) (MLRA 1, 2, nd 4B)
Drift deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Pett Observations: Inface Water Present? Yes No Depth (inches):	Drift deposits (B3) Oxidized Rhizospheres on Living Roots (C3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Shallow Aquitard (D3) FAC-neutral Test (D5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Pet Observations: Inface Water Present? Yes No Depth (inches): D	emarks: dric soil ind /drology etland Hyd rimary Indi Surface \(\) High Wat Saturatio	y Irology Indicaticators (minim Nater (A1) ter Table (A2) on (A3)	tors:		theck all that apply) Water-Stained Leave 1, 2, 4A, and 4B) Salt Crust (B11)	. ,	Secondar Wate 4A, a	y Indicators (minimum of two req r-Stained Leaves (B9) (MLRA 1, 2, nd 4B) age Patterns (B10)
Algal Mat or Crust (B4)	Algal Mat or Crust (B4)	dric soil ind drology etland Hydrimary Indi Surface V High Wat Saturatio Water Ma	y Irology Indicaticators (minim Nater (A1) ter Table (A2) on (A3) arks (B1)	tors:		check all that apply) Water-Stained Leav 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrate	es (B13)	Secondar Wate 4A, a	y Indicators (minimum of two req r-Stained Leaves (B9) (MLRA 1, 2, nd 4B) age Patterns (B10) ieason Water Table (C2)
Iron Deposits (B5)	Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C6) FAC-neutral Test (D5) Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) eld Observations: Inface Water Present? Yes No Depth (inches): Dep	dric soil ind drology etland Hydrimary Indi Surface V High Wat Saturatio Water Ma	y Irology Indicaticators (minim Nater (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2)	tors:		check all that apply) Water-Stained Leav 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Or	es (B13) dor (C1)	Secondar Wate 4A, a Drain Dry S Satur	y Indicators (minimum of two req r-Stained Leaves (B9) (MLRA 1, 2, nd 4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9)
Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) eld Observations: Inface Water Present? Interval of Stunted or Stressed Plants (D1) (LRR A) Interval of Stressed Plants (D1) (LRR A) I	Surface Soil Cracks (B6) Stunted or Stressed Plants (D1) (LRR A) Raised Ant Mounds (D6) (LRR A) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) eld Observations: Inface Water Present? Yes No Depth (inches): Inface Water Present? Yes No Pepth (inches):	drology etland Hydrimary Indi Surface V High Wat Saturatio Water Ma Sediment Drift dep	y Irology Indicaticators (minim Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3)	tors:		check all that apply) Water-Stained Leaven 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Or Oxidized Rhizospher	es (B13) dor (C1) es on Living Roots (C3	Secondar Wate 4A, a Drain Dry S Satur Geon	y Indicators (minimum of two req r-Stained Leaves (B9) (MLRA 1, 2, nd 4B) age Patterns (B10) ieason Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2)
Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) eld Observations: Inface Water Present? Yes No Depth (inches):	Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Frost Heave Hummocks (D7) Sparsely Vegetated Concave Surface (B8) eld Observations: Inface Water Present? Yes No Depth (inches): Inface Water Present? Yes No Depth (inches): Inturation Present? Yes No Depth (inches): Inturation Present? Yes No Depth (inches): Indudes capillary fringe) Yes No Pepth (inches): Secribe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:	drology etland Hydrimary Indi Surface V High Wat Saturatio Water Ma Sediment Drift dep Algal Mat	dicators were y Irology Indicaticators (minim Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)	tors:		check all that apply) Water-Stained Leave 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Of Oxidized Rhizospher Presence of Reduce	es (B13) dor (C1) es on Living Roots (C3 d Iron (C4)	Secondar Wate 4A, a Drain Dry S Satur Geon Shalk	y Indicators (minimum of two req r-Stained Leaves (B9) (MLRA 1, 2, nd 4B) age Patterns (B10) eason Water Table (C2) ation Visible on Aerial Imagery (C9) norphic Position (D2) ow Aquitard (D3)
Sparsely Vegetated Concave Surface (B8) eld Observations: urface Water Present? Yes No Depth (inches): ater Table Present? Yes No Depth (inches): uturation Present? redudes capillary fringe) Wetland Hydrology Present? Yes No Depth (inches):	Sparsely Vegetated Concave Surface (B8) eld Observations: irface Water Present? Yes No Depth (inches): ater Table Present? Yes No Depth (inches): inturation Present? Yes No Depth (inches): includes capillary fringe) esscribe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:	dric soil ind drid soil etland Hyd rimary Indi Surface V High Wat Saturatio Water Mi Sediment Drift dep Algal Mat Iron Dep	y Irology Indicaticators (minim Water (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)	tors:		check all that apply) Water-Stained Leav 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Of Oxidized Rhizospher Presence of Reduce Recent Iron Reducti	es (B13) dor (C1) es on Living Roots (C3 d Iron (C4) on in Tilled Soils (C6)	Secondar Wate 4A, a Drain Dry S Satur Geon Shalk	y Indicators (minimum of two req r-Stained Leaves (B9) (MLRA 1, 2, nd 4B) age Patterns (B10) deason Water Table (C2) ation Visible on Aerial Imagery (C9) arorphic Position (D2) ow Aquitard (D3) neutral Test (D5)
eld Observations: Inface Water Present? Yes No Depth (inches): Inf	eld Observations: Inface Water Present? Yes No Depth (inches): Inf	drology etland Hyd rimary Indi Surface V High Wat Sediment Drift dep Algal Mat Iron Dep Surface S	y Irology Indicaticators (minim Nater (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6)	tors: num of one	required; o	check all that apply) Water-Stained Leav. 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Or Oxidized Rhizospher Presence of Reduce Recent Iron Reducti Stunted or Stressed	es (B13) dor (C1) es on Living Roots (C3 d Iron (C4) on in Tilled Soils (C6) Plants (D1) (LRR A)	Secondar Wate 4A, a Drain Dry S Satur Satur Shalk FAC-1 Raise	y Indicators (minimum of two requestrictions) (MLRA 1, 2, and 4B) age Patterns (B10) deason Water Table (C2) ation Visible on Aerial Imagery (C9) ation Position (D2) and Aquitard (D3) and Test (D5) d Ant Mounds (D6) (LRR A)
Triface Water Present? Yes No Depth (inches): Depth (inches): Depth (inches): Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Depth (inches): Depth (inches): Depth (inches): Depth (inches): Depth (inches):	Depth (inches): Start Table Present? Yes No Depth (inches): Depth (inches	drology etland Hyd surface V High Wat Sediment Drift dep Algal Mat Iron Dep Surface S Inundation	y Irology Indicators (minim Nater (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Ae	tors: num of one	required; o	check all that apply) Water-Stained Leav. 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Or Oxidized Rhizospher Presence of Reduce Recent Iron Reducti Stunted or Stressed	es (B13) dor (C1) es on Living Roots (C3 d Iron (C4) on in Tilled Soils (C6) Plants (D1) (LRR A)	Secondar Wate 4A, a Drain Dry S Satur Satur Shalk FAC-1 Raise	y Indicators (minimum of two requestrictions) (MLRA 1, 2, and 4B) age Patterns (B10) deason Water Table (C2) ation Visible on Aerial Imagery (C9) ation Position (D2) and Aquitard (D3) and Test (D5) d Ant Mounds (D6) (LRR A)
ater Table Present? Yes No Depth (inches): Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Depth (inches):	ater Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Secribe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:	drology etland Hyd surface V High Wat Sediment Drift dep Algal Mat Iron Dep Surface S Inundation	y Irology Indicators (minim Nater (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Ae	tors: num of one	required; o	check all that apply) Water-Stained Leav. 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Or Oxidized Rhizospher Presence of Reduce Recent Iron Reducti Stunted or Stressed	es (B13) dor (C1) es on Living Roots (C3 d Iron (C4) on in Tilled Soils (C6) Plants (D1) (LRR A)	Secondar Wate 4A, a Drain Dry S Satur Satur Shalk FAC-1 Raise	y Indicators (minimum of two requestrictions) (MLRA 1, 2, and 4B) age Patterns (B10) deason Water Table (C2) ation Visible on Aerial Imagery (C9) ation Position (D2) and Aquitard (D3) and Test (D5) d Ant Mounds (D6) (LRR A)
Wetland Hydrology Present? Yes () No (•	Security of the security of th	dric soil ind dric s	y Irology Indications (minimal Mater (A1)) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Ae Vegetated Concertations:	tors: num of one rial Imagery cave Surface	required; (B7)	check all that apply) Water-Stained Leave 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrate 1940 Oxidized Rhizospher 1940 Presence of Reduce 1940 Recent Iron Reducti 1950 Stunted or Stressed 1950 Other (Explain in Reserved)	es (B13) dor (C1) es on Living Roots (C3 d Iron (C4) on in Tilled Soils (C6) Plants (D1) (LRR A)	Secondar Wate 4A, a Drain Dry S Satur Satur Shalk FAC-1 Raise	y Indicators (minimum of two requestrictions) (MLRA 1, 2, and 4B) age Patterns (B10) deason Water Table (C2) ation Visible on Aerial Imagery (C9) ation Position (D2) and Aquitard (D3) and Test (D5) d Ant Mounds (D6) (LRR A)
ncludes capillary fringe) Yes No Depth (inches):	Depth (inches): Depth (inches): Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:	dric soil ind dric soil ind drology etland Hyd rimary Indi Surface V High Wat Saturatio Water Ma Sediment Drift dep Algal Mat Iron Dep Surface S Inundatid Sparsely	y Irology Indications (minimal Mater (A1)) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Ae Vegetated Concertations:	tors: num of one rial Imagery cave Surface	required; (B7)	check all that apply) Water-Stained Leave 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrate 1940 Oxidized Rhizospher 1940 Presence of Reduce 1940 Recent Iron Reducti 1950 Stunted or Stressed 1950 Other (Explain in Reserved)	es (B13) dor (C1) es on Living Roots (C3 d Iron (C4) on in Tilled Soils (C6) Plants (D1) (LRR A)	Secondar Wate 4A, a Drain Dry S Satur Satur Shalk FAC-1 Raise	y Indicators (minimum of two requestrictions) (MLRA 1, 2, and 4B) age Patterns (B10) deason Water Table (C2) ation Visible on Aerial Imagery (C9) ation Position (D2) and Aquitard (D3) and Test (D5) d Ant Mounds (D6) (LRR A)
	escribe Recorded Data (stream gauge, monitor well, aerial photos, previous inspections), if available:	drology etland Hydrimary Indi Surface V High Water Mai Sediment Drift dep Algal Mat Iron Dep Surface S Inundation Sparsely	y Irology Indicaticators (minim Nater (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Ae Vegetated Cond vations: Present?	tors: num of one rial Imagery cave Surface	required; (B7) (B8) No •	check all that apply) Water-Stained Leaven 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrate Hydrogen Sulfide Office Oxidized Rhizospher Presence of Reduce Recent Iron Reduction Stunted or Stressed Other (Explain in Research Inches):	es (B13) dor (C1) es on Living Roots (C3 d Iron (C4) on in Tilled Soils (C6) Plants (D1) (LRR A)	Secondar Wate 4A, a Drain Dry S Satur Satur Shalk FAC-1 Raise	y Indicators (minimum of two requestricts) r-Stained Leaves (B9) (MLRA 1, 2, and 4B) age Patterns (B10) deason Water Table (C2) ation Visible on Aerial Imagery (C9) ation Position (D2) and Aquitard (D3) and Test (D5) d Ant Mounds (D6) (LRR A) Heave Hummocks (D7)
222. 22 . 220. 222 (20. cam gaage) montes way denai processy provided inspections), it distincts		wdrology etland Hydrimary Indi Surface N High Water Mai Sediment Drift dep Algal Mat Iron Dep Surface S Inundation Sparsely eld Observer S Surface Water Table Perturation Pre-	dicators were y Irology Indicaticators (minim Nater (A1) ter Table (A2) on (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Ae Vegetated Conc rations: Present? eresent?	tors: num of one rial Imagery cave Surface Yes Yes	(B7) (B8) No • No •	check all that apply) Water-Stained Leave 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrate 19 Hydrogen Sulfide Or Oxidized Rhizospher 19 Presence of Reduce 19 Recent Iron Reducti 19 Stunted or Stressed 10 Other (Explain in Reserved 19 Depth (inches): 1	es (B13) dor (C1) es on Living Roots (C3 d Iron (C4) on in Tilled Soils (C6) Plants (D1) (LRR A) marks)	Secondar Wate 4A, a Drain Dry S Satur Geon Shall FAC-I Raise	y Indicators (minimum of two reconstructions) r-Stained Leaves (B9) (MLRA 1, 2, and 4B) age Patterns (B10) leason Water Table (C2) ation Visible on Aerial Imagery (C9) ation Position (D2) by Aquitard (D3) leatral Test (D5) d Ant Mounds (D6) (LRR A) Heave Hummocks (D7)
	emarks:	ydrology (etland Hydrimary Indi Surface V High Water Ma Sediment Drift dep Algal Mat Iron Dep Surface S Inundation Sparsely (etla Observe Water Table Perturation Prepolation Sparsely)	y Irology Indications (Mater (A1)) ter Table (A2) on (A3) ter (A3) to Crust (B4) osits (B5) Soil Cracks (B6) on Visible on Ae Vegetated Concertations: Present? Present? Present? Present?	tors: num of one rial Imagery cave Surface Yes Yes Yes Yes Yes	required; of the second	check all that apply) Water-Stained Leaven 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrated Hydrogen Sulfide Or Oxidized Rhizosphere Presence of Reduced Recent Iron Reduction Stunted or Stressed Other (Explain in Research Inches): Depth (inches): Depth (inches):	es (B13) dor (C1) es on Living Roots (C3 d Iron (C4) on in Tilled Soils (C6) Plants (D1) (LRR A) marks) We	Secondar Wate 4A, a Drain Dry S Satur Shalk FAC-I Raise Frost	y Indicators (minimum of two requires restained Leaves (B9) (MLRA 1, 2, and 4B) age Patterns (B10) leason Water Table (C2) ation Visible on Aerial Imagery (C9) ation Position (D2) by Aquitard (D3) aneutral Test (D5) d Ant Mounds (D6) (LRR A) Heave Hummocks (D7)

US Army Corps of Engineers

Western Mountains, Valleys, and Coast - Version 2.0

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

Project/Site: Easton	с	ity/County:	Park	Sampling Date: 26-Jul-19	
Applicant/Owner: MDT			-	State: MT Sampling Point: DP-3	3W
Investigator(s): Cindy Hoschouer, Tanner Traxler		Section, To	ownship, Ra	ange: S 32 T 4N R 9E	
Landform (hillslope, terrace, etc.): Depression				convex, none): concave Slope: 0.0 % /	0.0
<u> </u>			(4		
Subregion (LRR): LRR E	Lat.: 46.				<u> </u>
Soil Map Unit Name: Meadowcreek, rarely flooded-Nesda co			<u> </u>	NWI classification: Upland	
re climatic/hydrologic conditions on the site typical for this	•		s 💿 No 🗆	(a, a. 	
Are Vegetation U , Soil U , or Hydrology U	significantly o	disturbed?	Are "N	lormal Circumstances" present? Yes No	
<i>s</i> – , – , <i>s</i> , –	naturally prol		•	eded, explain any answers in Remarks.)	• -
Summary of Findings - Attach site map sh	owing sai	mpling p	oint ioc	ations, transects, important reatures,	etc.
Hydrophytic Vegetation Present? Yes No		Is the	Sampled A	Area	
Hydric Soil Present? Yes No			n a Wetland	Van 📵 Na 🔘	
Wetland Hydrology Present? Yes No		***************************************	I a Wedana	"	
Remarks:					
Data point established on the edge of Community type 4 deposits, were observed in 2019.	- Salix drumm	nondiana. Si	gns of over	land flooding, including water marks and sediment	
VEGETATION - Use scientific names of plan	ıts.	Dominant			
	Absolute	_Species? Rel.Strat.	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30 Foot Radius)	% Cover		Status	Number of Dominant Species	
1		0.0%			A)
2		0.0%		Total Number of Dominant	
3	0	0.0%			В)
4		0.0%		Percent of dominant Species	
	0	= Total Cov	er	Percent of dominant Species That Are OBL, FACW, or FAC: 100.0%	A/B)
1. Salix drummondiana	30	81.1%	FACW	Prevalence Index worksheet:	
2. Salix lutea	5	13.5%	OBL	Total % Cover of: Multiply by:	
3. Ribes inerme	1_	2.7%	FAC	OBL species <u>5</u> x 1 = <u>5</u>	
4. Rosa woodsii		2.7%	FACU	FACW species <u>60</u> x 2 = <u>120</u>	
5		0.0%		FAC species $31 \times 3 = 93$	
Herb Stratum (Plot size: 5 Foot Radius)	37	= Total Cov	er	FACU species $\frac{1}{}$ x 4 = $\frac{4}{}$	
	20	✓ 50.0%	FACIAL	UPL species $0 \times 5 = 0$	
1_Phalaris arundinacea 2 Elymus repens		✓ 50.0% ✓ 33.3%	FACW	Column Totals: <u>97</u> (A) <u>222</u>	(B)
- December 1		16.7%	FAC FAC	Prevalence Index = B/A = 2.289	
3. Poa palustris 4.		0.0%	TAC	Trefdience Index B/N	
5		0.0%		Hydrophytic Vegetation Indicators:	
6.	_	0.0%		1 - Rapid Test for Hydrologic Vegetation	
7		0.0%		☑ 2 - Dominance Test is > 50%	
8	^	0.0%		☑ 3 - Prevalence Index is ≤3.0 ¹	
9.	0	0.0%		4 - Morphological Adaptations 1 (Provide suppor	ting
10.	0	0.0%		data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹	
11.	0	0.0%			
	60	= Total Cov	er	Problematic Hydrophytic Vegetation ¹ (Explain)	
Woody Vine Stratum (Plot size: 30 Foot Radius) 1.	0	0.0%		Indicators of hydric soil and wetland hydrology m be present, unless disturbed or problematic.	ıust
2.		0.0%		Hydrophytic	
		= Total Cov	er	Vegetation Present? Yes ● No ○	
% Bare Ground in Herb Stratum: 5					
Remarks: Willow community near the Shields River. Some bare soil	from high wa	nter flows ar	nd scour		

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil										Sampling Point:	DP-3W
Profile Desc	ription: (Des	cribe to th	e depth ne	eded to	document	the indi	cator or co	nfirm the	absence of indicators.)	
Depth	-	Matrix	-			ox Featu			•		
(inches)	Color (r	noist)	%	Color	(moist)	%	Type 1	Loc2	Texture	Rem	arks
0-5	10YR	3/1	100						Silt Loam		
5-20	10YR	3/2	97	10YR	4/6	3	RM	М	Sandy Silt Loam		
						-			-		
										_	
¹ Type: C=Cor	contration D	-Depletion	DM-Poduce	d Matrix	CS-Covere	nd or Coal	tod Sand Gra	nine 21 oc	cation: PL=Pore Lining. M		
- ''								aii 5 -LOC	Indicators for Prob		ile3.
Histosol (Indicators:	(Аррисавіє	e to all LKK	·—	ndy Redox (.)		2 cm Muck (A10	-	iis~:
	pedon (A2)				ripped Matri:	. ,			_ `	•	
Black His							F1) (except i	n MLRA 1)	Red Parent Mate Other (Explain in		
	Sulfide (A4)				amy Gleyed	•	,	,	Other (Explain ii	r remarks)	
Depleted	Below Dark S	urface (A11)	De	pleted Matri	ix (F3)					
☐ Thick Da	rk Surface (A1	.2)			dox Dark Su	•	•		³ Indicators of hydroph	ytic vegetation and	
Sandy Mu	uck Mineral (S	1)			pleted Dark		. ,		wetland hydrology	must be present,	
Sandy Gl	eyed Matrix (S	64)		Re	dox depress	sions (F8)			unless disturbed or	problematic.	
Restrictive L	ayer (if pres	sent):									
Туре:									U 41 0 1 0		\bigcirc
Depth (inc	ches):								Hydric Soil Present?	Yes No	0
Hydrolog	-										
Wetland Hyd	drology Indic	cators:									
	icators (mini	imum of or	ne required						Secondary Ind	licators (minimum	of two required)
	Water (A1)						(B9) (excep	t MLRA		ned Leaves (B9) (ML	RA 1, 2,
	ter Table (A2))			1, 2, 4A, and	-			4A, and 4B	,	
✓ Saturatio	` '				Salt Crust (B	,	(0.10)		_	atterns (B10)	
✓ Water M					Aquatic Inve					Water Table (C2)	
	t Deposits (B2 osits (B3)	<u>(1)</u>			Hydrogen Su			(62)		Visible on Aerial Ima	gery (C9)
	` ,	`					s on Living R	(C3)	_	c Position (D2)	
	t or Crust (B4))			Presence of		` '	11. (CC)	Shallow Aq		
_	oosits (B5) Soil Cracks (B6	۲)					n in Tilled So		✓ FAC-neutra		
	on Visible on A	•	m, (D7)				lants (D1) (l	_RR A)		Mounds (D6) (LRR A	A)
					Other (Expla	iin in Rem	narks)		☐ Frost Heav	e Hummocks (D7)	
□ Sparsely	Vegetated Co	incave Suria	Ce (D0)								
Field Observ	ations:										
Surface Wate	r Present?	Yes C	No 💿		Depth (incl	hes):					
Water Table F	Present?	Yes C	No •		Depth (incl	hes):		1		_	
Saturation Pre							0	Wetl	and Hydrology Present	? Yes 💿 N	o O
(includes capi	llary fringe)	Yes •			Depth (incl		0	<u> </u>			
Describe Red	corded Data	(stream ga	auge, moni	tor well,	, aerial pho	otos, pre	vious inspe	ections), i	if available:		
Remarks:											
Primary indi	cators includ	le saturatio	n within th	ne upper	r 12", wate	er marks	(scour), ar	nd sedime	ent deposits. Secondary	indicators include	e geomorphic
position and											•

US Army Corps of Engineers

Western Mountains, Valleys, and Coast - Version 2.0

MDT MONTANA WETLAND ASSESSMENT FORM (revised March 2008)

1.	Project Name: <u>Easton Ranch</u>	1 2. MDI Project#: STPX-00	34(14) 3. Control #: 4866		
3.	Evaluation Date: 7/26/2019	4. Evaluator(s): C. Hoschoue	r, T. Traxler, C. Seibert 5. We	tland/Site #(s): Creation	
6.	Wetland Location(s): Towns	ship <u>4 N,</u> Range <u>9 E,</u> Section <u>32</u>	<u>?;</u> Township <u>N</u> , Range <u>E</u> ,	Section	
	Approximate Stationing or I	Roadposts: <u>NA</u>			
	Watershed: 13 - Upper Yello	owstone County: Park	<u> </u>		
	Evaluating Agency: RESPE Purpose of Evaluation: ☐ Wetland potentially affe ☐ Mitigation wetlands; po ☐ Other CLASSIFICATION OF WET	ected by MDT project e-construction	9. Assessment Area (/	•	
	HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% OF AA
	Riverine	Emergent Wetland	Excavated	Seasonal / Intermittent	71
	Riverine Depressional	Emergent Wetland Aquatic Bed	Excavated Excavated	Seasonal / Intermittent Seasonal / Intermittent	71 4
	Depressional	Aquatic Bed	Excavated	Seasonal / Intermittent	4
	Depressional	Aquatic Bed	Excavated	Seasonal / Intermittent	4
	Depressional	Aquatic Bed	Excavated	Seasonal / Intermittent	4

common 12. GENERAL CONDITION OF AA

i. Disturbance: Use matrix below to select the appropriate response; see manual for Montana listed noxious weed and aquatic nuisance vegetation species lists

11. ESTIMATED RELATIVE ABUNDANCE (of similarly classified sites within the same Major Montana Watershed Basin; see manual.)

	Predominar	nt Conditions Adjacent to (within	500 feet of) AA
Conditions within AA	Managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or buildings; and noxious weed or ANVS cover is ≤15%.	Land not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to minor clearing; contains few roads or buildings; noxious weed or ANVS cover is ≤30%.	Land cultivated or heavily grazed or logged; subject to substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is >30%.
AA occurs and is managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or occupied buildings; and noxious weed or ANVS cover is ≤15%.		low disturbance	
AA not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to relatively minor clearing, fill placement, or hydrological alteration; contains few roads or buildings; noxious weed or ANVS cover is ≤30%.			
AA cultivated or heavily grazed or logged; subject to relatively substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is >30%.			

Comments (types of disturbance, intensity, season, etc.): Limited agriculture (hay) and a few ranch structures to the east. Undeveloped riparian corridor and herbaceous uplands to north, south, and west. A new house was built west of the Shield River on an upland terrace. Two species of noxious weeds were present within the AA. The AA is managed in a natural state, as are most of the lands within 500 feet of the AA.

- ii. Prominent noxious, aquatic nuisance, and other exotic vegetation species: Cirsium arvense and Cynoglossum officinale
- iii. Provide brief descriptive summary of AA and surrounding land use/habitat: The AA consists of five constructed wetland cells. The lowest contours of the wetland cells are seasonally inundated and have developed wetland characteristics. The higher elevations lack wetland characteristics and support upland plant communities. The cells are bordered by limited agriculture (hay and food plots) and an undeveloped riparian corridor.

13. STRUCTURAL DIVERSITY (Based on number of "Cowardin" vegetated classes present [do not include unvegetated classes]; see #10 above.)

Existing # of "Cowardin" Vegetated Classes in AA	Initial Rating	Is current management peristence of additional		Modified Rating
≥3 (or 2 if one is forested) classes	high	NA	NA	NA
2 (or 1 if forested) classes		NA	NA	NA
1 class, but not a monoculture		←NO	YES→	
1 class, monoculture (1 species comprises ≥90% of total cover)		NA	NA	NA

Comments: The AA consists of palustrine emergent wetlands (PEM), scrub-shrub (young PSS) and aquatic beds in the deeper depression.

14A. HABITAT FOR FEDERAL	LY LIS	STED C	R PROF	POSED	THRE	EATEN	IED (OR EN	IDANG	ERED	PLA	NTS C	OR AN	IMALS	6				
i. AA is Documented (D) or Su Primary or critical habitat (list Secondary habitat (list specie Incidental habitat (list species No usable habitat	specie es)	es)	o contai D D D D D D	S S S	eck bo	x base	ed on	defini	tions ir	ı manu	al.								
ii. Rating: Based on the stronge			7																
Highest Habitat Level	Doc/P	rimary	Sus/F	rimary	Do	c/Sec	onda	ary S	Sus/Se	conda	ıry	Doc/li	ncider	ntal	Sus/	Incide	ntal	Non	е
Functional Point/Rating	-						-											0L	
Sources for documented use	(e.g. ob	oservati	ons, reco	ords): _															
14B. HABITAT FOR PLANTS (Do not include species list				S1, S2	, OR S	53 BY	THE	MON	TANA	NATUI	RAL	HERIT	AGE I	PROGI	RAM				
i. AA is Documented (D) or Su Primary or critical habitat (list Secondary habitat (list species Incidental habitat (list species No usable habitat	species)	es) [D	S <u>Sar</u>	ndhill (Crane	(S5B		ions in	manua	al.								
ii. Rating: Based on the strong	jest hal	bitat ch	sen in 1	4A(i) a	bove,	select	the c	orres	onding	g functi	ional	point a	and rat	ing.					
Highest Habitat Level	Doc/P	rimary	Sus/F	Primary	Do	c/Sec	onda	ary S	Sus/Se	conda	ry	Doc/li	ncider	ntal	Sus/	Incide	ntal	None	
S1 Species Functional Point/Rating	-						-												
S2 and S3 Species	.0	ЭН					-												
Functional Point/Rating				- n-l-\. N	4TN II 10	2 2042		1 2040	field a		4:	C = = =	h:II O		-4:	al a a		b N 4 F	,
Sources for documented use (staff in 2019.	(e.g. or	oservati	ons, reco	oras): <u>Iv</u>	IIINHI	² , 201	3 and	12019	rieia o	oserva	tions	. Sano	niii Cra	ane ne	sting	docum	iented	Dy IVIL	<u>) </u>
14C. GENERAL WILDLIFE HA	BITAT	RATIN	G																
i. Evidence of Overall Wildlife	Use in	the A	A: Chec	k subst	antial.	mode	rate	or low	, basec	l on su	pport	ina evi	idence	.					
□ Substantial: Based on any or observations of abundant wildlife sign such observations of extremely limerity observations.	wildlife th as so niting ha	e #s or h cat, trac abitat fe	nigh spec ks, nest atures n	cies div structu ot avail	res, ga	ame tra	ails, e	etc.	d)	□ f □ li □ s	ew or ttle to parso	r no wi o no wi e adjac	Idlife o Idlife s cent up	ny of the bserva sign bland for l biolog	ations ood s	during ources	g peak	use p	
 Moderate: Based on any of t □ observations of scattered ⋈ common occurrence of wi ⋈ adequate adjacent upland □ interview with local biologic 	wildlife Idlife si I food s	groups ign such sources	or indivi	t, tracks	or rela , nest	tively fo structi	ew sp ures,	oecies game	during trails,	peak etc.	perio	ds							
ii. Wildlife Habitat Features: W For class cover to be considered percent composition of the AA (s	d eveni	y distrib	uted, the	e most a	and le	ast pre	evaler	nt veg	etated	classe	es mu	ıst be v	within 2	20% of	each				
S/I = seasonal/intermittent; T/E =															ıııaı,				
Structural Diversity (see #13)	•			High		_						derate		_				.ow	
Class Cover Distribution (all vegetated classes)		☐ Eve	n		⊠ Un	even			□ E	ven			☐ Un	even			□ E	ven	
Duration of Surface	P/P	S/I T	/E A	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
Water in ≥ 10% of AA			- ^				- 1		<u> </u>										
■ Low Disturbance at AA (see #12i) ■ Disturbance ■ Sistembrane		-			Е														
☐ Moderate Disturbance at AA (see #12i)		-																	
☐ High Disturbance at AA (see #12i)		-	-																
iii. Rating: Use the conclusions	s from	i and ii	ahove ar	nd the n	natriv	helow	to se	lect th	e func	ional r	noint 4	and ret	ina	<u>I</u>	I				
Evidence of Wildlife Use	1.0111	i unu il	above at						s Rati		Jii It (aria idi	9.		1				
(i)	D	Exce	otional			High				derat	е		□ Lo	w					
☐ Substantial												L							
		.91																	
☐ Minimal												ĺ							

Comments: There is a bald eagle (Haliaeetus leucocephalus) nest directly southwest of the site on the west side of the Shields River, the project site is within the primary habitat zone for bald eagles. In 2019 noted wild turkeys near the eastern project boundary as well as several white-tailed deer. Food plots located along portions of the eastern property boundary provide a supplemental food source for wildlife throughout the year.

14D. GENERAL FISH HABITAT	NA (proceed to 14	1E)
---------------------------	-------------------	-----

If the AA is not used by fish, fish use is not restorable due to habitat constraints, or is not desired from a management perspective [such as fish entrapped in a canal], then check the NA box and proceed to 14E.

Assess this function if the AA is used by fish or the existing situation is "correctable" such that the AA could be used by fish [i.e., fish use is precluded by perched culvert or other barrier].

Type of Fishery: Cold Water (CW) Warm Water (WW) Use the CW or WW guidelines in the manual to complete the matrix.

i. Habitat Quality and Known / Suspected Fish Species in AA: Use matrix to select the functional point and rating.

Duration of Surface Water in AA	☐ Pe	erman	ent / P	erenn	ial		□s	easo	nal / Ir	ntermit	tent		□1	☐ Temporary / Ephemeral				
Aquatic Hiding / Resting / Escape Cover	Opti] imal	Adeq] uate	Po	or	Opti] mal	Ade	_ quate	Po	or	Op:	timal	Aded] uate	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																		
FWP Tier II or Native Game fish species																		
FWP Tier III or Introduced Game fish																		
FWP Non-Game Tier IV or No fish species																		

Sources used for identifying fish spp. potentially found in AA:

ii. Modified Rating: NOTE: Modified score cannot exceed 1.0 or be less than 0.1.

a) Is fish use of the AA significantly reduced by a culvert, dike, or other man-made structure or activity, or is the waterbody included on the current final MDEQ list of waterbodies in need of TMDL development with listed "Probable Impaired Uses" including cold or warm water fishery or aquatic life support, or do aquatic nuisance plant or animal species (see Appendix E) occur in fish habitat? TES, reduce score in i by 0.1 = __ or 🖾 N0

b) Does the AA contain a documented spawning area or other critical habitat feature (i.e., sanctuary pool, upwelling area; specify in comments) for native fish or introduced game fish? \square YES, add to score in i or iia 0.1 = __ or \boxtimes N0

iii. Final Score and Rating: Comments: Wetland cells are isolated from Shields River with no fish habitat present.

14E. FLOOD ATTENUATION

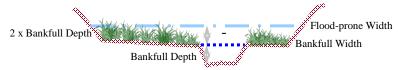
■ **NA** (proceed to 14F) Applies only to wetlands that are subject to flooding via in-channel or overbank flow.

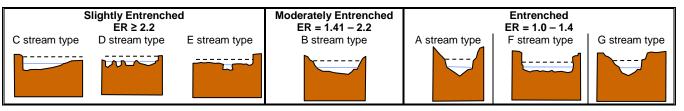
If wetlands in AA are not flooded from in-channel or overbank flow, check the NA box and proceed to 14F.

Entrenchment Ratio (ER) Estimation (see manual for additional guidance). Entrenchment ratio = (flood-prone width) / (bankfull width). Flood-prone width = estimated horizontal projection of where 2 X maximum bankfull depth elevation intersects the floodplain on each side of the stream.

133 / <u>28</u> =

flood prone width / bankfull width = entrenchment ratio





i. Rating: Working from top to bottom, use the matrix below to select the functional point and rating

rating. Working from top to bottom, use the matrix below to select the functional point and rating.										
Estimated or Calculated Entrenchment	⊠ Slightly Entrenched C, D, E stream types			☐ Mod	erately Entr	enched	☐ Entrenched			
(Rosgen 1994, 1996)				В	stream typ	е	A, F, G stream types			
Percent of Flooded Wetland Classified as		\boxtimes								
Forested and/or Scrub/Shrub	75%	25-75%	<25%	75%	25-75%	<25%	75%	25-75%	<25%	
AA contains no outlet or restricted outlet										
AA contains unrestricted outlet		.8H								

ii. Are ≥10 acres of wetland in the AA subject to flooding AND are man-made features which may be significantly damaged by floods located within 0.5 mile downstream of the AA? YES NO Comments: AA receives overbank flow from Shields River during high flow events.

14F SHORT	Δ ND I ONG T	TERM SURFACE	WATER STORAGE

☐ **NA** (proceed to 14G)

Applies to wetlands that flood or pond from overbank or in-channel flow, precipitation, upland surface flow, or groundwater flow. If no wetlands in the AA are subject to flooding or ponding, then check the NA box and proceed to 14G.

i. Rating: Working from top to bottom, use the matrix below to select the functional point and rating. Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; and T/E = temporary/ephemeral [see manual for further definitions of these terms].

Estimated Maximum Acre Feet of Water Contained in Wetlands within the AA that are Subject to Periodic Flooding or Ponding		>5 acre fo	eet	☐ 1 .1	to 5 ac	re 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									
Wetlands in AA flood or pond < 5 out of 10 years		.8H							

Comments: (9.63 acre wetland) * (1 ft. max depth at highwater) = 9.63 acre feet.

14G.	SEDIMENT / NUTRIENT / TOXICANT / RETENTION AND REMOVAL	□ NA	(proceed to 14H)
------	--	------	------------------

Applies to wetland 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, check the NA box and proceed to 14H.

i. Rating: Working from top to bottom, use the matrix below to select the functional point and rating.

Sediment, Nutrient, and Toxicant Input Levels within AA	AA receive has potent nutrients, such that a substantia sedimenta toxicants, present.	tial to delive or compount other funct ally impaire tion, source	er sedime inds at lev ions are n d. Minor es of nutr	ents, rels not rients or	Waterbody is on MDEQ list of waterbodies in need of TMDL development for "probable causes" related to sediment, nutrients, or toxicants or AA receives or surrounding land use has potential to deliver high levels of sediments, nutrients, or compounds such that other functions are substantially impaired. Major sedimentation, sources of nutrients or toxicants, or signs of eutrophication present.					
% Cover of Wetland Vegetation in AA	⊠≥∵	70%	□ < 70%		□ ≥ 70 %		☐ < 70%			
Evidence of Flooding / Ponding in AA	⊠ Yes	□No	☐ Yes	☐ No	☐ Yes	☐ No	☐ Yes	☐ No		
AA contains no or restricted outlet										
AA contains unrestricted outlet	.9H									

Comments: There was evidence of ponding and flooding in 2011, 2012, 2014, 2015, 2016, 2017, 2018, and 2019. There was no evidence of ponding or flooding in 2013.

14H. SEDIMENT / SHORELINE STABILIZATION NA (proceed to 14I)

Applies only if AA occurs on or within the banks of a river, stream, or other natural or man-made drainage, or on the shoreline of a standing water body which is subject to wave action.

If 14H does not apply, check the NA box and proceed to 14I.

% Cover of Wetland Streambank or Shoreline by Species with Stability	Duration of Surface Water Adjacent to Rooted Vegetation						
Ratings of ≥6 (see Appendix F).	☐ Permanent / Perennial	Seasonal / Intermittent	☐ Temporary / Ephemeral				
□ ≥ 65%							
⊠ 35-64%		.6M					
☐ < 35%							

Comments: Deep-rooted species observed in 2019 include cattails, bulrush, spikerush, sedges and rushes.

14I. PRODUCTION EXPORT / FOOD CHAIN SUPPORT

i. Level of Biological Activity: Synthesis of wildlife and fish habitat rates (select).

General Fish Habitat Rating	Genera	General Wildlife Habitat Rating (14Ciii)						
(14Diii)	☐ E/H	\boxtimes M	L					
☐ E/H								
■ M								
⊠ NA		M						

ii. Rating: Working from top to bottom, use the matrix below to select the functional point and rating. Factor A = acreage of vegetated wetland component in the AA; Factor B = level of biological activity rating from above (14li); Factor C = whether or not the AA contains a surface or subsurface outlet; the final three rows pertain to the duration of surface water in the AA, where P/P, S/I, and T/E were previously defined, and A = "absent" [see manual for further definitions of these terms].

Α	\boxtimes	Vegeta	ted Co	mponent	>5 ac	res		Vegeta	ated Co	mponent	1-5 ac	res	☐ Vegetated Component <1 acre					
В	B ☐ High ☐ Moderate ☐ Low		☐ High ☐ Moderate			Low	☐ High				☐ Low							
С	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
P/P																		
S/I			.7M															
T/E/A																		

			Wetland	/Site #(s)): Creation				
14I. PRODUCTION EXPORT / FOOD CH	IAIN SU	JPPORT (contin	nued)						
iii. Modified Rating: Note: Modified score	e canno	ot exceed 1.0 o	r be less than	0.1.					
Vegetated Upland Buffer: Area with mowing or clearing (unless for weed of the state of the stat	ontrol).								
iv. Final Score and Rating: <u>.8H</u> Comm	nents: <u>\</u>	Vegetated area	greater than 5	acres wi	th moderate le	evel of biologic	al activity	and seasona	al hydrology.
14J. GROUNDWATER DISCHARGE / R Check the appropriate indicators in i. Discharge Indicators	_	_		Pachai	rge Indicators				
The AA is a slope wetland. Springs or seeps are known or observed. Vegetation growing during dormant season/drought. Wetland occurs at the toe of a natural slope. 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 an	d ii abov								a
			Saturation at <i>I</i> ATER THAT I						
Criteria			⊠ S		<u> </u>	GROONDWA	□ No		
☐ Groundwater Discharge or Recharge	arge		.7M						
☐ Insufficient Data/Information									
Comments: Shallow surface water or soil 14K. UNIQUENESS i. Rating: Working from top to bottom, us	se the m	natrix below to s	select the funct	ional poi	nt and rating.		li .		
Replacement Potential	spring forest	ontains fen, bo gs or mature (: ted wetland Of ciation listed a TNHP	>80 yr-old) ≷ plant	cited ra diversi contair	es not contail are types ANI ity (#13) is hig ns plant asso as "S2" by the	Structural gh OR ciation	AA does not contain previously cited rare types OR associations AND structural diversity (#13) is low-moderate		
Estimated Relative Abundance (#11)	□ Rare	e Common	□ Abundant	□ Rare	□ Common	☐ Abundant	□ Rare	□ Common	□ Abundar
□ Low Disturbance at AA (#12i)								.4M	
☐ Moderate Disturbance at AA (#12i) ☐ High Disturbance at AA (#12i)									
Comments: Vegetation is becoming well									
cell 3. 14L. RECREATION / EDUCATION POTI			NA (proceed to		-			ny ana ponio	io or worlding
Affords 'bonus' points if AA provides				,					
i. Is the AA a known or potential recrea	itional c	or educational	site? XES	i, go to ii.	. NO, che	eck the NA box	(.		
ii. Check categories that apply to the A		Other:	·	⊠ Cons	sumptive Recre	eational \square N	Ion-consu	umptive recrea	ational
iii. Rating: Use the matrix below to select				-1.4		II-	17	I Barrier	7
		al Recreational					Known	Potential	4
Public ownership or public easemer Private ownership with general publ		·			n required)				4
Private ownership with general public private or public ownership without					sion for nubli	ic access		.05L	1
Comments: Permission is required for ac			-, 	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	pabi			.002	_

15. GENERAL SITE NOTES:

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	low 0.00	1.00	0	
B. MT Natural Heritage Program Species Habitat	high 0.90	1.00	8.667	
C. General Wildlife Habitat	high 0.90	1.00	8.667	*
D. General Fish Habitat	NA	NA	0	
E. Flood Attenuation	high 0.80	1.00	7.704	
F. Short and Long Term Surface Water Storage	high 0.80	1.00	7.704	*
G. Sediment / Nutrient / Toxicant Removal	high 0.90	1.00	8.667	*
H. Sediment / Shoreline Stabilization	mod 0.60	1.00	5.778	
I. Production Export / Food Chain Support	high 0.80	1.00	7.704	*
J. Groundwater Discharge / Recharge	mod 0.70	1.00	6.741	
K. Uniqueness	mod 0.40	1.00	3.852	
L. Recreation / Education Potential (bonus point)	low 0.05		0.482	
Total Points	6.85	10	65.966 Total	Functional Units
Percent of Possibl	e Score 68.5% (rou	nd to nearest wh	nole number)	

	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; if not 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 #).
_	AVEDALL ANALYSIS AREA (AA) RATING
U	OVERALL ANALYSIS AREA (AA) RATING: Check the appropriate category based on the criteria outlined above.

MDT MONTANA WETLAND ASSESSMENT FORM (revised March 2008)

1.	Project Name: Easton Ranch	<u> 2. MDT Project #: STPX-00</u>	34(14) 3. Control #: 4866							
3.	Evaluation Date: 7/26/2019	4. Evaluator(s): C. Hoschoue	er, T. Traxler, C. Seibert 5. We	etland/Site #(s): Preservation						
6.	Wetland Location(s): Towns	ship <u>4 N,</u> Range <u>9 E,</u> Section <u>32</u>	<u>?;</u> Township <u>N</u> , Range <u>E</u> ,	Section						
	Approximate Stationing or I	Roadposts: <u>NA</u>								
	Watershed: 13 - Upper Yellowstone County: _ Park									
7.	 Z. Evaluating Agency: RESPEC for MDT Purpose of Evaluation: Wetland Size (acre): (visually estimated) 1.1 (measured, e.g. GPS) Witigation wetlands; pre-construction Mitigation wetlands; post-construction ☑ Other Preserved PSS/PFO/PEM Habtiat (see manual for determining AA) 1.1 (measured, e.g. GPS) 									
10	. CLASSIFICATION OF WET	LAND AND AQUATIC HABITA	ATS IN AA (See manual for def	initions.)						
	HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% OF AA					
	Riverine	Scrub-Shrub Wetland		Seasonal / Intermittent	10					
	Riverine	Forested Wetland		Seasonal / Intermittent	20					
	Riverine	Emergent Wetland	_	Seasonal / Intermittent	70					

Comments:

- 11. ESTIMATED RELATIVE ABUNDANCE (of similarly classified sites within the same Major Montana Watershed Basin; see manual.) common
- 12. GENERAL CONDITION OF AA

i. Disturbance: Use matrix below to select the appropriate response; see manual for Montana listed noxious weed and aquatic nuisance vegetation species lists.

	Predominar	nt Conditions Adjacent to (within	500 feet of) AA
Conditions within AA	Managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or buildings; and noxious weed or ANVS cover is ≤15%.	Land not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to minor clearing; contains few roads or buildings; noxious weed or ANVS cover is ≤30%.	Land cultivated or heavily grazed or logged; subject to substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is >30%.
AA occurs and is managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or occupied buildings; and noxious weed or ANVS cover is ≤15%.		low disturbance	
AA not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to relatively minor clearing, fill placement, or hydrological alteration; contains few roads or buildings; noxious weed or ANVS cover is ≤30%.			
AA cultivated or heavily grazed or logged; subject to relatively substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is >30%.			

Comments (types of disturbance, intensity, season, etc.): AA consists of existing riverine PFO/PSS/PEM wetlands located adjacent to the created depressional wetlands and flood channel. AA and adjacent areas are managed in a natural state, disturbance is low.

- ii. Prominent noxious, aquatic nuisance, and other exotic vegetation species: Cirsium arvense
- iii. Provide brief descriptive summary of AA and surrounding land use/habitat: AA contains small areas of existing PFO/PSS/PEM wetlands located at the northwest (Shields River) and southcentral ends of the mitigation area. The existing PFO/PEM habitat located at the southern end of the AA receives direct hydrologic inputs from the created flood channel. Both wetland features are bordered by created wetlands and the Shields River riparian corridor.

13. STRUCTURAL DIVERSITY (Based on number of "Cowardin" vegetated classes present [do not include unvegetated classes]; see #10 above.)

Existing # of "Cowardin" Vegetated Classes in AA	Initial Rating	Is current management peristence of additional		Modified Rating
≥3 (or 2 if one is forested) classes	high	NA	NA	NA
2 (or 1 if forested) classes		NA	NA	NA
1 class, but not a monoculture		←NO	YES→	
1 class, monoculture (1 species comprises ≥90% of total cover)		NA	NA	NA

Comments: PEM, PFO and PSS vegetated communities are present on site.

14A. HABITAT FOR FEDERAL	LLY LIS	STED (R PRO	OPOSE	THR	EATEN	IED O	R EN	DANG	ERED	PLA	NTS C	OR AN	IMALS	6				
i. AA is Documented (D) or S Primary or critical habitat (list Secondary habitat (list speciencidental habitat (list speciencidental habitat)	specie es)	es) []	D D D	tain: Ch □ S □ S □ S ⊠ S	eck b	ox base	ed on	defini	tions in	ı manu	al.								
ii. Rating: Based on the strong	est hab	oitat cho	sen in	14A(i) a	bove,	select t	the co	rresp	onding	function	onal p	ooint a	nd rati	ng.					
Highest Habitat Level	Doc/P	rimary	Sus	s/Primar	y D	oc/Sec	onda	ry S	Sus/Se	conda	ıry	Doc/I	ncide	ntal	Sus/	Incide	ntal	None	•
Functional Point/Rating	-						-		-									0L	
Sources for documented use	(e.g. ob	oservat	ons, re	ecords):															
14B. HABITAT FOR PLANTS Do not include species lis				D S1, S	2, OR	S3 BY	THE	MON ⁻	ΓΑΝΑ Ι	NATUI	RAL	HERIT	AGE I	PROG	RAM				
 i. AA is Documented (D) or So Primary or critical habitat (list Secondary habitat (list special Incidental habitat (list special No usable habitat 	specie es)	es) []	⊠ D □ D ⊠ D	tain: Che ☐ S <u>Sa</u> ☐ S <u>—</u> ☐ S <u>Ge</u> ☐ S	ndhill	Crane	(S5B,	definit <u>S2N)</u>	ions in	manua	al.								
ii. Rating: Based on the strong			_																7
Highest Habitat Level	Doc/P	rimary	Sus	s/Primar	y D	oc/Sec	onda	ry S	Sus/Se	conda	ry	Doc/I	ncide	ntal	Sus/l	ncide	ntal	None	
S1 Species Functional Point/Rating S2 and S3 Species	-						-		-										
Functional Point/Rating	.9	PΗ					-		-										
Sources for documented use	(e.g. ob	oservat	ons, re	cords): I	MTN	IP, 2013	3 field	obse	rvation	s. San	dhill (Crane	nestin	g docu	ment	ed by	MDT :	staff in 2	2019
14C. GENERAL WILDLIFE HA	BITAT	RATIN	IG																
i. Evidence of Overall Wildlife	Use ir	n the A	A: Che	eck subs	tantia	ıl, mode	rate, o	or low	based	l on su	pport	ting ev	idence) .					
□ Substantial: Based on any of □ observations of abundant □ abundant wildlife sign suc □ presence of extremely lim □ interview with local biolog □ Moderate: Based on any of □ observations of scattered □ common occurrence of w □ adequate adjacent upland	t wildlife th as so niting ha gist with the follo wildlife ildlife si	e #s or cat, trace abitat for knowled by wing [cate of the cate of	high specks, neseatures edge of check]. It is or indicated that is so	pecies di st structu not ava f the AA lividuals	ires, (lable or rela	game train the s	ails, e urrour ew sp	tc. nding ecies	d) area during	□ f □ li □ s □ i	ew or ittle to sparse ntervi	r no wi o no wi e adjad iew wit	ldlife o ildlife s cent up	sign oland fo	ations ood s	during ources	g peak	ck]. cuse pe	
☐ interview with local biolog				the AA															
ii. Wildlife Habitat Features: Verbase For class cover to be considered percent composition of the AA (d eveni see #10	y distrik 0). Abb	outed, to reviation	he most	and lourface	east pre water	evalen durati	t veg ons a	etated re as fo	classe ollows:	es mu P/P	ist be v = perm	within : nanent	20% of :/peren	each				
S/I = seasonal/intermittent; T/E Structural Diversity	= temp	orary/e			A = at	sent [s	ee ma	anual	for furt					ermsj.	1				
(see #13)			Þ	☑ High						L	_ Mo	derate)					-ow	
Class Cover Distribution (all vegetated classes)		□ Eve	n		⊠ Uı	neven			□ E	ven			☐ Un	even				ven	
Duration of Surface Water in ≥ 10% of AA	P/P	S/I	T/E A	A P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α
■ Low Disturbance at AA (see #12i)					Е														
☐ Moderate Disturbance at AA (see #12i)																			
☐ High Disturbance at AA (see #12i)																			
iii. Rating: Use the conclusion	s from	i and ii	above	and the	matrix	c below	to sel	ect th	e funct	ional r	oint a	and rat	ting.	•					
Evidence of Wildlife Use						e Habit													
(i)		Exce	ntiona		Г	High			□ма	derat	^		☐ Lo		1				
		7 FYCE	puona	<u> </u>		<u>g</u>				Juerai	<u> </u>		<u></u>	<u> </u>					
☐ Substantial ☐ Moderate		 9.	•			 								ow					

Comments: Moderate use of site by moose, deer, golden eagle, and other avian species. There is a bald eagle (Haliaeetus

leucocephalus) nest directly southwest of the site on the west side of the Shields River. The project site is within the primary habitat zone for bald eagles. Food plots east of the mitigation site will also encourage use by wildlife.

14D. GENERAL FISH HABITAT	NA (proceed to 14	1E)
---------------------------	-------------------	-----

If the AA is not used by fish, fish use is not restorable due to habitat constraints, or is not desired from a management perspective [such as fish entrapped in a canal], then check the NA box and proceed to 14E.

Assess this function if the AA is used by fish or the existing situation is "correctable" such that the AA could be used by fish [i.e., fish use is precluded by perched culvert or other barrier].

Type of Fishery: Cold Water (CW) Warm Water (WW) Use the CW or WW guidelines in the manual to complete the matrix.

i. Habitat Quality and Known / Suspected Fish Species in AA: Use matrix to select the functional point and rating.

Duration of Surface Water in AA	☐ Pe	erman	ent / P	erenn	ial		☐ Seasonal / Intermittent							☐ Temporary / Ephemeral					
Aquatic Hiding / Resting / Escape Cover	Opti	Optimal		Adequate		or	Opti] imal	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						-													
FWP Tier II or Native Game fish species																			
FWP Tier III or Introduced Game fish																			
FWP Non-Game Tier IV or No fish species																			

Sources used for identifying fish spp. potentially found in AA:

ii. Modified Rating: NOTE: Modified score cannot exceed 1.0 or be less than 0.1.

a) Is fish use of the AA significantly reduced by a culvert, dike, or other man-made structure or activity, **or** is the waterbody included on the current final MDEQ list of waterbodies in need of TMDL development with listed "Probable Impaired Uses" including cold or warm water fishery or aquatic life support, **or** do aquatic nuisance plant or animal species (see **Appendix E**) occur in fish habitat?

YES, reduce score in **i** by 0.1 = ___ or NO

b) Does the AA contain a documented spawning area or other critical habitat feature (i.e., sanctuary pool, upwelling area; specify in comments) for native fish or introduced game fish?

YES, add to score in i or iia 0.1 = ___ or

N0

iii. Final Score and Rating: _ Comments: No fish habitat on site.

14E. FLOOD ATTENUATION

■ NA (proceed to 14F)

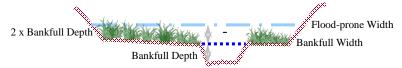
Applies only to wetlands that are subject to flooding via in-channel or overbank flow.

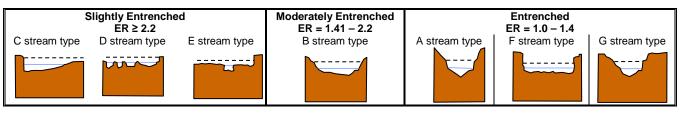
If wetlands in AA are not flooded from in-channel or overbank flow, check the NA box and proceed to 14F.

Entrenchment Ratio (ER) Estimation (see manual for additional guidance). Entrenchment ratio = (flood-prone width) / (bankfull width). Flood-prone width = estimated horizontal projection of where 2 X maximum bankfull depth elevation intersects the floodplain on each side of the stream.

133 / 28 = 4.75

flood prone width / bankfull width = entrenchment ratio





i. Rating: Working from top to bottom, use the matrix below to select the functional point and rating.

Estimated or Calculated Entrenchment	⊠ Sli	ightly Entre	nched	☐ Mod	lerately Enti	renched	☐ Entrenched			
(Rosgen 1994, 1996)	C, D	, E stream t	ypes	Е	stream typ	e	A, F, G stream types			
Percent of Flooded Wetland Classified as		\boxtimes								
Forested and/or Scrub/Shrub	75%	25-75%	<25%	75%	25-75%	<25%	75%	25-75%	<25%	
AA contains no outlet or restricted outlet		.9H								
AA contains unrestricted outlet										

ii. Are ≥10 acres of wetland in the AA subject to flooding AND are man-made features which may be significantly damaged by floods located within 0.5 mile downstream of the AA? ☐ YES ☒ NO Comments: Approximately 30% of the preservation AA contains forested and/or scrub/shrub wetland with surface water outlet to the south into relic isolated channel. The Shields River is slightly entrenched at this location.

445	CHART	ANDI	ONG	TEDM	CLIDEA	OF W	TED	CTODACE	
14F.	SHURI	AND L	_ONG	IEKIVI	SURFA	LE W	AIEK	STORAGE	

☐ **NA** (proceed to 14G)

Applies to wetlands that flood or pond from overbank or in-channel flow, precipitation, upland surface flow, or groundwater flow. If no wetlands in the AA are subject to flooding or ponding, then check the NA box and proceed to 14G.

i. Rating: Working from top to bottom, use the matrix below to select the functional point and rating. Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; and T/E = temporary/ephemeral [see manual for further definitions of these terms].

Estimated Maximum Acre Feet of Water Contained in Wetlands within the AA that are Subject to Periodic Flooding or Ponding		>5 acre fo	eet	⊠ 1.1	to 5 ac	re 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					.6M					
Wetlands in AA flood or pond < 5 out of 10 years										

Comments: (1.10 acre of preserved wetland) x (approximate average of 1.0 ft. of inundation during high water) = 1.10 acre feet

Applies to wetland 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, check the NA box and proceed to 14H.

i. Rating: Working from top to bottom, use the matrix below to select the functional point and rating.

Sediment, Nutrient, and Toxicant Input Levels within AA	AA receive has potent nutrients, such that of substantial sedimental toxicants, present.	tial to deliv or compou other funct illy impaire tion, sourc	er sedime inds at lev ions are n d. Minor es of nutr	ents, rels oot rients or	Waterbody is need of TMDI causes" relat toxicants or A has potential nutrients, or c functions are sedimentation or signs of etc.	developmer ed to sedime AA receives of to deliver hig compounds s substantially n, sources of	nt for "probal nt, nutrients, or surroundin gh levels of s such that oth y impaired. M nutrients or	ole or g land use ediments, er ajor	
% Cover of Wetland Vegetation in AA	⊠≥`	70%	□<	70%	□≥7	70%	□ < 70%		
Evidence of Flooding / Ponding in AA		□No	☐ Yes	☐ No	☐ Yes	☐ No	☐ Yes	☐ No	
AA contains no or restricted outlet	1H								
AA contains unrestricted outlet									

Comments: Wetland vegetation cover exceeds 70%. AA contains restricted outlet.

14H. SEDIMENT / SHORELINE STABILIZATION

NA (proceed to 14I)

Applies only if AA occurs on or within the banks of a river, stream, or other natural or man-made drainage, or on the shoreline of a standing water body which is subject to wave action.

If 14H does not apply, check the NA box and proceed to 14I.

% Cover of Wetland Streambank or Shoreline by Species with Stability	Duration of S	Duration of Surface Water Adjacent to Rooted Vegetation									
Ratings of ≥6 (see Appendix F).	☐ Permanent / Perennial	☐ Seasonal / Intermittent	☐ Temporary / Ephemeral								
□ ≥ 65%											
□ 35-64%											
☐ < 35%											

Comments: No shoreline in the project area.

14I. PRODUCTION EXPORT / FOOD CHAIN SUPPORT

i. Level of Biological Activity: Synthesis of wildlife and fish habitat rates (select).

General Fish Habitat Rating	Genera	l Wildlife Habitat Rati	ing (14Ciii)
(14Diii)	⊠ E/H		□ L
☐ E/H			
■ M			
L			
⊠ NA	Н		

ii. Rating: Working from top to bottom, use the matrix below to select the functional point and rating. Factor A = acreage of vegetated wetland component in the AA; Factor B = level of biological activity rating from above (14li); Factor C = whether or not the AA contains a surface or subsurface outlet; the final three rows pertain to the duration of surface water in the AA, where P/P, S/I, and T/E were previously defined, and A = "absent" [see manual for further definitions of these terms].

Α		Vegeta	ted Co	mponent	: >5 ac	res	☑ Vegetated Component 1-5 acres							☐ Vegetated Component <1 acre							
В	_	ligh	M	oderate		Low	⊠⊦	ligh		derate		Low	_ 	ligh	☐ Mo	derate		.ow			
С	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No			
P/P																					
S/I							.8H														
T/E/A																					

			Wetland	l/Site #(s)	: Preservation	<u>ī</u>								
14I. PRODUCTION EXPORT / FOOD CHAIN SUPPORT (continued)														
iii. Modified Rating: Note: Modified scor	e canno	t exceed 1.0 o	r be less than	0.1.										
Vegetated Upland Buffer: Area with mowing or clearing (unless for weed constitutions in the state of the sta	ontrol).				•		•	•						
iv. Final Score and Rating: .9H Comm	ents: <u>T</u>	here is a restri	cted surface w	ater outle	et to the south	<u>-</u>								
14J. GROUNDWATER DISCHARGE / RI Check the appropriate indicators in	-	_												
i. Discharge Indicators ☐ The AA is a slope wetland. ☐ Springs or seeps are known or observed. ☐ Vegetation growing during dormant season/drought. ☐ Wetland occurs at the toe of a natural slope. ☐ 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 select the functional point and rating.														
Duration of Saturation at AA Wetlands FROM GROUNDWATER DISCHARGE or WITH WATER THAT IS RECHARGING THE GROUNDWATER SYSTEM Criteria Drive the information from 1 and 11 above and the table below to select the functional point and rating. Duration of Saturation at AA Wetlands FROM GROUNDWATER DISCHARGE or WITH WATER THAT IS RECHARGING THE GROUNDWATER SYSTEM Drive the information from 1 and 11 above and the table below to select the functional point and rating.														
☑ Groundwater Discharge or Recha	arge		.7M]					
☐ Insufficient Data/Information														
Comments: Shallow groundwater table do	ocument	ted during field	<u>investigations</u>	<u>-</u>										
14K. UNIQUENESS														
i. Rating: Working from top to bottom, us							ır							
Replacement Potential														
Estimated Relative Abundance (#11)	□ Rare	Common	□ Abundant	□ Rare		☐ Abundant	□ Rare	□ Common	□ Abundant					
□ Low Disturbance at AA (#12i)					.6M									
Moderate Disturbance at AA (#12i)														
☐ High Disturbance at AA (#12i) Comments: Site disturbance is low and st		divorcity is hig												
14L. RECREATION / EDUCATION POTE Affords 'bonus' points if AA provides i. Is the AA a known or potential recrea	ENTIAL a recrea	 ational or educa	— NA (proceed to ational opportu	ınity.	•	01 0 7								
ii. Check categories that apply to the A		Other:	•	⊠ Cons	umptive Recre	eational 🖾N	lon-consu	umptive recrea	ational					
Detice the the metable below to enlarge	the effects	and a second contract of the con-	and the Control											

iii	. Rating: Use the matrix below to select the functional point and rating.		
	Known or Potential Recreational or Educational Area	Known	Potential
	Public ownership or public easement with general public access (no permission required)		
	Private ownership with general public access (no permission required)		
	Private or public ownership without general public access, or requiring permission for public access		.05L

Comments: Permission is required for access to this site.

15. GENERAL SITE NOTES: _____

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	low 0.00	1.00	0				
B. MT Natural Heritage Program Species Habitat	high 0.90	1.00	0.99				
C. General Wildlife Habitat	high 0.90	1.00	0.99	*			
D. General Fish Habitat	NA	NA	0				
E. Flood Attenuation	high 0.90	1.00	0.99				
F. Short and Long Term Surface Water Storage	mod 0.60	1.00	0.66				
G. Sediment / Nutrient / Toxicant Removal	high 1.00	1.00	1.1	*			
H. Sediment / Shoreline Stabilization	NA	NA	0				
I. Production Export / Food Chain Support	high 0.90	1.00	0.99	*			
J. Groundwater Discharge / Recharge	mod 0.70	1.00	0.77	*			
K. Uniqueness	mod 0.60	1.00	0.66				
L. Recreation / Education Potential (bonus point)	low 0.05		0.055				
Total Points							
Percent of Possibl	e Score 73% (round	to nearest who	e number)				

	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; if not 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 #).
C	OVERALL ANALYSIS AREA (AA) RATING: Check the appropriate category based on the criteria outlined above.

MDT MONTANA WETLAND ASSESSMENT FORM (revised March 2008)

1.	Project Name: Easton Ranch	<u> 2. MDT Project #: STPX-00</u>	34(14) 3. Control #: 4866											
3.	Evaluation Date: 7/26/2019	4. Evaluator(s): C. Hoschoue	er, T. Traxler, C. Seibert 5. We	etland/Site #(s): Restoration										
6.	Wetland Location(s): Towns	ship <u>4 N</u> , Range <u>9 E</u> , Section <u>32</u>	<u>2;</u> Township <u>N</u> , Range <u>E</u> ,	Section										
	Approximate Stationing or Roadposts: <u>NA</u>													
	Watershed: 13 - Upper Yellowstone County: _ Park													
7.	Evaluating Agency: RESPE Purpose of Evaluation: Wetland potentially affe Mitigation wetlands; pr	ected by MDT project	8. Wetland Size (acre)	(visually estimated) 1.56 (measured, e.g. GPS)										
	☐ Mitigation wetlands; po☐ Other restored channel	est-construction	 Assessment Area (AA) Size (acre): (visually estimated) (see manual for determining AA) 1.56 (measured, e.g. GPS) 											
1 <u>0</u>		LAND AND AQUATIC HABITA	ATS IN AA (See manual for def	• , ,	, 0 ,									
	HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% OF AA									
	Riverine	Emergent Wetland	Excavated	Seasonal / Intermittent	97									
	Riverine	Scrub-Shrub Wetland	Excavated	Seasonal / Intermittent	3									
L														
\sim	mmonte:													

Comments: ____

- 11. ESTIMATED RELATIVE ABUNDANCE (of similarly classified sites within the same Major Montana Watershed Basin; see manual.) common
- 12. GENERAL CONDITION OF AA

i. Disturbance: Use matrix below to select the appropriate response; see manual for Montana listed noxious weed and aquatic nuisance vegetation species lists.

	Predominar	nt Conditions Adjacent to (within	500 feet of) AA
Conditions within AA	Managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or buildings; and noxious weed or ANVS cover is ≤15%.	Land not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to minor clearing; contains few roads or buildings; noxious weed or ANVS cover is ≤30%.	Land cultivated or heavily grazed or logged; subject to substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is >30%.
AA occurs and is managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or occupied buildings; and noxious weed or ANVS cover is ≤15%.		low disturbance	
AA not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to relatively minor clearing, fill placement, or hydrological alteration; contains few roads or buildings; noxious weed or ANVS cover is ≤30%.			
AA cultivated or heavily grazed or logged; subject to relatively substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is >30%.			

Comments (types of disturbance, intensity, season, etc.): <u>Limited agriculture (hay) and ranch structures to the east. Undeveloped riparian corridor and herbaceous uplands to north, south, and west. Two species of noxious weeds were present within the AA. The AA is managed in a natural state, as are most of the lands within 500 feet of the AA.</u>

- ii. Prominent noxious, aquatic nuisance, and other exotic vegetation species: <u>Cirsium arvense, Cynoglossum officinale</u>
- iii. Provide brief descriptive summary of AA and surrounding land use/habitat: The AA consists of one constructed secondary stream channel which bisects the mitigation area. The channel is active during high flow events, is seasonally inundated by shallow ground water early in the growing season and has developed wetland characteristics.
- 13. STRUCTURAL DIVERSITY (Based on number of "Cowardin" vegetated classes present [do not include unvegetated classes]; see #10 above.)

Existing # of "Cowardin" Vegetated Classes in AA	Initial Rating	Is current management peristence of additional		Modified Rating
≥3 (or 2 if one is forested) classes		NA	NA	NA
2 (or 1 if forested) classes	mod	NA	NA	NA
1 class, but not a monoculture		←NO	YES→	
1 class, monoculture (1 species comprises ≥90% of total cover)		NA	NA	NA

Comments: Planted shrubs along channel are surviving, cottonwood seedlings/root suckers were noted in the southern portion of the channel.

14A. HABITAT FOR FEDERAL	LY LISTI	ED OF	RPROP	OSED	THRE	EATEN	ED (OR EN	IDANG	ERED	PLA	NTS C	R AN	IMALS	3				
i. AA is Documented (D) or St Primary or critical habitat (list Secondary habitat (list speci- Incidental habitat (list specie No usable habitat	species) es)		D	s s		x base	ed on	defin	itions ir	n manu	al.								
ii. Rating: Based on the strong	est habita	t chos	en in 14	4A(i) ab	ove, s	select t	he co	orresp	onding	function	onal p	oint a	nd rati	ng.					
Highest Habitat Level	Doc/Prin	nary	Sus/P	rimary	Do	c/Sec	onda	ary :	Sus/Se	conda	ıry	Doc/li	ncider	ntal	Sus	Incide	ntal	Non	е
Functional Point/Rating		-																0L	
Sources for documented use	(e.g. obse	rvatio	ns, reco	ords):	-									-				<u> </u>	
14B. HABITAT FOR PLANTS (Do not include species lis				S1, S2,	OR S	83 BY	THE	MON	TANA	NATUI	RAL	HERIT	AGE I	PROGI	RAM				
i. AA is Documented (D) or Suspected (S) to contain: Check box based on definitions in manual. Primary or critical habitat (list species) Secondary habitat (list species) Incidental habitat (list species) No usable habitat D																			
ii. Rating: Based on the strong	gest habita	at cho	sen in 1	4A(i) at	oove,	select	the c	orres	ponding	g functi	ional	point a	and rat	ing.					_
Highest Habitat Level	Doc/Prin	nary	Sus/P	rimary	Do	c/Sec	onda	ary S	Sus/Se	conda	ry	Doc/li	ncider	ntal	Sus/	Incide	ntal	None	
S1 Species Functional Point/Rating			-				-		Sus/Secondary Doc/Incidental										
S2 and S3 Species	.9H		_																
Functional Point/Rating														tad by	MDT	otoff in			
Sources for documented use (e.g. observations, records): MTNHP; observed on site in 2013. Sandhill Crane nesting documented by MDT staff in 2019.																			
14C. GENERAL WILDLIFE HA	BITAT R	ATING	}																
i. Evidence of Overall Wildlife	Use in th	ne AA	: Chec	k substa	antial.	mode	rate.	or lov	v based	on su	pport	ina evi	idence).					
□ Substantial: Based on any of □ observations of abundant □ abundant wildlife sign suc □ presence of extremely lim □ interview with local biolog ■ Moderate: Based on any of □ observations of scattered □ common occurrence of wi □ adequate adjacent uplanc □ interview with local biolog	wildlife #sch as scathiting habiting habitist with krothe following wildlife grildlife sign drood south	s or hi track tat fea lowled ng [ch oups such rces	gh spects, nest tures not lige of the neck]. or individual scat	structur ot availa ne AA iduals o , tracks	res, ga able in	ame tra	ails, e urrou ew sp	etc. Inding	d) area during	□ f □ li □ s □ i	ew or ttle to sparse ntervi	no wi no wi adjad ew wit	Idlife o Idlife s ent up	bserva sign bland fo	ations ood s	lowing during ources ith kno	peak	use p	
_			_				_4_ ^	. ^ ~44.	ممد داد				_44!		4	رمانام الم			440
ii. Wildlife Habitat Features: V For class cover to be considered																			
percent composition of the AA (s																1 011101			
S/I = seasonal/intermittent; T/E	= tempora	ry/epł	nemeral	; and A	= abs	sent [s	ee m	anual	for furt	her de	finitio	ns of t	hese te	erms].					
Structural Diversity				High						\triangleright	Mo	derate	!					.ow	
(see #13) Class Cover Distribution	_				_														
(all vegetated classes)		Even	1		_ Un	even			□ E	ven			⊠ Un	even				ven	
Duration of Surface	P/P S/	I T/	ΕA	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
Water in ≥ 10% of AA	F/F 3/	' '/'	_ ^	F/F	3/1	-	^	F/F	3/1	1/2	^	F/F	5	1/2	^	F/F	3/1	1/2	^
													Н						
□ Moderate Disturbance at AA (see #12i)		.																	
☐ High Disturbance at AA (see #12i) AA (see #12i)																			
iii. Rating: Use the conclusion	s from i a	nd ii a	bove an	nd the m	natrix	below	to se	lect th	ne func	ional p	oint a	and rat	ing.	•					
Evidence of Wildlife Use									s Rati										
(i)	E	хсер	tional		⊠ High			☐ Moderate			Low								
Substantial														-					
		<u></u>				.7M		+		 					-				
□ IVIIIIIIIIII												1			Ī				

Comments: AA has frequent deer and moose sightings. Food plots located adjacent/east of the project boundary provide supplemental food for wildlife. There is a bald eagle (Haliaeetus leucocephalus) nest directly southwest of the site on the west side of the Shields River, the project site is within the primary habitat zone for bald eagles.

14D. GENERAL FISH HABITAT	NA (proceed to 14	1E)
---------------------------	-------------------	-----

If the AA is not used by fish, fish use is not restorable due to habitat constraints, or is not desired from a management perspective [such as fish entrapped in a canal], then check the NA box and proceed to 14E.

Assess this function if the AA is used by fish or the existing situation is "correctable" such that the AA could be used by fish [i.e., fish use is precluded by perched culvert or other barrier].

Type of Fishery: Cold Water (CW) Warm Water (WW) Use the CW or WW guidelines in the manual to complete the matrix.

i. Habitat Quality and Known / Suspected Fish Species in AA: Use matrix to select the functional point and rating.

Duration of Surface Water in AA	☐ Pe	erman	ent / P	erenn	ial		☐ Seasonal / Intermittent						☐ Temporary / Ephemeral					
Aquatic Hiding / Resting / Escape Cover	Opti	Optimal] uate	Poor		☐ Optimal		Adequate		□ Poor		☐ Optimal		Adequate		□ Poor	
Thermal Cover: optimal / suboptimal	0	o s		S	0	S	0	S	0	s	0	S	0	S	0	s	0	S
FWP Tier I fish species																		
FWP Tier II or Native Game fish species																		
FWP Tier III or Introduced Game fish																		
FWP Non-Game Tier IV or No fish species																		

Sources used for identifying fish spp. potentially found in AA:

ii. Modified Rating: NOTE: Modified score cannot exceed 1.0 or be less than 0.1.

a) Is fish use of the AA significantly reduced by a culvert, dike, or other man-made structure or activity, or is the waterbody included on the current final MDEQ list of waterbodies in need of TMDL development with listed "Probable Impaired Uses" including cold or warm water fishery or aquatic life support, or do aquatic nuisance plant or animal species (see Appendix E) occur in fish habitat? TES, reduce score in i by 0.1 = __ or 🖾 N0

b) Does the AA contain a documented spawning area or other critical habitat feature (i.e., sanctuary pool, upwelling area; specify in comments) for native fish or introduced game fish? \square YES, add to score in i or iia 0.1 = __ or \boxtimes N0

iii. Final Score and Rating: Comments: Although activated during high-flow events within the Shields River, no permanent fish habitat is present within AA.

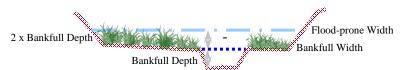
14E. FLOOD ATTENUATION

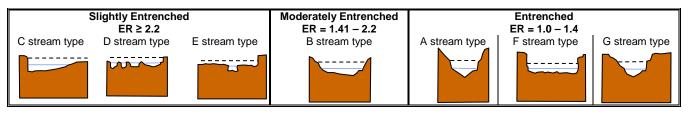
■ NA (proceed to 14F) Applies only to wetlands that are subject to flooding via in-channel or overbank flow.

If wetlands in AA are not flooded from in-channel or overbank flow, check the NA box and proceed to 14F.

Entrenchment Ratio (ER) Estimation (see manual for additional guidance). Entrenchment ratio = (flood-prone width) / (bankfull width). Flood-prone width = estimated horizontal projection of where 2 X maximum bankfull depth elevation intersects the floodplain on each side of the stream.

flood prone width / bankfull width = entrenchment ratio





i. Rating: Working from top to bottom, use the matrix below to select the functional point and rating.

Estimated or Calculated Entrenchment	⊠ SI	ightly Entre	nched	☐ Mod	lerately Enti	enched	☐ Entrenched			
(Rosgen 1994, 1996)	C, D	, E stream t	ypes	В	stream typ	е	A, F, G stream types			
Percent of Flooded Wetland Classified as			\boxtimes							
Forested and/or Scrub/Shrub	75%	25-75%	<25%	75%	25-75%	<25%	75%	25-75%	<25%	
AA contains no outlet or restricted outlet			.6M							
AA contains unrestricted outlet										

ii. Are ≥10 acres of wetland in the AA subject to flooding AND are man-made features which may be significantly damaged by floods located within 0.5 mile downstream of the AA? TYES NO Comments: Outlet is restricted. AA subjet to overflow from Shields River and empties into old meanders of the Shields River at the south end of AA.

14F.	SH	ORT	AND	LO	NG	TE	:RM	SURFA	CE WATE	ER S	TOR	AG	E	□ NA (pr	осее	ed to	14G)		

Applies to wetlands that flood or pond from overbank or in-channel flow, precipitation, upland surface flow, or groundwater flow. If no wetlands in the AA are subject to flooding or ponding, then check the NA box and proceed to 14G.

i. Rating: Working from top to bottom, use the matrix below to select the functional point and rating. Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; and T/E = temporary/ephemeral [see manual for further definitions of these terms].

Estimated Maximum Acre Feet of Water Contained in Wetlands within the AA that are Subject to Periodic Flooding or Ponding		>5 acre fo	eet	⊠ 1.1	to 5 ac	re 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					.6M				
Wetlands in AA flood or pond < 5 out of 10 years									

Comments: (1.56 acre of restoration) x (average 1 ft. ponding/flow at high water) = 1.56 acre feet

Applies to wetland 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, check the NA box and proceed to 14H.

i. Rating: Working from top to bottom, use the matrix below to select the functional point and rating.

Sediment, Nutrient, and Toxicant Input Levels within AA	AA receive has potent nutrients, such that of substantia sedimenta toxicants, present.	ial to delivor compou other funct lly impaire tion, source	er sedime nds at lev ions are n d. Minor es of nutr	nts, els ot ients or	Waterbody is on MDEQ list of waterbodies in need of TMDL development for "probable causes" related to sediment, nutrients, or toxicants or AA receives or surrounding land use has potential to deliver high levels of sediments, nutrients, or compounds such that other functions are substantially impaired. Major sedimentation, sources of nutrients or toxicants, or signs of eutrophication present.					
% Cover of Wetland Vegetation in AA	⊠≥:	70%	□ < 70%		□≥7	70%	□ <	70%		
Evidence of Flooding / Ponding in AA	⊠ Yes □ No		☐ Yes	□No	☐ Yes	☐ No	☐ Yes	☐ No		
AA contains no or restricted outlet	1H									
AA contains unrestricted outlet										

Comments: Cover in AA is greater than 70% and outlet is topographically restricted.

14H. SEDIMENT / SHORELINE STABILIZATION NA (proceed to 14I)

Applies only if AA occurs on or within the banks of a river, stream, or other natural or man-made drainage, or on the shoreline of a standing water body which is subject to wave action.

If 14H does not apply, check the NA box and proceed to 14I.

% Cover of Wetland Streambank or Shoreline by Species with Stability	Duration of Surface Water Adjacent to Rooted Vegetation							
Ratings of ≥6 (see Appendix F).	☐ Permanent / Perennial	⊠ Seasonal / Intermittent	☐ Temporary / Ephemeral					
⊠ ≥ 65%		.9H						
□ 35-64%								
☐ < 35%								

Comments: Increased vegetation development from 2013 to 2019 of species with high stability ratings including Salix, Betula, Carex, and Juncus species.

14I. PRODUCTION EXPORT / FOOD CHAIN SUPPORT

i. Level of Biological Activity: Synthesis of wildlife and fish habitat rates (select).

General Fish Habitat Rating	Genera	l Wildlife Habitat Rati	ing (14Ciii)
(14Diii)	☐ E/H	\boxtimes M	L
☐ E/H			
■ M			
⊠ NA		M	

ii. Rating: Working from top to bottom, use the matrix below to select the functional point and rating. Factor A = acreage of vegetated wetland component in the AA; Factor B = level of biological activity rating from above (14li); Factor C = whether or not the AA contains a surface or subsurface outlet; the final three rows pertain to the duration of surface water in the AA, where P/P, S/I, and T/E were previously defined, and A = "absent" [see manual for further definitions of these terms].

Α		Vegeta	ted Co	mponent	: >5 ac	res	☑ Vegetated Component 1-5 acres							☐ Vegetated Component <1 acre					
В	B ☐ High ☐ Moderate			Low	/ ☐ High				☐ Low		☐ High		☐ Moderate		☐ Low				
С	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
P/P																			
S/I									.6M										
T/E/A																			

			Wetland	/Site #(s)	: Restoration				
14I. PRODUCTION EXPORT / FOOD CH	IAIN SUI	PPORT (conti	nued)						
iii. Modified Rating: Note: Modified scor	e cannot	t exceed 1.0 o	r be less than	0.1.					
Vegetated Upland Buffer: Area with ≥ 30% plant cover, ≤ 15% noxious weed or ANVS cover, AND that is not subjected to periodic mechanical mowing or clearing (unless for weed control). Is there an average ≥ 50-foot wide vegetated upland buffer around ≥ 75% of the AA's perimeter? \boxtimes YES, add 0.1 to score in ii = 0.70 \square NO									
iv. Final Score and Rating: .7M Comm	nents: C	hannel is seas	sonally inundat	ed and h	as a restricted	doutlet at the	southern e	end of the mit	igation site.
14J. GROUNDWATER DISCHARGE / R Check the appropriate indicators in	-								-
i. Discharge Indicators The AA is a slope wetland. Springs or seeps are known of the control o	ormant se a natural land edg ng droug ut no inle	eason/drought slope. e. ht periods. et.		⊠ Perr Wetl	land contains am is a knowi	s ate present wi inlet but no ou n 'losing' strea	ıtlet.		
iii. Rating: Use the information from i an	d ii abov	e and the table	e below to sele	ct the fun	ctional point a	and rating.			
Criteria			Saturation at <i>I</i> VATER THAT I ⊠ S	S RECHA				STEM	
☐ Groundwater Discharge or Recharge	arge		.7M						1
☐ Insufficient Data/Information			•			•			
Comments: Channel is intermittently inun	dated by	<u>r shallow grou</u> i	<u>ndwater and hi</u>	gh flows	from the Shie	ds River.			
14K. UNIQUENESS i. Rating: Working from top to bottom, us									
Replacement Potential	spring foreste	ntains fen, bo s or mature (: ed wetland Of ation listed a 'NHP	>80 yr-old) ⋜ plant	cited ra diversi contair	es not contain are types ANI ty (#13) is high as plant asso as "S2" by the	O structural gh OR ciation			
Estimated Relative Abundance (#11)	□ Rare	☐ Common	□ Abundant	□ Rare	□ Common	□ Abundant	□ Rare		□ Abundar
■ Low Disturbance at AA (#12i)								.4M	
Moderate Disturbance at AA (#12i)									
High Disturbance at AA (#12i)		ad abannal C			thin hanin with				
Comments: Emergent wetland within sea constructed wetland vegetation.	Sonai no	od channel. C	ommon wellan	a type wi	ının basın wili	1 10-50% 01 at	ea wellar	ius similar to	tne
14L. RECREATION / EDUCATION POTI Affords 'bonus' points if AA provides i. Is the AA a known or potential recrea ii. Check categories that apply to the A	a recrea itional o .A: ⊠ E	itional or educ	site? XES	nity. 5, go to ii.	☐ NO , che	eck the NA box	ζ.	Imptive recrea	ational
iii. Rating: Use the matrix below to selec	t the fund	ctional point ar	nd rating.						
Known or F							Vnaum	Detential	and the same of th
Public ownership or public easemer	Otential	Recreational	or Education	al Area			Known	Potential	!
Public ownership of public easemer					n required)				'

Private or public ownership without general process.

Comments: Permission is required for site access.

15. GENERAL SITE NOTES: _____

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	low 0.00	1.00	0				
B. MT Natural Heritage Program Species Habitat	high 0.90	1.00	0.312	*			
C. General Wildlife Habitat	mod 0.70	1.00	1.092				
D. General Fish Habitat	NA	NA	0				
E. Flood Attenuation	mod 0.60	1.00	0.936				
F. Short and Long Term Surface Water Storage	mod 0.60	1.00	0.936				
G. Sediment / Nutrient / Toxicant Removal	high 1.00	1.00	1.56	*			
H. Sediment / Shoreline Stabilization	high 0.90	1.00	1.404	*			
I. Production Export / Food Chain Support	mod 0.70	1.00	1.092	*			
J. Groundwater Discharge / Recharge	mod 0.70	1.00	1.092				
K. Uniqueness	mod 0.40	1.00	0.624				
L. Recreation / Education Potential (bonus point)	low 0.05		0.078				
Total Points	6.55	10		Functional Units			
Percent of Possible Score 66% (round to nearest whole number)							

	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; if not go to Category III) "Low" rating for Uniqueness; and
	☐ Vegetated <u>wetland</u> component < 1 acre (do <u>not</u> include upland vegetated buffer); and
	Percent of possible score < 35% (round to nearest whole #).
Į	·
	OVERALL ANALYSIS AREA (AA) RATING: Check the appropriate category based on the criteria outlined above.
_	THE CHIEF AND LIGHT (AA) INTINO. Check the appropriate category based on the chiefla outlined above.

APPENDIX C PROJECT AREA PHOTOGRAPHS

MDT Wetland Mitigation Monitoring Easton Ranch Park County, Montana

C-1 RSI-2977

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: 2019



Photo Point: 2 Bearing: 200 degrees

Location: Northeast Corner Year: 2010



Photo Point: 2 Bearing: 200 degrees

Location: Northeast Corner Year: 2019



Photo Point: 3 Bearing: 100 degrees

Location: Northwest Corner Year: 2010



Photo Point: 3 Bearing: 100 degrees

Location: Northwest Corner Year: 2019



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

Year: 2010

Bearing: 90 degrees

Bearing: 90 degrees

Year: 2019

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: 2019



Photo Point: 7 Bearing: 340 degrees

Location: Southeast Corner Year: 2010



Photo Point: 7
Bearing: 340 degrees

Location: Southeast Corner Year: 2019

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: 2019



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: 2019



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: 2019

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: 2019



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: 2019



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: 2019

Easton Ranch: Data Point Photos

