#### Montana Department of Transportation Wetland Mitigation Monitoring Report

#### **US 93 PETERSON MITIGATION SITE**

#### **Project Overview**

MDT Project # NH-5-2(122)31 UPN# 1744

Watershed: Watershed #3 – Lower Clark Fork

**Monitoring Year: 2022** 

**Years Monitored**: 14<sup>th</sup> year of monitoring (2<sup>nd</sup> year after adaptive management actions in 2020)

Corps Permit Number: NWO-2005-90-185

Monitoring Conducted By: Confluence Consulting Inc Dates Monitoring Was Conducted: July 6-7, 2022

### **Purpose of the Approved Project:**

US 93 Peterson is one of five sites developed in cooperation with the permitting and natural resources staff from the Confederated Salish and Kootenai Tribes (CSKT) of the Flathead Nation to mitigate for wetland impacts associated with eight segments of the US 93 Evaro-to-Polson highway reconstruction project by the Montana Department of Transportation (MDT). This report assesses the final of the five wetland mitigation sites, US 93 Peterson, that due to adaptive management actions in 2020 had not met required mitigation goals and objectives as determined by the US Army Corps of Engineers (USACE) and the CSKT Shoreline Protection Program. The 2004 wetland mitigation plan provided wetland mitigation concepts, identified wetland community types targeted for establishment, and calculated the wetland mitigation credits expected to be obtained from each onsite mitigation area. At the US 93 Peterson site, MDT was to establish mitigation for wetland impacts regulated by the USACE and the CSKT. This site was to provide 1.31 acres of CSKT mitigation credit and 2.39 acres of Corps mitigation credit (See Table 1-2 in 2017 Monitoring Report https://www.mdt.mt.gov/publications/brochures//wetland-mitigation.aspx).

#### **Site Location:**

Latitude: 47.361717 Longitude: -114.099755

County: Lake County Nearest Town: St. Ignatius, MT

Map Included: Figure #1 on page 7.

Mitigation Site Construction Started: 2004 Construction Ended: 2007

Specific recommendations for any additional corrective actions: Repairs to the failing downstream

outfall structure. Weed management will continue in 2023.

**Anticipated Wetland Credit Acres:** USACE – 2.39, CSKT – 1.31

Wetland Credit Acres Generated to Date: USACE – 3.00, CSKT – 1.33

**Previous Monitoring Reports:** 

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

**Requirements** (from approved mitigation plan, banking instrument, or US Army Corps of Engineers permit conditions)

**Monitoring Period:** 5 years from construction completion or until concurrence by the USACE.

**Performance Standards\*:** 1) Construction of impoundments using 12 log crib structures and earthen berms, and 2) planting of shrubs and herbaceous plugs within the wetland fringe and earthen embankments associated with log crib structures. The target wetland type in the riparian area is palustrine scrub-shrub that supports a Bebb's willow community type with inclusions of palustrine emergent habitat. Grazing is excluded from the mitigation site to preserve the riparian and wetland

areas. Revegetation was completed in 2006, and recent adaptive management associated with crib repairs made in May 2020.

\*Performance criteria were reviewed in 2022, and where necessary, corrected and/or removed to accurately reflect the original performance criteria agreed to in the mitigation plan and any amendments to the mitigation plan.

#### **Summary Data**

**Wetland Delineation** –Total wetland acreage delineated in 2022 was 3.47 acres, a decrease of 0.17 acres from 2021, and included palustrine emergent (PEM) wetlands and a developing palustrine scrubshrub (PSS) component. The increase in wetland acreage reported in 2020 was supported by irrigation overflow that was no longer present in 2021 or 2022. The decrease observed in 2022 was around the slope wetland in the north portion of the mitigation site (Table 1; Figure A-3, Appendix A). The 2022 wetland acreage is a 0.27 acres increase from 2017, likely as a result of repairs made on two crib structures in May 2020, which improved hydrologic function by increasing water and sediment retention.

Table 1. Delineated Wetland Acreage from 2016 through 2017 and 2020-2022 at the US 93 Peterson Site

Habitat Type (acres)	2016	2017	2020	2021	2022
(PEM) Wetland	3.20	3.20	3.94	3.60	3.47

**Vegetation** – A total of 95 plant species have been identified at the site in the 14 years of monitoring (Appendix B; Table B-1).

Two upland community types and three wetland community types were identified and mapped at the site in 2022 (Figure A-3, Appendix A). Wetland Type 11 (*Dipsacus fullonum/Carex nebrascensis*) was replaced with Wetland Type 12 (*Carex nebrascensis/Poa pratensis*) in 2020, both of which are no longer present at the site and mapped in 2022 as Wetland Type 13 (*Carex nebrascensis/Nasturtium officinale*). Wetland Type 2 (*Phalaris arundinacea/Carex spp.*) was previously updated from *Phalaris arundinacea* to include *Carex spp.*, and to reflect the diversifying wetland community. *Alnus incana* individuals are present within Wetland Type2 and Wetland Type 8 (*Typha latifolia/Phalaris arundinacea*), although the individuals appear stunted with decreasing foliage observed during the monitoring event. Woody vegetation is diversifying within Wetland Type 8 with *Cornus alba* and *Salix exigua* observed for the first time in 2021, and *Salix exigua* volunteers establishing within the wetland. Species composition for each community type is provided in detail in the Wetland Mitigation Site Monitoring form (Appendix B). The vegetation community types identified within the site in 2022 include the following:

- Wetland Type 2 Phalaris arundinacea/Carex spp.
- Wetland Type 8 Typha latifolia/Phalaris arundinacea
- Wetland Type 13 Carex nebrascensis/Nasturtium officinale
- Upland Type 7 *Elymus repens/Poa pratensis*
- Upland Type 10 *Elymus repens/Sisymbrium altissimum*

Vegetation cover was measured along two transects (T-1 and T-2) in 2022 (Figure A-2, Appendix A). Photographs of the transect end points are provided in Appendix C. Table 2 summarizes the data for T-1. T-1 is 144 feet long and intersected upland community Type 7 – *Elymus repens/Poa pratensis* and Wetland Type 8 – *Typha latifolia/Phalaris arundinacea*; 83.3 percent of the transect crossed wetland habitat, a 3.5% decrease from 2022. The number of hydrophytic species increased from 13 to 14, and the total number of species increased from 17 to 23. Total vegetative cover remained unchanged at 95 percent. The dominant wetland community at the site is classified as Palustrine Emergent (PEM), although woody species including gray alder provide approximately 10% canopy cover across the entire wetland.

Table 2. Data Summary for T-1 From 2016 - 2017 and 2020 - 2022 at the US 93 N Peterson Site

Monitoring Year	2016	2017	2020	2021	2022
Transect Length (feet)	144	144	144	144	144
Vegetation Community Transitions along Transect	2	2	2	2	2
Vegetation Communities along Transect	2	2	2	2	2
Hydrophytic Vegetation Communities along Transect	1	1	1	1	1
Total Vegetative Species	15	14	14	17	23
Total Hydrophytic Species	12	7	12	13	14
Total Upland Species	3	7	2	4	9
Estimated % Total Vegetative Cover	96	95	95	95	95
Estimated % Unvegetated	4	5	5	5	5
% Transect Length Comprising Hydrophytic Vegetation Communities	73.6	85.4	85.4	86.8	83.3
% Transect Length Comprising Upland Vegetation Communities	26.4	14.6	14.6	13.2	16.7
% Transect Length Comprising Unvegetated Open Water	0	0	0	0	0
% Transect Length Comprising Mudflat	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 325 feet long and intersects Upland Type 7 – *Elymus repens/Poa pratensis* and Wetland Type 8 – *Typha latifolia/Phalaris arundinacea;* 78.5 percent of the transect crossed wetland habitat in 2022, which is an increase of 6.5% from 2021. Additionally, the number of hydrophytic species increased from 12 to 18, and the total number of species observed along the transect increased from 17 to 28. Total vegetative cover remained unchanged at 95 percent.

Table 3. Data Summary for T-2 From 2016 - 2017 and 2020 - 2022 at the US 93 N Peterson Site

Monitoring Year	2016	2017	2020	2021	2022
Transect Length (feet)	325	325	325	325	325
Vegetation Community Transitions along Transect	3	3	3	3	3
Vegetation Communities along Transect	2	2	2	2	2
Hydrophytic Vegetation Communities along Transect	1	1	1	1	1
Total Vegetative Species	18	17	17	17	28
Total Hydrophytic Species	14	6	12	12	18
Total Upland Species	4	11	5	5	10
Estimated % Total Vegetative Cover	93	95	95	95	95
Estimated % Unvegetated	7	5	5	5	5
% Transect Length Comprising Hydrophytic Vegetation Communities	67.7	72.0	72.0	72	78.5
% Transect Length Comprising Upland Vegetation Communities	32.3	28.0	28.0	28	21.5
% Transect Length Comprising Unvegetated Open Water	0	0	0	0	0
% Transect Length Comprising Mudflat	0	0	0	0	0

Twenty-seven infestations of state-listed Priority 2A and 2B noxious weeds were mapped across the US 93 Peterson site in 2022 (Figure A-3, Appendix A). Ox-eye daisy (*Leucanthemum vulgare*) and yellow flag iris (*Iris pseudacorus*) were observed in low cover classes, while Canada thistle (*Cirsium arvense*) ranged

from trace to high. Whitetop (*Lepidium draba*) infestations ranged from trace to high, with dense infestations occurring in the upland of the southwest quadrant of the mitigation site. Ventenata (*Ventenata dubia*) was first observed in the north central portion of the site in 2020 as a low infestation. In 2022, the number of infestations have increased and spread across the site, ranging from low to moderate.

Hydrology — The main source of hydrology at the Peterson site is an unnamed perennial tributary of Post Creek. The mitigation site is located within a ¼-mile-long wetland corridor aligned east to west that follows the topographic gradient toward Post Creek. The project area is exposed to seasonal flooding during spring runoff, seasonal high groundwater, and sustained flows during summer from irrigation returns. Additionally, small seeps occur north and south of the tributary at the toe of slope. Immediately east of US 93 and the Peterson site is a small reservoir located on private land. The landowner manipulates the channel flows from this reservoir that supply hydrology to the mitigation site. In May 2020, log crib structures (i.e., log dams 1, 1A, 2, and 6) and earthen berms were installed, repaired, and replaced to improve water impoundment and increase wetland establishment across the site. During the 2022 monitoring event, 1-2 inches of water were observed flowing over the upstream and middle crib structures, indicating that they are functioning as intended. However, water was flowing through and not over the downstream outfall structure, indicating failure. This structure requires repairs to function as intended.

The slope/swale wetland along the north boundary of the mitigation site shrunk in 2022. This was observed in the field as a transition from a hydrophytic to a facultative vegetation community and an absence of wetland hydrology in those areas after several consecutive drier than normal years.

**Soils** – The assessment area is primarily mapped as Colake silt loam and Ronan silty clay loam by the National Resource Conservation Service (NRCS). Paired soil test plots, one upland plot paired with one wetland plot, were excavated at 5 locations (Figure A-2, Appendix A). Wetland sample plots demonstrated the hydric soil indicator redox dark surface, except DP04-wet, which was a problematic wetland soil. This sample pit was located at the same elevation as the adjacent cattail marsh, indicating that saturation at this location may not fluctuate enough to introduce aerobic conditions for the development of redoximorphic features, such as concentrations or depletions. However, the lower horizons are becoming depleted, and the soil meets the NRCS (2018) definition of a hydric soil as having formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register 1994). Soil textures ranged from sandy loam to clay, and a restrictive hardpan layer was encountered around 11-12 in both upland and wetland plots across the site. No hydric soil indicators were observed in the upland soil plots.

**Photographs** – Photographs were taken at photo points 1–8 (PP1 to PP8), transect endpoints, and data points. These and additional site photos of the repaired cribs and outflow structures are provided in Appendix C, with comparisons between 2022 and the first year of monitoring. MDT added photo point 8 in 2020 to monitor the newly installed Log Crib 1A. Please refer to past monitoring reports for all previous annual photographs at this weblink:

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

**Functional Assessment** – The 2022 results of the functional assessment utilizing the 2008 version of the Montana Wetland Assessment (MWAM) are summarized in Table 4. Prior to 2021, the 1999 version of the MWAM form was used, and changes in points scored between past years and 2021 may be related to substantial updates between the versions, and not necessarily indicative of a reduced function. Comparisons between 2021 and 2022 are more representative of functionality. Completed MWAM forms for the US 93 Peterson site are provided in Appendix B. Overall, the site rates as a Category II wetland and has generated 27.24 Functional Units. Due to observations of minnows in the

channel, fish habitat, which was previously rated as N/A, was evaluated in 2021, and 2022. Expected wetland mitigation credits are shown in Table 5.

Table 4. Montana Wetland Assessment Method Summary for the US 93 N Peterson Site.

Function and Value Parameters from the MDT Montana Wetland Assessment Method (2008)	2004 (Baseline) (AA-1)*	2017 (AA-1)*	2020 (AA-1)*	2021 (AA-1)	2022 (AA-1)
Listed/Proposed T&E Species Habitat	Low (0.3)	High (0.8)	High (0.8)	High (0.8)	High (0.8)
MTNHP Species Habitat	Low (0.1)	Low (0.1)	Low (0.1)	Low (0.1)	Low (0.1)
General Wildlife Habitat	Low (0.5)	High (0.9)	High (0.9)	High (0.9)	High (0.9)
General Fish/Aquatic Habitat	Low (0.1)	NA	NA	Low (0.3)	Low (0.3)
Flood Attenuation	Low (0.2)	High (0.8)	High (0.8)	Mod (0.6)	Mod (0.6)
Short and Long Term Surface Water Storage	Mod (0.4)	High (0.8)	High (0.8)	High (0.8)	High (0.8)
Sediment/Nutrient/Toxicant Removal	High (0.9)	High (1.0)	High (1.0)	High (1)	High (1)
Sediment/Shoreline Stabilization	High (0.7)	High (1.0)	High (1.0)	High (1)	High (1)
Production Export/Food Chain Support	High (0.8)	High (0.8)	High (0.8)	High (0.8)	High (0.8)
Groundwater Discharge/Recharge	High (1.0)	High (1.0)	High (1.0)	High (1)	High (1)
Uniqueness	Low (0.2)	Mod (0.4)	Mod (0.4)	Mod (0.4)	Mod (0.4)
Recreation/Education Potential (Bonus Points)	Low (0.1)	High (1.0)	High (1.0)	High (0.15)	High (0.15)
Actual Points / Possible Points	5.3/12	8.6/11	8.6/11	7.85/11	7.85/11
% of Possible Score Achieved	44%	78%	78%	71%	71%
Overall Category	III	II	II	II	II
Total Acreage of Assessed Wetlands within Easement (ac)	1.26	3.20	3.94	3.60	3.47
Total Functional Units (acreage x actual points) (fu)	6.68	27.52	33.88	28.26	27.24

<sup>\*1999</sup> MWAM form. 2008 MWAM first utilized at US 93 N Peterson in 2021.

**Wildlife** – Four bird species were identified at the site in 2022, including Sora (*Porzana carolina*), Redwinged Blackbird (*Agelaius phoeniceus*), Eastern Kingbird (*Tyrannus tyrannus*), and a Great Horned Owl (*Bubo virginianus*). In addition to the four bird species, frogs, minnows, voles, common gartersnake, and white-tailed deer were observed at the site. Additional evidence of wildlife use includes observations of tracks, scat, bedding, and bird nests. Woody vegetation provides usable habitat for wildlife and birds.

**Credit Summary** — Wetland acreage totaled 3.47 acres and has generated 27.24 Functional Units in 2022, which is a slight decrease from acreages and Functional Units reported in 2021. Based upon the 3.47 acres of delineated wetlands, using the USACE credit ratios for creation and rehabilitation/secondary restoration, the site is currently receiving 3.00 USACE credit acres and 1.33 CSKT credit acres. Table 5 summarizes the estimated wetland credits based on USACE-approved credit ratios and the wetland delineation completed in July 2022. Credit acres calculated in 2022 exceed anticipated credit acres for both the USACE and CSKT.

Table 5. Expected USACE and CSKT Mitigation Credits for US 93 Peterson Site for 2022.

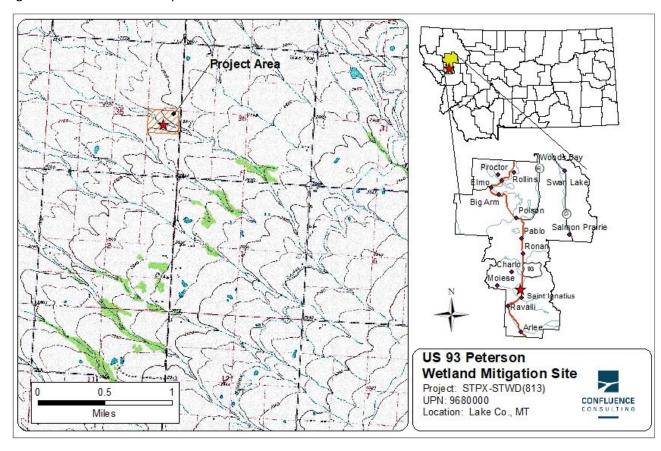
Compensatory Mitigation Type	2022 Delineated Acres	Mitigation Ratio		2022 Mitigation Credit Acres		MWAM Actual Points	2022 Functional Units Generated
		USACE	CSKT	USACE	CSKT		
Creation	2.22	1:1	3.36:1	2.22	0.66	7.85	17.43
Rehabilitation/Secondary Restoration	1.25	1.61:1*	1.86:1	0.78	0.67	7.85	6.12
	(Mitigation Credit Acres** X Actual Points)						

<sup>\*</sup>Corrected enhancement ratio implemented in 2014.

<sup>\*\*</sup>Functional Credits are calculated based on the USACE Mitigation Credit Acres and do not include CSKT Credit Acres.

#### Maps, Plans, Photos

Figure # 1: Site Location Map



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

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

**Tables:** See Appendix B (Comprehensive Vegetation Species List, Table B-1).

Photos: See Appendix C.

**Plans:** See Appendix D of 2020 US 93- Peterson Wetland Monitoring Report found at this website:

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

#### **Conclusions**

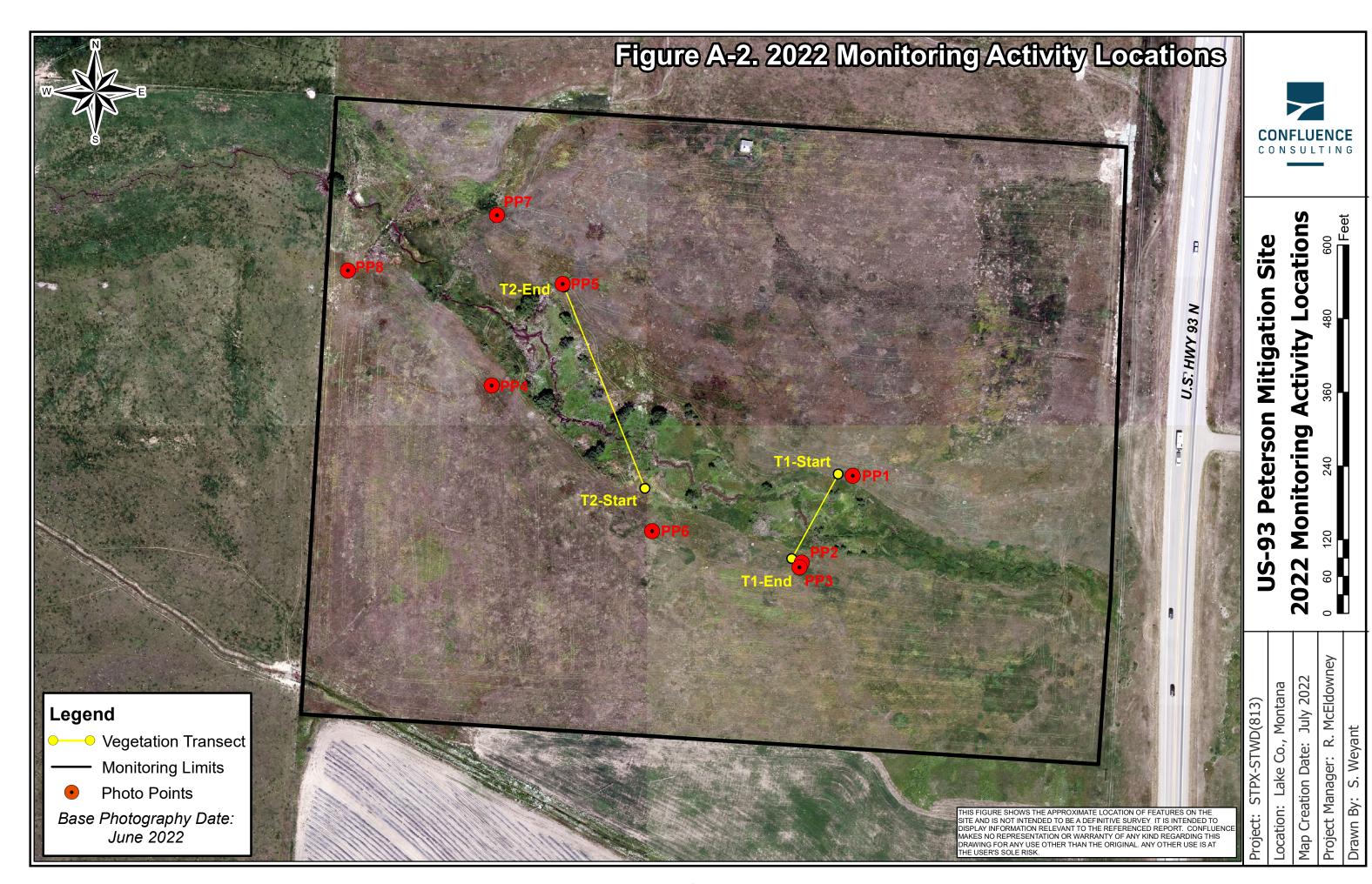
Based on the results of the fourteenth year of monitoring, the mitigation site has developed into a diverse wetland ecosystem consisting of emergent habitat and a developing scrub/shrub habitat. The site is meeting the following performance standards in 2022: the construction of 12 log crib structures and earthen berms and the planting of shrubs and herbaceous plugs within the wetland fringe. However, the site has not developed into the target scrub shrub habitat type. Of the three log crib structures installed in May 2020, the middle crib structure at the downstream end is not functioning as intended and requires repair. Decreases in wetland acreage from the previous year were observed around the slope wetlands north and south of the creek and are likely related to decreased hydrology after several consecutive drier than normal years. Despite these decreases, both the USACE and CSKT mitigation credits outlined in the 2008 mitigation plan have been reached and exceeded.

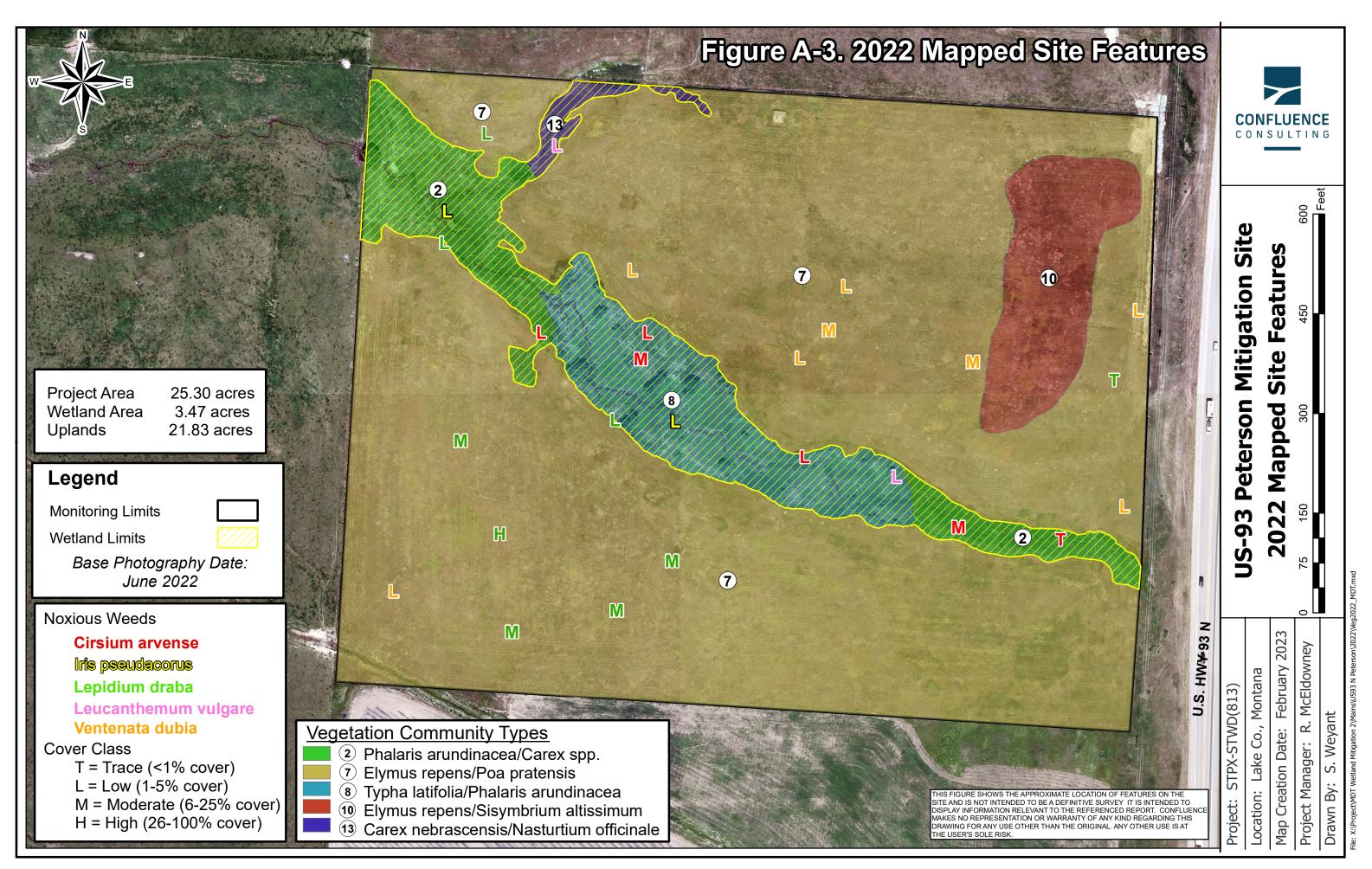
#### **References**

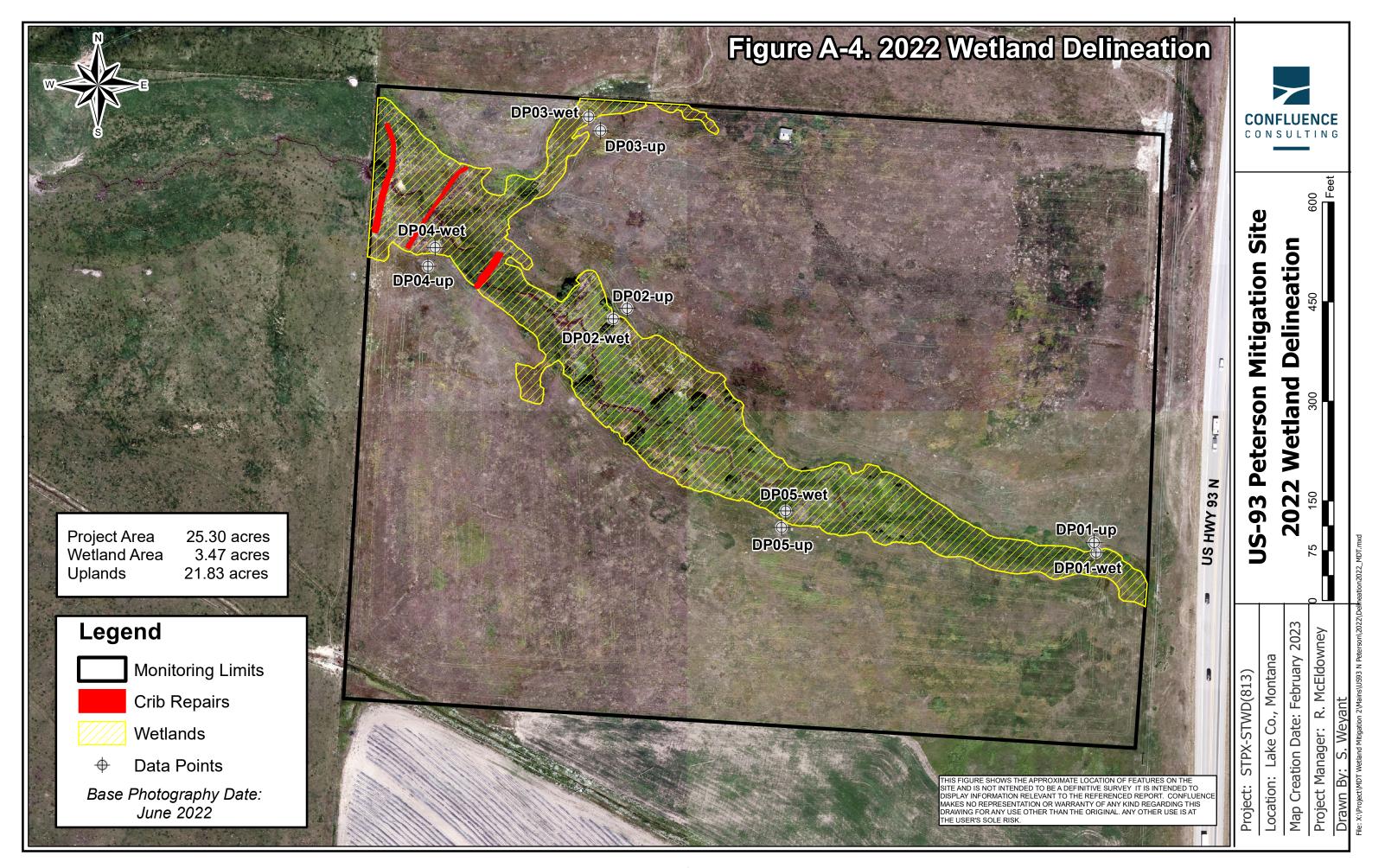
- **Berglund, J. and R. McEldowney. 2008.** MDT Montana Wetland Assessment Method, PBS&J Project B43072.00, prepared by Post, Buckley, Schuh, & Jernigan, Helena, MT, for the Montana Department of Transportation, Helena, MT.
- **Environmental Laboratory.** 1987. *Corps of Engineers Wetlands Delineation Manual*. U.S. Army Corps of Engineers. Washington, DC.
- **Federal Geographic Data Committee (FGDC).** 2013. *Classification of wetlands and deepwater habitats of the United States*. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.
- Lesica, P. 2012. Manual of Montana Vascular Plants, Brit Press, Fort Worth, TX.
- **Montana Natural Heritage Program.** Environmental Summary Report. Custom Field Guide. Summarized by: 23PRVT0062 MDTMIT (Custom Area of Interest). Retrieved on 9/16/2022.
- Natural Resources Conservation Service (NRCS). 2020. Soil Survey (SSURGO) Database for [Lake County Area, Montana]. Accessed on 2 October 2020 at http://websoilsurvey.nrcs.usda.gov/
- Natural Resources Conservation Service (NRCS). 2018. Field Indicators of Hydric Soils in the United States, Version 8.2. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils. 55 p.
- **U.S. Army Corps of Engineers (USACE).** 2005. *Montana Mitigation Information*. Accessed on 10 October 2016 at http://www.nwo.usace.army.mil/Missions/Regulatory-Program/Montana/Mitigation/
- U.S. Army Corps of Engineers (USACE). 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coasts Region (Version 2.0), prepared by U.S. Army Corps of Engineers, U.S. Army Engineer Research and Development Center, Environmental Laboratory, Vicksburg, MS.
- **U.S. Army Corps of Engineers (USACE).** 2020. *National Wetland Plant List (Version 3.5),* prepared by U.S. Army Corps of Engineers, U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH.

# APPENDIX A PROJECT AREA MAPS

MDT Wetland Mitigation Monitoring US 93 Peterson Lake County, Montana







# APPENDIX B MONITORING FORMS

MDT Wetland Mitigation Monitoring US 93 Peterson Lake County, Montana

## MDT WETLAND MITIGATION SITE MONITORING FORM

Project Site: <u>US 93 Peterson</u> Assessment Date/Time	<u>7/6/2</u> 02
Person(s) conducting the assessment: S Weyant	
Weather: Clearly, partly cloudy, 75 degrees Location: St. Ignatius	
MDT District: Missoula Milepost: 35.5	
Legal Description: T <u>19N</u> R <u>20W</u> Section(s) <u>35</u>	
Initial Evaluation Date: 8/15/2008 Monitoring Year: 14 #Visits in Year: 1	
Size of Evaluation Area: 25 (acres)	
Land use surrounding wetland:	
Residential & agriculture.	
HYDROLOGY	
Surface Water Source: Unnamed tributary to Post Creek; irrigation ditch diversion.	
nundation: Average Depth: 0.5 (ft) Range of Depths: 0-2 (ft)	
Percent of assessment area under inundation:25 %	
Depth at emergent vegetation-open water boundary:0 (ft)	
f 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 <u>:</u>	-
Surface soil cracks, soil saturation, sulfidic odor, geomorphic position, FAC-Neutral, innundation.	
Groundwater Monitoring Wells	
_	
Record depth of water surface below ground surface, in feet.	
dditional Activities Checklist:	
Map emergent vegetation-open water boundary on aerial photograph.	
Observe extent of surface water during each site visit and look for evidence of past surface water	
levations (drift lines, erosion, vegetation staining, etc.)	
Use GPS to survey groundwater monitoring well locations, if present.	
lydrology Notes:	
nundation behind the crib structures at the downstream end was present during the site visit, nowever, water was flowing under one of the crib structures, indicating failure of the design and equires repair. The wetland/upland boundary at the site is distinct and contained by landscape position. Slope wetlands have decreased in size after a string of dry years.	

#### **VEGETATION COMMUNITIES**

Site US 93 Peterson

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

Community # 2 Community Type: Phalaris arundinacea / Carex spp. Acres: 1.53

Species	Cover class	Species	Cover class
Alnus incana	1	Brassica juncea	2
Carex aquatilis	1	Carex nebrascensis	1
Carex pachystachya	1	Carex pellita	2
Carex stipata	2	Cirsium arvense	0
Dipsacus fullonum	2	Eleocharis palustris	1
Epilobium ciliatum	2	Juncus balticus	0
Juncus tenuis	1	Nasturtium officinale	2
Phalaris arundinacea	4	Poa palustris	1
Rosa woodsii	1	Schoenoplectus acutus	1
Scirpus microcarpus	1	Solanum dulcamara	2
Typha latifolia	3		

#### Comments:

Wetland community type created in 2021 to replace Phalaris arundinacea community. Community observed along channel at the west and east ends of the mitigation site.

Community # 7 Community Type: Elymus repens / Poa pratensis Acres: 20.49

Species	Cover class	Species	Cover class
Bare Ground	1	Brassica juncea	2
Bromus inermis	2	Bromus tectorum	1
Carex nebrascensis	1	Cirsium arvense	0
Dipsacus fullonum	1	Elymus repens	4
Juncus balticus	0	Lepidium campestre	1
Lepidium draba	1	Lepidium perfoliatum	2
Mentha arvensis	0	Pascopyrum smithii	2
Phalaris arundinacea	0	Poa pratensis	4
Rosa woodsii	0	Sisymbrium altissimum	1
Sonchus arvensis	1	Thlaspi arvense	0
Ventenata dubia	1		

#### **Comments:**

Upland community type surrounding the wetland assessment area. Ventenata dubia is proliferating and spreading across the site within this community, particularly in disturbed and drier areas that appear to have been previously sprayed with herbicide.

Community #	8	Community Type:	Typha latifolia / Phalaris arundinacea	Acres:	1.75
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Species	Cover class	Species	Cover class
Alnus incana	2	Brassica juncea	3
Carex aquatilis	1	Carex nebrascensis	2
Carex stipata	0	Carex utriculata	2
Cirsium arvense	0	Cirsium vulgare	0
Cornus alba	1	Dipsacus fullonum	2
Elymus repens	0	Epilobium ciliatum	3
Geum macrophyllum	1	Glyceria grandis	0
Hesperis matronalis	0	Lemna minor	1
Leucanthemum vulgare	0	Mentha arvensis	1
Myosotis laxa	2	Nasturtium microphyllum	2
Nasturtium officinale	3	Nepeta cataria	1
Open Water	0	Persicaria amphibia	1
Phalaris arundinacea	4	Poa palustris	1
Poa pratensis	1	Rosa woodsii	1
Salix exigua	1	Sisymbrium altissimum	0
Solanum dulcamara	2	Sonchus arvensis	0
Thlaspi arvense	0	Typha latifolia	4
Veronica americana	0		

#### Comments:

Wetland community type along stream channel in the central portion of the mitigation site.

Species	Cayar alaaa	Species	Cover elece	
Community #	10 Community Type:	Elymus repens / Sisymbrium altissimu	<u>ım</u> Acres:	<u>1.36</u>

Species	Cover class	Species	Cover class
Brassica juncea	1	Bromus inermis	1
Cirsium vulgare	0	Elymus repens	5
Lepidium perfoliatum	2	Sisymbrium altissimum	4
Thlaspi arvense	0		

#### Comments:

Upland community type in northeast quandrant of site.

Community #	13	<b>Community Type:</b>	Carex nebrascensis / Nasturtium officinale	Acres:	0.18
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Species	Cover class	Species	Cover class
Brassica juncea	3	Carex nebrascensis	5
Carex stipata	1	Elymus repens	0
Glyceria grandis	1	Leucanthemum vulgare	0
Nasturtium officinale	3	Pascopyrum smithii	0
Phalaris arundinacea	1	Poa pratensis	1
Sisymbrium altissimum	0	Thlaspi arvense	1
Typha latifolia	1		

## **Comments:**

Community type 13 was created in 2021 to replace community type 12 (Carex nebrascensis/Poa pratensis). Observed in slope wetland north of the channel.

Total Vegetation Community Acreage

25.30

# **VEGETATION TRANSECTS**

US 93 Peterson		ate:	
Transect Number: <u>1</u>	Compass D	Direction from Start: 2	<u>10</u>
Interval Data:			
<b>Ending Station</b>	13 Community Type	Elymus repens / Poa praten	sis
Species	Cover class	Species	Cover class
Bare Ground	2	Brassica juncea	0
Dipsacus fullonum	0	Elymus repens	3
Pascopyrum smithii	2	Poa pratensis	3
Ventenata dubia	1		
Ending Station	133 Community Type	Typha latifolia / Phalaris aru	ndinacea
Species	Cover class	Species	Cover class
Alnus incana	0	Brassica juncea	2
Carex nebrascensis	1	Carex stipata	1
Carex utriculata	1	Dipsacus fullonum	2
Epilobium ciliatum	3	Hesperis matronalis	1
Myosotis laxa	2	Nasturtium microphyllum	4
Open Water	1	Phalaris arundinacea	2
Poa pratensis	0	Rosa woodsii	0
Sisymbrium altissimum	1	Solanum dulcamara	0
Typha latifolia	2	Veronica americana	3
Ending Station	144 Community Type	Elymus repens / Poa praten	sis
Species	Cover class	Species	Cover class
Brassica juncea	1	Elymus repens	2
Poa pratensis	5	Sisymbrium altissimum	1
Thlaspi arvense	1		
T (N)			
Transect Notes:			

Transect Number: 2	<b>Compass Direction from Start:</b>	340

**Interval Data:** 

<b>Ending Station</b>	255 Community Type:	Typha latifolia / Phalaris arundinacea
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	• • • • • • • • • • • • • • • • • • • •	<b>76.</b>	
Species	Cover class	Species	Cover class
Alnus incana	1	Brassica juncea	2
Carex nebrascensis	1	Cirsium arvense	0
Dipsacus fullonum	2	Elymus repens	0
Epilobium ciliatum	2	Geum macrophyllum	1
Glyceria grandis	1	Leucanthemum vulgare	0
Mentha arvensis	0	Myosotis laxa	2
Nasturtium officinale	3	Nepeta cataria	1
Persicaria amphibia	1	Phalaris arundinacea	0
Poa palustris	0	Rosa woodsii	0
Solanum dulcamara	3	Sonchus arvensis	1
Thlaspi arvense	0	Typha latifolia	3
Veronica americana	1		

Ending Station 325 Community Type: Elymus repens / Poa pratensis

Species	Cover class	Species	Cover class
Bromus tectorum	1	Carex nebrascensis	0
Pascopyrum smithii	2	Poa pratensis	5
Sisymbrium altissimum	0	Thlaspi arvense	1
Ventenata dubia	1		

Transect Notes:

Depth of inundation along the transect ranged from 0-5".

#### PLANTED WOODY VEGETATION SURVIVAL

#### US 93 Peterson

Planting Type	#Planted	#Alive Notes
Alnus incana	1163	
Betula occidentalis	817	
Cornus alba	408	
Crataegus douglasii		
Ribes hudsonianum	245	
Rosa woodsii	450	
Salix exigua	408	

#### Comments

No planted woody vegetation survival was assessed during 2020-2022 monitoring events. Woody plants were evaluated based on ocular observation. Alnus incana has the highest woody plant density and appears stunted with thin foliage above and some basal regrowth. Rosa woodsii and Cornus alba are present along the wetland/upland boundary, and Salix exigua is present within community type 8 with volunteers observed in this area. Overall, woody vegetation is diversifying, and provides important wildlife habitat and structural diversity at the site.

## **WILDLIFE**

birus	
Were man-made nesting structures installed? _	No
If yes, type of structure:	
How many?	
Are the nesting structures being used?	No
Do the nesting structures need repairs?	No
Nesting Structure Comments:	

Species	#Observed	Behavior	Habitat
Eastern Kingbird	1	L	
Great Horned Owl	1	FO, L	
Red-winged Blackbird	25	L, FO, F	
Sora	2	L	
Bird Comments			
Observed owl pellets, feathers, and birds nests in shrubs.			

## **BEHAVIOR CODES**

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

#### **HABITAT CODES**

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

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

# **Mammals and Herptiles**

# Species # Observed Tracks Scat Burrows Comments

Frog sp.	2	No	No	No
Garter Snake	1	No	No	No
Minnow sp.	1	No	No	No
Vole	2	No	No	Yes
White-tailed Deer	2	Yes	Yes	Yes

# Wildlife Comments:

Sightings, tracks, and scat indicate wildlife presence. Minnows observed in channel in 2021 and 2022.

#### **PHOTOGRAPHS**

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

## **Photograph Checklist:**

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

Photo #	Latitude	Longitude	Bearing	Description
DP01u	47.361253	-114.097568		Upland data point
DP01w	47.361213	-114.097554		Wetland data point
DP02u	47.362106	-114.100487		Upland data point
DP02w	47.362059	-114.100568		Wetland data point
DP03u	47.362832	-114.100712		Upland data point
DP03w	47.362887	-114.100789		Wetland data point
DP04u	47.362231	-114.101711		Upland data point
DP04w	47.36231	-114.101674		Wetland data point
DP05u	47.361239	-114.099472		Upland data point
DP05w	47.361309	-114.099452		Wetland data point
PP1	47.361538	-114.098828	175	Photo point 1: Photo 1.
PP2-1	47.361169	-114.099105	35	Photo point 2: Photo 1.
PP2-2	47.361169	-114.099105	110	Photo point 2: Photo 2.
PP3	47.36115	-114.099117	45	Photo point 3.
PP4	47.361821	-114.101036	30	Photo point 4.
PP5	47.362254	-114.100645	175	Photo point 5.
PP6	47.361263	-114.100017	315	Photo point 6.
PP7-1	47.362521	-114.101066	5	Photo point 7: Photo 1.
PP7-2	47.362521	-114.101066	267	Photo point 7: Photo 2.
PP8	47.362257	-114.101944	34	Photo point 8.
T1-End	47.361169	-114.099105	45	Photo point 2. T-1 End.
T1-Start	47.361538	-114.098828	215	Photo point 1. T-1 Start.
T2-End	47.362242	-114.100633	315	Photo point 5. T-2 End.
T2-Start	47.361435	-114.100076	135	Transect 2 start.

## **ADDITIONAL ITEMS CHECKLIST**

Hydrology
<ul> <li>✓ Map emergent vegetation/open water boundary on aerial photos.</li> <li>✓ Observe extent of surface water. Look for evidence of past surface water elevations (e.g. drift lines, vegetation staining, erosion, etc).</li> </ul>
Photos
<ul> <li>✓ One photo from the wetland toward each of the four cardinal directions</li> <li>☐ One photo showing upland use surrounding the wetland.</li> <li>☐ One photo showing the buffer around the wetland</li> <li>✓ One photo from each end of each vegetation transect, toward the transect</li> </ul>
Vegetation
✓ Map vegetation community boundaries
✓ Complete Vegetation Transects
Soils
✓ Assess soils
Wetland Delineations
✓ Delineate wetlands according to applicable USACE protocol (1987 form or Supplement)
☑ Delineate wetland – upland boundary onto aerial photograph.
Wetland Delineation Comments
Wetland acreage decreased 0.13-acre in the slope wetland at the north boundary of the site.
Functional Assessments
☑ Complete and attach full MDT Montana Wetland Assessment Method field forms.
Functional Assessment Comments:
The assessment area is rated as a category 2 wetland.

#### **Maintenance**

Were man-made nesting structure installed at this site? No

If yes, do they need to be repaired?

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

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

into or out of the wetland? Yes

If yes, are the structures in need of repair? Yes

If yes, describe the problems below.

The second wire from the top of fence at the entry gate has been cut and needs repair. Water is flowing around and not over the downstream outfall structure of the middle crib structure, indicating it has failed and requires repair.

Project/Site: US 93 N Peterson	City/County: Lake Sampling Date:7/6/2022
Applicant/Owner: MDT	State: Montana Sampling Point: DP01-up
Investigator(s): S Weyant	
Landform (hillslone, terrace, etc.). Hillside	Local relief (concave, convex, none): flat Slone (%):
Subregion (LRR): LRR E	Local relief (concave, convex, none): flat Slope (%): 47.361253 Long:114.097568 Datum: NAD 83
Soil Map Unit Name: 22: Colake silt loam, 0-1% slopes	NWI classification: Not Mapped.
Are climatic / hydrologic conditions on the site typical for this time o	
	ntly disturbed? Are "Normal Circumstances" present? Yes <u>✓</u> No
	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ing sampling point locations, transects, important features, etc
Hydrophytic Vegetation Present? Yes ☐ No ☑  Hydric Soil Present? Yes ☐ No ☑	Is the Sampled Area
Wetland Hydrology Present? Yes No	within a Wetland? Yes No
Remarks: Sample point located on hillside approximately 1.5' higher  VEGETATION - Use scientific names of plants	than DP01-wet.
Tara Stratum Plat size (20 Feet Rediive) Absolute Dom	i Dominance Test Worksneet
Iree Stratum Plot size (30 Foot Radius) % Cover: Spec	Number of Dominant Species that are OBL, FACW or FAC:  (A)
	Total Number of Dominant Species Across All Strata:  1 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)	Percent of Dominant Species That Are OBL, FACW, or FAC:  0 % (A/B)
<u></u>	Prevalence Index worksheet
	Total % Cover of: Multiply by:  OBL species 0 X 1 0
	FACW species 1 X2 2
	FAC species 3 X 3 9
	FACU species 89 X 4 356
Herbaceous Stratum Plot size ( 5 Foot Radius)	UPL species 2 X 5 10
Juncus balticus 1	FACW Column Totals 95 (A) 377 (B
Lactuca serriola 1	FACU  FACU  Prevalence Index = B/A = 3.96842
Lepidium perfoliatum       1         Pascopyrum smithii       87	Hydrophytic Vocatation Indicators
Poa pratensis 3	FAC 1 - Rapid Test for Hydrophytic Vegetation
Ventenata dubia 2	UPL 2 - Dominance Test is >50%
	3 - Prevalence Index is <= 3.0
	4 - Morphological Adaptations (Provide supporting data in remarks or on separate
	sheet.  5 - Wetland Non-Vascular Plants
	Problematic Hydrophytic Vegetation (Explain
Woody Vine Stratum Plot size ( 30 Foot Radius)	Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5.
Percent Bare Ground 5	Hydrophytic  Vegetation Yes □ NO ✓  Present?
Remarks:	1
Upland sample plot dominated by FACU vegetation.	
US Army Corpo of Engineers	Western Mauntains Valleus and Coasts Marrier Co
US Army Corps of Engineers	Western Mountains, Valleys, and Coasts - Version 2.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)  Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)  Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)  Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)  Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)  Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)  Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)  Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)  Profile Description: (Describe to the depth needed to the confirmation of the description of the descri	Depth (inches)	Features  %Type¹  10DM  10DM  Features  10DM  Features  Featur	Loc <sup>2</sup> T	Clay  Hardpan  Clay  A continuation of the con	Remarks Fine roots Cemented Refusal  On: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils³: luck (A10) arent Material (TF2) hallow Dark Surface (TF12) Explain in Remarks) of hydrophytic vegetation and
Color (moist)	Color (moist)   Color (moist)   Color (moist)	7ype <sup>1</sup> 10 D M 1	Sand Grains	Clay  Hardpan	Cemented  Refusal  On: PL=Pore Lining, M=Matrix.  for Problematic Hydric Soils <sup>3</sup> : luck (A10) arent Material (TF2) hallow Dark Surface (TF12) Explain in Remarks)  of hydrophytic vegetation and
Dept	0-07 7.5YR 3/1 100  07-14 10YR 5/2 90 10YR 4/1  14+  1Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS= Hydric Soil Indicators: (Applicable to all LRRs, unless otherw Histosol (A1) Sandy Redox (SS Stripped Matrix (SS Hydrogen Sulfide (A4) Loamy Mucky Mill Depleted Below Dark Surface (A11) Depleted Matrix (SS Sandy Mucky Mineral (S1) Depleted Dark Surface (A12) Redox Dark Surface (A12) Redox Depression  Restrictive Layer (if present):  Type: Depth (inches):	10 D M	Sand Grains	Clay  Hardpan	Cemented  Refusal  On: PL=Pore Lining, M=Matrix.  for Problematic Hydric Soils <sup>3</sup> : luck (A10) arent Material (TF2) hallow Dark Surface (TF12) Explain in Remarks)  of hydrophytic vegetation and
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.   Tocation: PL=Pore Lining, M=Matrix, Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)   Indicators for Problematic Hydric Soils   Histoso (A)   Sandy Redox (S5)   2 cm Muck (A10)   Red Parent Material (TF2)   Redox Dark Surface (A12)   Depleted Matrix (E3)   Redox Dark Surface (A11)   Depleted Matrix (E3)   Redox Dark Surface (F6)   Redox Dark Surface (F7)   Redox Dark Surface (F7)   Redox Dark Surface (F7)   Redox Dark Surface (F8)   Redox Dar	17ype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS= Hydric Soil Indicators: (Applicable to all LRRs, unless otherw Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Depressio  Restrictive Layer (if present): Type: Depth (inches):	ECovered or Coated vise noted.)  5) S6) neral (F1) (except Natrix (F2) (F3) ace (F6) urface (F7)	Sand Grains	Clay  Hardpan   Location  Indicators  Red Pa  Very SI  Other (  James Simulation of the control	Cemented  Refusal  on: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils <sup>3</sup> : luck (A10) arent Material (TF2) hallow Dark Surface (TF12) Explain in Remarks) of hydrophytic vegetation and
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.   Location: PL=Pore Lining, M=Matrix, Plydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)   Indicators for Problematic Hydric Soils*:   Loamy Mucky Menoral (F1) (except MLRA 1)   Red Parrent Material (TF2)   Plydropen Suffice (A4)   Loamy Mucky Mineral (F1) (except MLRA 1)   Red Parrent Material (TF2)   Plydropen Suffice (A4)   Loamy Gleyed Matrix (F2)   Depleted Below Dark Surface (A11)   Depleted Matrix (F3)   Depleted Dark Surface (F5)   Plydropen Suffice (A4)   Depleted Dark Surface (F5)   Plydropen Suffice (A4)   Redox Dark Surface (F6)   Plydropen Suffice (A5)   Plydrop	14+  1 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS= Hydric Soil Indicators: (Applicable to all LRRs, unless otherw Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Depleted Matrix (1) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Depression Restrictive Layer (if present): Type: Depth (inches):	ECovered or Coated vise noted.)  5) S6) neral (F1) (except Natrix (F2) (F3) ace (F6) urface (F7)	Sand Grains	2Locatic Indicators Question Other (	Refusal  on: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils³: luck (A10) arent Material (TF2) hallow Dark Surface (TF12) Explain in Remarks) of hydrophytic vegetation and
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.	1Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS= Hydric Soil Indicators: (Applicable to all LRRs, unless otherw Histosol (A1) Histic Epipedon (A2) Stripped Matrix (S Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Depression Restrictive Layer (if present): Type: Depth (inches):	vise noted.)  5)  S6)  neral (F1) (except Natrix (F2)  (F3)  ace (F6)  urface (F7)	Sand Grains	2Locatie Indicators  2 cm M Red Pa Very SI Other (  3Indicators of	on: PL=Pore Lining, M=Matrix.  for Problematic Hydric Soils <sup>3</sup> : luck (A10) arent Material (TF2) hallow Dark Surface (TF12) Explain in Remarks) of hydrophytic vegetation and
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)    Histosol (A1)	Hydric Soil Indicators: (Applicable to all LRRs, unless otherw  Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Depressio  Restrictive Layer (if present): Type: Depth (inches):	vise noted.)  5)  S6)  neral (F1) (except Natrix (F2)  (F3)  ace (F6)  urface (F7)		Indicators  2 cm M Red Pa Very SI Other (	for Problematic Hydric Soils <sup>3</sup> : luck (A10) arent Material (TF2) hallow Dark Surface (TF12) Explain in Remarks) of hydrophytic vegetation and
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Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)    Histosol (A1)	Hydric Soil Indicators: (Applicable to all LRRs, unless otherw  Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Depressio  Restrictive Layer (if present): Type: Depth (inches):	vise noted.)  5)  S6)  neral (F1) (except Natrix (F2)  (F3)  ace (F6)  urface (F7)		Indicators  2 cm M Red Pa Very SI Other (	for Problematic Hydric Soils <sup>3</sup> : luck (A10) arent Material (TF2) hallow Dark Surface (TF12) Explain in Remarks) of hydrophytic vegetation and
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Bistic Epipedon (A2)	Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Redox Dark Surface Depleted Dark Surface Carrictive Layer (if present):  Type:  Depth (inches):	S6) neral (F1) (except flatrix (F2) (F3) ace (F6) urface (F7)	MLRA 1)	Red Pa Very SI Other (	arent Material (TF2) hallow Dark Surface (TF12) Explain in Remarks) of hydrophytic vegetation and
Black Histic (A3)	Black Histic (A3)	neral (F1) (except fatrix (F2) (F3) ace (F6) urface (F7)	MLRA 1)	Very SI Other (	hallow Dark Surface (TF12) Explain in Remarks) of hydrophytic vegetation and
Hydrogen Sulfide (A4)	Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Dark Surface Depleted Dark Surface (B4) Redox Dark Surface (B4) Redox Depression Redox Depression Restrictive Layer (if present):  Type: Depth (inches):	atrix (F2) (F3) ace (F6) urface (F7)	VIERA I)	Other (	Explain in Remarks) of hydrophytic vegetation and
Depleted Below Dark Surface (A11)  □ Depleted Matrix (F3)  □ Thick Dark Surface (A12)  □ Redox Dark Surface (F6)  □ Poleted Dark Surface (F7)  □ Depleted Dark Surface (F7)  □ Depleted Dark Surface (F7)  □ Wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if present):  Type: □ Depth (inches): □ Hydric Soil Present? Yes □ No ☑  Remarks:  No hydric soil indicators observed. Concentrations appear relict and occur in an extremely compacted/hardpan layer. Refusal by hardpan layer encountered at 14*.  INDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply) □ Secondary Indicators (2 or more required) □ A4, and 4B) □ A4, and	Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Redox Dark Surface Depleted Dark Surface (A12) Redox Dark Surface (A12) Redox Dark Surface (A12) Redox Depression Redox Depression Restrictive Layer (if present):  Type: Depth (inches):	(F3) ace (F6) urface (F7)		<sup>3</sup> Indicators of	of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Redox Depressio  Restrictive Layer (if present):  Type:  Depth (inches):	urface (F7)			
Sandy Gleyed Matrix (S4)	Sandy Gleyed Matrix (S4)  Restrictive Layer (if present):  Type:  Depth (inches):	, ,		wetland	
Restrictive Layer (if present):  Type:  Depth (inches):  Hydric Soil Present? Yes  No    Remarks:  No hydric soil indicators observed. Concentrations appear relict and occur in an extremely compacted/hardpan layer. Refusal by hardpan layer encountered at 14".    Water of the continuation of the continuati	Restrictive Layer (if present):  Type:  Depth (inches):	ons (F8)			
Type:	Type: Depth (inches):			uniess d	isturbed or problematic.
Depth (inches):	Depth (inches):				
Remarks:  No hydric soil indicators observed. Concentrations appear relict and occur in an extremely compacted/hardpan layer. Refusal by hardpan layer encountered at 14".    IVDROLOGY			L,	vdric Soil Dr	esent? Ves No 🗸
No hydric soil indicators observed. Concentrations appear relict and occur in an extremely compacted/hardpan layer. Refusal by hardpan layer encountered at 14".    IVDROLOGY   Wetland Hydrology Indicators:   Primary Indicators (minimum of one required; check all that apply)   Secondary Indicators (2 or more required)   Surface Water (A1)   Water-Stained Leaves (B9) (except   Water-Stained Leaves (B9) (MLRA 1, 2, 4, and 4B)   A4, and 4B, and 4B   Dry-Season Water Table (A2)   MLRA 1, 2, 4A, and 4B)   Dry-Season Water Table (C2)   Sediment Deposits (B1)   Aquatic Invertebrates (B13)   Dry-Season Water Table (C2)   Sediment Deposits (B3)   Oxidized Rhizospheres along 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)   FAC-Neutral Test (D5)   Surface Soil Cracks (B6)   Stunted or Stressed Plants (D1) (LRR A)   Rised Ant Mounds (D6) (LRR A)   Frost-Heave Hummocks (D7)   Sparsely Vegetated Concave Surface (B8)   Depth (inches):   Wetland Hydrology Present? Yes   No   Depth (inches):   Wetland Hydrology Present? Yes   No   Present? Yes   No   Depth (inches):   Wetland Hydrology Present? Yes   No   Present? Yes   Yes   No   Present? Yes	Remarks:		'''	yunc 3011 Fit	esent: Tes NO
Wetland Hydrology Indicators:  Primary 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)  Driy-Season Water Table (C2)  Drift Deposits (B3)  Oxidized Rhizospheres along Living Roots (C3)  Recent Iron Reduction in Tilled Soils (C6)  Surface Soil Cracks (B6)  Surface Water Arial Imagery (B7)  Sparsely Vegetated Concave Surface (B8)  Water Present?  Yes No ✓ Depth (inches):  Secondary Indicators (2 or more required)  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)  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)  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)  Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Water Aria (B10)  Driy-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Saturation Visible on Aerial Imagery (C9)  Saturation Visible on Aerial Imagery (B7)  Other (Explain in Remarks)  Frost-Heave Hummocks (D7)  Frost-Heave Hummocks (D7)  Water Table Present?  Yes No ✓ Depth (inches):  Wetland Hydrology Present? Yes No ✓ Depth (inches):					
Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)  Water-Stained Leaves (B9) (except  Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Saturation (A3)  Saturation (A3)  Sediment Deposits (B2)  Drift Deposits (B3)  Oxidized Rhizospheres along Living Roots (C3)  Recent Iron Reduction in Tilled Soils (C6)  Surface Soil Cracks (B6)  Surface Soil Cracks (B6)  Surface Soil Cracks (B6)  Drift Observations:  Surface Water Present?  Yes  No  Depth (inches):  Saturation Visible on Aerial Prosent?  Yes  No  Wetland Hydrology Present?  Yes  No  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)  4A, and 4B)  4A, and 4B)  Drainage Patterns (B10)  Drainage Patterns (B10)  Saturation Visible on Aerial Imagery (C9)  Saturation Visible on Aerial Imagery (C9)  Sparsely Vegetated Concave Surface (B8)  Frost-Heave Hummocks (D7)  Depth (inches):  Water Table Present?  Yes  No  Depth (inches):  Wetland Hydrology Present?  Yes  No  No  Wetland Hydrology Present?  Yes  No  No  No  Wetland Hydrology Present?  Yes  No  No  No  No  No  No  No  No  No  N					
Surface Water (A1)				Sacanda	ny Indicators (2 or more required)
High Water Table (A2)  Saturation (A3)  Saturation (A3)  Satic Crust (B11)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Drait Present? Yes ☐ No ✔ Depth (inches):  Saturation Present? Yes ☐ No ✔ Depth (inches):  Wetland Hydrology Present? Yes ☐ No ✔ Depth (includes capillary fringe)					· · · · · · · · · · · · · · · · · · ·
Saturation (A3)			cepi		
Water Marks (B1)					•
Sediment Deposits (B2)					
□ Drift Deposits (B3) □ Oxidized Rhizospheres along 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) □ 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)  Field Observations:  Surface Water Present? Yes □ No ☑ Depth (inches): □ Water Table Present? Yes □ No ☑ Depth (inches): □ Wetland Hydrology Present? Yes □ No ☑ (includes capillary fringe)		, ,			
Algal Mat or Crust (B4)		, ,	iving Roots (C	_	
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)  Field Observations:  Surface Water Present? Yes ☐ No ✔ Depth (inches):  Water Table Present? Yes ☐ No ✔ Depth (inches):  Saturation Present? Yes ☐ No ✔ Depth (inches):  (includes capillary fringe)		-		_	
Inundation Visible on Aerial Imagery (B7)  ☐ Other (Explain in Remarks)  ☐ Frost-Heave Hummocks (D7) ☐ Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present? Yes ☐ No ☑️ Depth (inches): ☐ Water Table Present? Yes ☐ No ☑️ Depth (inches): ☐ Wetland Hydrology Present? Yes ☐ No ☑️ Depth (inches): ☐ Wetland Hydrology Present? Yes ☐ No ☑️ Concludes capillary fringe)					
Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present? Yes □ No ☑ Depth (inches):  Water Table Present? Yes □ No ☑ Depth (inches):  Saturation Present? Yes □ No ☑ Depth (inches):  (includes capillary fringe)  Wetland Hydrology Present? Yes □ No ☑ Metland Hydrology Present? Yes □ No ☑	Surface Soil Cracks (B6)	Stressed Plants (D1)	(LRR A)	Rais	ed Ant Mounds (D6) ( <b>LRR A</b> )
Field Observations:  Surface Water Present? Yes Nov Depth (inches): Water Table Present? Yes No _v Depth (inches): Saturation Present? Yes No _v Depth (inches): (includes capillary fringe)  Wetland Hydrology Present? Yes No _v _v Depth (inches):	Inundation Visible on Aerial Imagery (B7)  Uther (Expla	ain in Remarks)		Fros	t-Heave Hummocks (D7)
Surface Water Present?  Yes Nov Depth (inches):  Water Table Present?  Yes No _v Depth (inches):  Saturation Present?  Yes No _v Depth (inches):  (includes capillary fringe)  Wetland Hydrology Present? Yes No _v _v Depth (inches):	Sparsely Vegetated Concave Surface (B8)				
Water Table Present?  Yes Nov Depth (inches): Saturation Present?  Yes No _v Depth (inches): (includes capillary fringe)  Wetland Hydrology Present? Yes No _v _v No _v					
Saturation Present? Yes Nov Depth (inches): Wetland Hydrology Present? Yes No _v (includes capillary fringe)	Surface Water Present? Yes 🖳 No 👱 Depth (inch	ies):	-		
(includes capillary fringe)	Water Table Present? Yes 🔲 No 🔟 Depth (inch	ies):	-		_
		ies):	_ Wetland I	Hydrology P	resent? Yes No
		otos, previous inspe	ections), if ava	ailable:	
Demonto	Domontico				
Remarks: No evidence of wetland hydrology observed.					
	12 21.251.00 of Hodging Hydrology observed.				

Project/Site: US 93 N Peterson	City/County: Lake	Sampling Date:7/6/2022
		State: Montana Sampling Point: DP01-wet
Investigator(s): S Weyant		
		,
Landform (hillslope, terrace, etc.): Streambank	Local relief (concave, co	onvex, none): Concave Slope (%):
Subregion (LRR): LRR E Lat:	47.361213	Long:
Soil Map Unit Name: 22: Colake silt loam, 0-1% slopes		NWI classification:PEM1C
Are climatic / hydrologic conditions on the site typical for this time of	f year?  Yes 🗹 No[	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significa	ntly disturbed? Are "N	ormal Circumstances" present? Yes 🗹 No 🔲
Are Vegetation, Soil, or Hydrology naturally		
SUMMARY OF FINDINGS – Attach site map show	ing sampling point lo	cations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		
Hydric Soil Present? Yes ✓ No □	Is the Sampled A	Area
Wetland Hydrology Present? Yes <u>✓</u> No	within a Wetland	? Yes V No No
Remarks:	<b>'</b>	
PEM, riverine wetland. Sample point at east end of wetland	d fringe along channel, ap	oproximately 6" above the water surface.
VEGETATION - Use scientific names of plants		
Tree Stratum Plot size (30 Foot Radius) Absolute Dom % Cover: Spe		Dominance Test worksheet
Cover. Spe	cies? Status	Number of Dominant Species that are OBL, FACW or FAC: 2 (A)
		Total Number of Dominant Species Across All Strata:  2 (B)
Continue (Characher Dietaire #5 Foot Podius)		Percent of Dominant Species That Are OBL, FACW, or FAC:  100 % (A/B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)		Prevalence Index worksheet
		Total % Cover of: Multiply by:
		OBL species 13 X 1 13
		FACW species 28 X 2 56
		FAC species 31 X 3 93
		FACU species 0 X 4 0
Herbaceous Stratum Plot size ( 5 Foot Radius)		UPL species 8 X 5 40
Brassica juncea 7	UPL	Column Totals 80 (A) 202 (B)
Carex aquatilis 3	OBL	Prevalence Index = B/A = 2.525
Carex stipata 8	OBL	
Cirsium arvense 2	] FAC	Hydrophytic Vegetation Indicators  1 - Rapid Test for Hydrophytic Vegetation
Epilobium ciliatum 1	] FACW	✓ 2 - Dominance Test is >50%
Geum macrophyllum 3	FAC	
Glyceria grandis 2	OBL	✓ 3 - Prevalence Index is <= 3.0
Juncus tenuis 20		4 - Morphological Adaptations (Provide
Mentha arvensis 3	] FACW	supporting data in remarks or on separate sheet.
Phalaris arundinacea 24	FACW	
Poa pratensis 5	] FAC	☐ 5 - Wetland Non-Vascular Plants
Solanum dulcamara 1	FAC	Problematic Hydrophytic Vegetation (Explain)
Woody Vine Stratum Plot size ( 30 Foot Radius)		Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5.
Percent Bare Ground 21		Hydrophytic Vegetation Present?  Ves ✓ NO
Remarks:		
Evidence of hydrophytic vegetation includes a positive do	minance test and prevaler	nce index less than 3.0.
LIO Assess Company of Francisco		Western Meantains Walley 10 1 2 1 2 2
US Army Corps of Engineers		Western Mountains, Valleys, and Coasts - Version 2.0

SOIL											Sampling Point: DP01-wet
Profile Desc	cription: (	Describe	to the de	oth neede	d to docum	ent the ir	ndicato	r or confi	rm the abs	ence of i	
Depth		Matrix			Redox	c Features			_		
(inches)		(moist)	%	Color	(moist)	%	_Type <sup>1</sup>	Loc <sup>2</sup>	Textu		Remarks
0-03	10YR	2/2	100						Sandy	Loam	Fine roots
03-08	10YR	2/1	97	7.5YR	4/6	3	С	M, PL	Clay	Loam	
08+			-						Hard	dpan —	Cobbles. Refusal
				,				-	_		
<sup>1</sup> Type: C=C	oncentratio	n D=Der	letion RM	=Reduced	I Matrix CS		or Coat	ed Sand (		<sup>2</sup> l ocatio	n: PL=Pore Lining, M=Matrix.
								ica cana ·			or Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators: (Applicable to a  Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)				Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except MLRA 1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8)					2 cm Muck (A10) Red Parent Material (TF2)		
Restrictive	Layer (if p	resent):									
Type:											
Depth (in	ches):								Hydrid	Soil Pre	sent? Yes 🔽 No 🔲
encountere											
HYDROLO											
Wetland Hy											
Primary India			one require								y Indicators (2 or more required)
	Water (A1				Water-Stair			except	-		r-Stained Leaves (B9) (MLRA 1, 2,
☐ High Wa ☐ ☑ Saturation	ater Table(	(A2)				l, <b>2, 4A, a</b> ı 'D11\	na 4B)				a, and 4B)
_	larks (B1)				Salt Crust ( Aquatic Inv		(D12)		-		age Patterns (B10) eason Water Table (C2)
	nt Deposits	(P2)			Hydrogen S				-	_ •	ation Visible on Aerial Imagery (C9)
	posits (B3)				Oxidized R			a Livina P		_	norphic Position (D2)
	at or Crust				Presence o			-			ow Aquitard (D3)
	posits (B5)	(04)			Recent Iron		,	,			Neutral Test (D5)
	Soil Crack	c (B6)			Stunted or			-	-	_	d Ant Mounds (D6) (LRR A)
	on Visible		lmagen, (F	_	Other (Expl		,	Ji) (LIKIK	<b>~</b> ) -	_	Heave Hummocks (D7)
	y Vegetate				Other (Expi	iaiii iii ixei	ilai Ko)		-		rieave ridiffifiocks (D7)
Field Obser				(==)							
Surface Wat		? Y	′es _ 🗆 _	No 🗸	Depth (inc	hes)					
Water Table					Depth (inc			1			
Saturation P	resent?	Υ	es 🔽	_	Depth (inc			_	etland Hydr	ology Pro	esent? Yes 🔽 No 🔲
Describe Re			n gauge, m	onitoring v	vell, aerial p	hotos, pre	vious in	spections	s), if availab	le:	
Remarks:	Function of the	bydrele	v ipple-d-		م جناطنيد م	S in also s	of the	ail af-	00 00000	robic	sition and a positive FAC
Neutral test		nyarolog	y include:	s saturati	on within 6	inches (	of the s	oli surrac	ce, geomo	rpnic pos	sition, and a positive FAC-

Project/Site: US 93 N Peterson	City/County: Lake		Sampling Date:	7/6/2022
Applicant/Owner: MDT	, ,	State: Montana	Sampling Point:	DP02-up
	Section, Township, Rang			
Landform (hillslope, terrace, etc.): Toeslope				
Subregion (LRR): LRR E Lat:	47.362106	Long: -11	4.100487 <sub>Datu</sub>	<sub>Im:</sub> NAD 83
Soil Map Unit Name: 143: Ronan silty clay loam, 4-8% slopes		NWI classifica	ation Not Mappe	<u></u> ed.
Are climatic / hydrologic conditions on the site typical for this time of ye				
Are Vegetation, Soil, or Hydrology significantly				No 🗆
Are Vegetation, Soil, or Hydrology naturally pr				
SUMMARY OF FINDINGS – Attach site map showing				atures, etc.
Hydrophytic Vegetation Present?  Hydric Soil Present?  Wetland Hydrology Present?  Yes	Is the Sampled A within a Wetland		No <u>✓</u>	_
Remarks: Upland sample point on hillside approximately .75' higher tha	n DP02-wet			
opining sumpre point on missing approximately in o mights the	Di 02 wo			
VEGETATION - Use scientific names of plants				
Tree Stratum Plot size (30 Foot Radius) Absolute Domiar		Dominance Test wor	ksheet	
Tree Stratum Plot Size (30 Foot Radius) % Cover: Species	s? Status	Number of Dominant S that are OBL, FACW of		1 (A)
		Total Number of Domi		1 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)		Percent of Dominant S That Are OBL, FACW,		00 % (A/B)
<u></u>		Prevalence Index wo		
		Total % Cover of OBL species	f: M 0 X 1	lultiply by:
		FACW species	0 X1	0
		·	80 X3	240
			15 X4	60
Herbaceous Stratum Plot size ( 5 Foot Radius)		UPL species	5 X 5	25
Pascopyrum smithii 15	FACU	Column Totals 10	00 (A)	325 (B)
Poa pratensis 80  Thlaspi arvense 1	FAC UPL	Prevalence Index	: = B/A = 3	3.25
Ventenata dubia 4	UPL	Hydrophytic Vegetati	on Indicators	
		_	st for Hydrophytic	: Vegetation
		_	ce Test is >50%	
		☐ 3 - Prevalenc	e Index is <= 3.0	1
			gical Adaptations ata in remarks or	
			lon-Vascular Pla	nte
			Hydrophytic Vege	
			, , , ,	` ' /
Woody Vine Stratum Plot size ( 30 Foot Radius)		Indicators of hydric sil a present, unless disturbe		
Percent Bare Ground 0		Hydrophytic Vegetation Present?	es 🗸 NO	
Remarks:	tland are sa serrer !!	oito Although the	t in densire -t- !	by a FAC
Typical upland vegetation community encountered in non-we rated species, the plot exhibits no other wetland characteristics.		site. Although the plo	ı is dominated	by a FAC-
US Army Corps of Engineers		Western Mountains, Va	alleys, and Coast	ts - Version 2.0

SOIL								Sampling Point: DP02	2-up
Profile Desc	cription: (C	escribe	to the depth	needed to docur	nent the indicato	r or confirr	n the absence o		
Depth		Matrix			x Features		<b>T</b>	<b>D</b>	
(inches)	Color (I		%	Color (moist)	%Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-03	7.5YR		100				Clay	Fine roots	
03-11	7.5YR	4/3	100				Clay	Gravels	
11+								Refusal	
				educed Matrix, CS	S=Covered or Coa	ted Sand G		tion: PL=Pore Lining, M=Matri s for Problematic Hydric Soil:	
Histosol		(Appli		Sandy Redox (	-			Muck (A10)	э.
	pipedon (A2	2)		Stripped Matrix	•			Parent Material (TF2)	
	istic (A3)	.,		7 ''	Mineral (F1) ( <b>exce</b>	pt MLRA 1)	_	Shallow Dark Surface (TF12)	
Hydroge	en Sulfide (A			Loamy Gleyed	Matrix (F2)			(Explain in Remarks)	
	d Below Da ark Surface		ce (ATT)	Depleted Matrix Redox Dark Su			3Indicators	of hydrophytic vegetation and	ı
_	Aucky Miner	,	Ħ	Depleted Dark	` ,			d hydrology must be present,	^
	Gleyed Matr		Ť	Redox Depress	, ,			disturbed or problematic.	
Restrictive			_		,			J	
		•							
Depth (in				<u>—</u>			Hydric Soil P	resent? Yes No _	<b>~</b>
HYDROLO Wetland Hy		dicators	:						
-				theck all that appl	v)		Second	ary Indicators (2 or more requi	red)
	Water (A1)		ono roganou, c		ined Leaves (B9) (	excent		ter-Stained Leaves (B9) ( <b>MLR</b> A	
	ater Table (A				1, 2, 4A, and 4B)	CACCAL		4A, and 4B)	· ·, <u>-</u> ,
Saturation		·-/		Salt Crust				inage Patterns (B10)	
_	larks (B1)				vertebrates (B13)			-Season Water Table (C2)	
	nt Deposits	(B2)			Sulfide Odor (C1)			uration Visible on Aerial Image	nv (C9)
	posits (B3)	(02)		= ' '	Rhizospheres alon	a Livina Roc		omorphic Position (D2)	19 (00)
	at or Crust (	B4)			of Reduced Iron (0		` ' —	allow Aquitard (D3)	
	oosits (B5)	٥.,			n Reduction in Till	,		C-Neutral Test (D5)	
	Soil Cracks	(B6)		_	Stressed Plants (	,	_	sed Ant Mounds (D6) (LRR A)	
			Imagery (B7)		plain in Remarks)	/ (		st-Heave Hummocks (D7)	
			re Surface (B8)		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
Field Obser									
Surface Wat	er Present?	,	res 🗌 No	✓ Depth (in	ches):				
Water Table			res 🗌 No	_	ches):				
Saturation P	resent?	,	res No	_	ches):		and Hydrology	Present? Yes 🔲 No	<b>✓</b>
Describe Re	corded Data	á (strear	n gauge, monit	oring well, aerial ı	ohotos, previous ir	spections),	if available:		
Remarks:									
	e of wetlan	nd hvdra	ology observe	ed.					
311401100	J		, 5555140	·					

Project/Site: US 93 N Peterson	City/County: Lake	Sampling Date:7/6/2022
Applicant/Owner: MDT		State: Montana Sampling Point: DP02-wet
• •	Section Township Ran	ge: S 35 T 19 N R 20 W
Landform (hillslope, terrace, etc.): Valley bottom		
Subregion (LRR): LRR E Lat:	47 362059	Long:114.100568 Datum: NAD 83
Soil Map Unit Name: 22: Colake silt loam, 0-1% slopes	17.002000	Not Mannad
•		NWI classification: Not Mapped.
Are climatic / hydrologic conditions on the site typical for this time of year		
Are Vegetation, Soil, or Hydrology significantly		
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If nee	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing	g sampling point lo	ocations, transects, important features, etc
Hydrophytic Vegetation Present?  Yes   No   No   No   No   No   No   No   N		•
Hydric Soil Present? Yes No	Is the Sampled within a Wetlan	
Wetland Hydrology Present? Yes No	within a vvetan	u: 163 <u> </u>
Remarks: PEM, riverine wetland. Sample point in central portion of mitig	ration site along porth	houndary of the wotland
FEM, INVENIE WELIAND. Sample point in Central portion of mility	gation site along north	boundary of the wetland.
VECETATION Lies esignific names of plants		
VEGETATION - Use scientific names of plants  Absolute Domiar	t Indicator	T
<u>Tree Stratum</u> Plot size (30 Foot Radius) Absolute Domiar % Cover: Species		Dominance Test worksheet
		Number of Dominant Species that are OBL, FACW or FAC: 2 (A)
		Total Number of Dominant Species Across All Strata:  2 (B)
Carling/Church Chratum Plataire #F Foot Podius)		Percent of Dominant Species That Are OBL, FACW, or FAC:  100 % (A/B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)		Prevalence Index worksheet
		Total % Cover of: Multiply by:
		OBL species 45 X 1 45
		FACW species 1 X 2 2
		FACULTURE 18 X 3 54
Herbaceous Stratum Plot size ( 5 Foot Radius)		FACU species 0 X 4 0  UPL species 11 X 5 55
	LIDI	
Brassica juncea 10 ☐ Carex nebrascensis 35 ✓	UPL OBL	Column Totals 75 (A) 156 (B
Carex nebrascensis 35  Dipsacus fullonum 3	FAC	Prevalence Index = B/A = 2.08
Epilobium ciliatum 1	FACW	Hydrophytic Vegetation Indicators
Geum macrophyllum 15	FAC	1 - Rapid Test for Hydrophytic Vegetation
Nasturtium officinale 5	OBL	✓ 2 - Dominance Test is >50%
Thlaspi arvense 1	UPL	✓ 3 - Prevalence Index is <= 3.0
Typha latifolia 5	OBL	4 - Morphological Adaptations (Provide
		supporting data in remarks or on separate sheet.
		☐ 5 - Wetland Non-Vascular Plants
		Problematic Hydrophytic Vegetation (Explai
Woody Vine Stratum Plot size ( 30 Foot Radius)		Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5.
		Hydrophytic
Percent Bare Ground 25		Vegetation Yes ✓ NO ☐ Present?
Remarks:		<u> </u>
Some vegetation appears herbicide damaged. Evidence of h prevalence index less than 3.0.	ydrophytic vegetation	includes a positive dominance test and a
US Army Corps of Engineers		Western Mountains, Valleys, and Coasts - Version 2.

SOIL										Sampling Point: DP02-wet
Profile Desc	cription: (	Describe	to the dep	th neede	ed to docun	nent the i	ndicato	or confirn	n the absence of	
Depth		Matrix				x Features		. 2		
(inches)		(moist)	%		(moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-11	10YR	3/2	90	7.5YR	4/4	10	С	M	Clay Loam	
11-14+	7.5YR	5/3	100						Clay Loam	Cemented/hardpan
<sup>1</sup> Type: C=C								ed Sand G		on: PL=Pore Lining, M=Matrix.
Hydric Soil		: (Appli	cable to all				ed.)			for Problematic Hydric Soils <sup>3</sup> :
Histosol					dy Redox (S					uck (A10)
	pipedon (A	2)		_ :	ped Matrix	. ,	12.7			rent Material (TF2)
	istic (A3) en Sulfide (	'ΔΔ'			my Mucky N my Gleyed I			ot MLRA 1)		nallow Dark Surface (TF12) Explain in Remarks)
	d Below Da		ce (A11)	=	illy Gleyed i leted Matrix	•	,		Other (	Explain in Remarks)
	ark Surface		(, , , , ,		lox Dark Su				<sup>3</sup> Indicators	of hydrophytic vegetation and
Sandy N	/lucky Mine	ral (S1)		Dep	leted Dark S	Surface (F	7)		wetland	hydrology must be present,
	Sleyed Mat			Red	ox Depress	ions (F8)			unless d	isturbed or problematic.
Restrictive		-								
Depth (in	ches):								Hydric Soil Pro	esent? Yes <u>V</u> No <u> </u>
Remarks: Distinct red										
HYDROLO	GY									
Wetland Hy	drology In	dicators	:							
Primary India	cators (min	imum of	one require	d; check a	all that apply	y)			Seconda	ry Indicators (2 or more required)
Surface	Water (A1)	)			Water-Stai	ned Leave	es (B9) (	except	Wate	er-Stained Leaves (B9) (MLRA 1, 2,
	ater Table (					1, 2, 4A, a				A, and 4B)
Saturation	on (A3)				Salt Crust	(B11)			Drair	nage Patterns (B10)
Water M	larks (B1)				Aquatic Inv	/ertebrate:	s (B13)		Dry-	Season Water Table (C2)
Sedimer	nt Deposits	(B2)			Hydrogen	Sulfide Oc	dor (C1)		<u> </u>	ration Visible on Aerial Imagery (C9)
Drift Dep	posits (B3)				Oxidized R			_	ots (C3) 👱 Geor	morphic Position (D2)
	at or Crust	(B4)		<u> </u>	Presence		•	•		ow Aquitard (D3)
	posits (B5)	(5.0)		<u> </u>	Recent Iro					Neutral Test (D5)
	Soil Crack			<u>,</u> –	Stunted or			01) ( <b>LRR A</b>	_	ed Ant Mounds (D6) (LRR A)
_			Imagery (B	· —	Other (Exp	olain in Re	marks)		Frosi	-Heave Hummocks (D7)
Field Obser			/e Surface (	. Бо)						
Surface Wat		2 ,	Yes 🗆	No 🔽	Depth (ind	shoe):				
Water Table					Depth (inc					
Saturation P				_	Depth (inc				and Hydrology P	resent? Yes <u>V</u> No <u> </u>
(includes car	pillary fringe	e)								NO
Describe Re	corded Dat	a (strean	n gauge, m	onitoring	well, aerial p	ohotos, pre	evious in	spections),	if available:	
Remarks:	Function 2	bydrala:	و د بامماریو		rnhia naait	ion ord	nos:4:-	~ EAC N=	uutral taat	
Evidence of	welland I	iyurolog	yy miciuaes	s geomo	i biliic bosit	ion and a	a positiv	e FAC-NE	eutai test.	

Project/Site: US 93 N Peterson	City/County: Lake		Sampling Date: 7/6/2022
Applicant/Owner: MDT		State: Montana	Sampling Point: DP03-up
	Section, Township, Range:		
Landform (hillslope, terrace, etc.): Valley bottom	Local relief (concave, conv	ex, none): convex	Slope (%): 25
Subregion (LRR): LRR E Lat:	47.362832 <sub>Lo</sub>	ng: -11	4.100712 <sub>Datum:</sub> NAD 83
Soil Map Unit Name: 143: Ronan silty clay loam, 4-8% slopes		NWI classific	 ation:Not Mapped.
Are climatic / hydrologic conditions on the site typical for this time of ye			
Are Vegetation, Soil, or Hydrology significantly			
Are Vegetation, Soil, or Hydrology naturally pro			
SUMMARY OF FINDINGS – Attach site map showing			
Hydrophytic Vegetation Present? Yes No			
Hydric Soil Present? Yes No	Is the Sampled Are within a Wetland?		No _ <b></b>
Wetland Hydrology Present? Yes No	within a wettand?		<u></u>
Remarks: Sample point hill approximately 1' higher than DP03-wet.			
Sample point him approximately 1 higher than Di 03-wet.			
VEGETATION - Use scientific names of plants			
Tree Stratum Plot size (30 Foot Radius) Absolute Domian		Dominance Test wor	rksheet
Tree Stratum Plot size (30 Foot Radius) % Cover: Species	1	Number of Dominant hat are OBL, FACW	
		otal Number of Dom Species Across All St	1 2
Sapling/Shrub Stratum Plot size (15 Foot Radius)		Percent of Dominant S That Are OBL, FACW	
<u></u>	F	Prevalence Index wo	
	<del>-</del>	Total % Cover o	
		DBL species FACW species	0 X1 0 0
			60 X3 180
		•	40 X 4 160
Herbaceous Stratum Plot size ( 5 Foot Radius)		JPL species	0 X 5 0
Galium aparine 1		Column Totals 1	00 (A) 340 (B)
Lepidium perfoliatum 35  Pascopyrum smithii 4	FACU FACU	Prevalence Index	x = B/A = 3.4
Poa pratensis 60		lydrophytic Vegetat	ion Indicators
1 od pratoriolo	1710	☐ 1 - Rapid Te	st for Hydrophytic Vegetation
		2 - Dominan	ce Test is >50%
		3 - Prevalence	ce Index is <= 3.0
		4 - Morpholo	ogical Adaptations (Provide
		supporting d sheet.	ata in remarks or on separate
			Non-Vascular Plants
			Hydrophytic Vegetation (Explain)
Woody Vine Stratum Plot size ( 30 Foot Radius)			and wetland hydrology must be bed or problematic for #3, 4, 5.
Percent Bare Ground 0	\	lydrophytic /egetation Y Present?	es □ NO 🗹
Remarks:	Hand areas comments.	ta Ilmiand	mlat da aa mat :
Typical upland vegetation community encountered in non-we parameters for a hydrophytic vegetation community.	uand areas across the si	ie. Upiand sample	piot does not meet the
US Army Corps of Engineers	V	/estern Mountains. V	'alleys, and Coasts - Version 2.0

SOIL									Sampling Point: DP03-u	ib dr
Profile Desc	ription: ([	Describe	to the depth	needed to d	ocument the	indicator	or confirm	the absence of		
Depth		Matrix			Redox Feature					
(inches)	Color (		%	Color (moist	%	Type <sup>1</sup> _	Loc <sup>2</sup>	<u>Texture</u>	Remarks	
0-02	10YR	2/2	100					Loam	Fine roots	
02-16	10YR	2/2	100					Loam	Gravels	
1Tyrno: C=C		n D=Do	olotion DM-C	Paduaad Matri			d Sand Cr		tion: DI =Doro Lining M=Motrix	
Hydric Soil Histosol Histic Ep Black Hi Hydroge Depleted Thick Da Sandy M	Indicators (A1) pipedon (A2	2) A4) Ark Surface (A12) Aral (S1)	cable to all Li	Loamy Gle Depleted M Redox Dar Depleted D	otherwise no dox (S5) atrix (S6) cky Mineral (F yed Matrix (F	ted.) F1) (except 2) ) F7)		Indicators 2 cm M Red P Very S Other  Indicators wetland	ion: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils <sup>3</sup> : Muck (A10) arent Material (TF2) Shallow Dark Surface (TF12) (Explain in Remarks)  of hydrophytic vegetation and Hydrology must be present, disturbed or problematic.	
Restrictive I	Layer (if pı	resent):								
										_
Depth (in	ches):							Hydric Soil P	resent? Yes No _ <del>_</del>	
HYDROLO										
Wetland Hy	==									
			one required;	check all that					ary Indicators (2 or more required	
	Water (A1)				-Stained Lea		xcept		ter-Stained Leaves (B9) ( <b>MLRA</b> 1	1, 2,
	iter Table (	A2)			-RA 1, 2, 4A,	and 4B)			IA, and 4B)	
Saturation Natural	, ,				rust (B11) ic Invertebrat	oo (B12)			inage Patterns (B10) -Season Water Table (C2)	
	larks (B1) nt Deposits	(B2)			gen Sulfide C	. ,			uration Visible on Aerial Imagery	(CQ)
	osits (B3)	(62)		:	zed Rhizosph	` '	Livina Roo		emorphic Position (D2)	(09)
	nt or Crust (	(B4)			nce of Reduc	_	-		illow Aquitard (D3)	
	osits (B5)	(51)			nt Iron Reduct		•		C-Neutral Test (D5)	
	Soil Cracks	s (B6)		_	ed or Stresse		•	_	sed Ant Mounds (D6) (LRR A)	
			Imagery (B7)		(Explain in R		, ( ,		st-Heave Hummocks (D7)	
Sparsely	/ Vegetated	d Concav	e Surface (B8	3)		•				
Field Obser	vations:									
Surface Wate	er Present?	? \	res 🔲 No	Dept	h (inches):		_			
Water Table	Present?	١	es 🔲 No	Dept	h (inches):		_			
Saturation Pi			es No	Dept	h (inches):		_ Wetla	and Hydrology F	Present? Yes 🔲 No 🔽	<u>/</u>
Describe Re	corded Dat	a (strean	n gauge, mon	itoring well, ae	erial photos, p	revious ins	pections),	if available:		
Dames										
Remarks: No evidence	e of wetlar	nd hydro	ology observ	red.						

Project/Site: US 93 N Peterson City	<sub>y/County:</sub> Lake	Sampling Date:7/6/2022
Applicant/Owner: MDT	,	State: Montana Sampling Point: DP03-wet
Investigator(s): S Weyant Sec		
Landform (hillslope, terrace, etc.): Swale Lo	cal relief (concave, convex	, none): concave Slope (%): 0
Subregion (LRR): LRR E	47.362887 <sub>_Long</sub>	:NAD 83
Soil Map Unit Name: 143: Ronan silty clay loam, 4-8% slopes		NWI classification:PEM1C
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes _ No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly dis	turbed? Are "Norma	l Circumstances" present? Yes 🔽 No 🗌
Are Vegetation, Soil, or Hydrology naturally proble	matic? (If needed,	explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sa	ampling point location	ons, transects, important features, etc.
Hydrophytic Vegetation Present?  Hydric Soil Present?  Wetland Hydrology Present?  Yes  No  No  No  No  No  No  No  No  No  No	Is the Sampled Area within a Wetland?	Yes No
Remarks: PEM, slope wetland. Sample point located in low swale.		
VEGETATION - Use scientific names of plants		
Tree Street up Plet size (20 Feet Rediive) Absolute Domiant	Indicator Doi	minance Test worksheet
Tree Stratum Plot size (30 Poot Radius) % Cover: Species?		mber of Dominant Species t are OBL, FACW or FAC:
		al Number of Dominant ecies Across All Strata:
Sapling/Shrub Stratum Plot size (15 Foot Radius)		recent of Dominant Species 50 % (A/B)
,	Pre	evalence Index worksheet
	OB	Total % Cover of: Multiply by: L species 63 X 1 63
		CW species 0 X 2 0
		C species 0 X 3 0
Herbaceous Stratum   Plot size ( 5 Foot Radius)		CU species         0         X 4         0           L species         20         X 5         100
	IDI	umn Totals 83 (A) 163 (B)
	DBL	
Nasturtium officinale 3 C	)BL	Prevalence Index = B/A = 1.96386
	Пус	drophytic Vegetation Indicators  1 - Rapid Test for Hydrophytic Vegetation
		2 - Dominance Test is >50%
		✓ 3 - Prevalence Index is <= 3.0
		4 - Morphological Adaptations (Provide
		supporting data in remarks or on separate sheet.
		5 - Wetland Non-Vascular Plants
		☐ Problematic Hydrophytic Vegetation (Explain)
Woody Vine Stratum Plot size ( 30 Foot Radius)		cators of hydric sil and wetland hydrology must be ent, unless disturbed or problematic for #3, 4, 5.
Percent Bare Ground 17	Veç	drophytic getation Yes V NO
Remarks:	1 -	
Evidence of hydrophytic vegetation includes a prevalence index	less than 3.0.	
US Army Corps of Engineers	Wes	stern Mountains, Valleys, and Coasts - Version 2.0

SOIL										Sampling Point: DP03-wet
Profile Desc	cription: (	Describe	to the de	oth neede	ed to docu	ment the i	ndicato	r or confirm	the absence of i	
Depth		Matrix			Redo	x Features				
(inches)	Color	(moist)	%	Color	(moist)	%	_Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-06	10YR	3/1	95	10YR	4/3	5	С	M	Clay Loam	
06-16	10YR	3/1	93	7.5YR	4/6	7	С	M, PL	Clay Loam	Gravels
	-			-						_
						_				
	-									
	-									
<sup>1</sup> Type: C=C	oncentratio	on, D=Dep	letion, RM	=Reduce	d Matrix, C	S=Covered	d or Coa	ted Sand Gr		on: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators	: (Applic	able to al	l LRRs, u	nless othe	rwise note	ed.)		Indicators f	or Problematic Hydric Soils <sup>3</sup> :
Histosol	I (A1)			San	dy Redox (	S5)				uck (A10)
Histic E	pipedon (A	.2)		_ :	oped Matrix				_	rent Material (TF2)
	istic (A3)			_	•	•	, ,	pt MLRA 1)		nallow Dark Surface (TF12)
	en Sulfide (	. ,			my Gleyed		)		U Other (E	Explain in Remarks)
	d Below Da		e (A11)	= .	leted Matri	, ,			3Indicators	of hydrophytic vegetation and
	ark Surface Jucky Mine			$\overline{}$	lox Dark Su leted Dark	, ,	7)			of hydrophytic vegetation and nydrology must be present,
	Gleyed Mat			_ :	lox Depress		')			sturbed or problematic.
Restrictive					.ox 2 op. oo.				1	<u> </u>
Type:		,								
Depth (in	ches):								Hydric Soil Pre	esent? Yes <u>V</u> No
Remarks:									,	
excavation	of the sar	mpie pit.								
HYDROLO	GY									
Wetland Hy										
Primary Indi			ne require	d; check						y Indicators (2 or more required)
	Water (A1				Water-Sta	ined Leave	es (B9) (	except	Wate	r-Stained Leaves (B9) ( <b>MLRA 1, 2,</b>
	ater Table (	(A2)			1	1, 2, 4A, a	nd 4B)			A, and 4B)
<u> </u> Saturati				Ļ	Salt Crust					age Patterns (B10)
	larks (B1)				Aquatic In					Season Water Table (C2)
	nt Deposits			Ļ	Hydrogen		, ,			ration Visible on Aerial Imagery (C9)
	posits (B3)			<u> </u>		· · · · · · · · · · · · · · · · · · ·		g Living Roo		norphic Position (D2)
	at or Crust			-	Presence			•	_	ow Aquitard (D3)
Iron Der								ed Soils (C6		Neutral Test (D5)
	Soil Crack			)-X			,	D1) ( <b>LRR A</b> )		ed Ant Mounds (D6) (LRR A)
	on Visible				Other (Ex	piain in Re	marks)		Frost	-Heave Hummocks (D7)
	y Vegetate	d Concav	e Suriace	(DO)						
Field Obser		o v	,	Na 🗸	Danath (in	-h\.				
Surface Wat				_	Depth (in					
Water Table					Depth (in				1	
Saturation P (includes ca			'es	No	Depth (in	cnes):		vvetia	and Hydrology Pr	resent? Yes <u>V</u> No
Describe Re			gauge, m	onitoring	well, aerial	photos, pre	evious ir	nspections),	if available:	
Remarks:										
	f wetland	hydroloa	y include	s geomo	rphic posi	tion and a	a positiv	ve FAC-Ne	utral test. Soil m	oist from 0-06", and drier below
where comp				5	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					- , <u></u>

Project/Site: US 93 N Peterson		Citv/C	<sub>County:</sub> Lake	Sampling Date:
Applicant/Owner: MDT		<b>,</b>		State: Montana Sampling Point: DP04-up
Investigator(s): S Weyant				
				<u> </u>
Subregion (LRR): LRR E	1 -1	_ Loca	47 362231	convex, none): convex Slope (%): Slope (%): Slope (%):
Subregion (LRR): 22: Colake silt loam 0-1%	Lat:		17.002201	Long: Not Manned
Soil Map Unit Name: 22: Colake silt loam, 0-1%				
Are climatic / hydrologic conditions on the site typic	-			
				Normal Circumstances" present? Yes 🔽 No 🗔
Are Vegetation, Soil, or Hydrology _	naturally p	roblem	atic? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site	e map showin	g san	npling point l	ocations, transects, important features, et
Hydrophytic Vegetation Present? Yes		_		
Hydric Soil Present? Yes		-	Is the Sampled within a Wetlar	
Wetland Hydrology Present? Yes	No <u></u>	-	within a vvetiar	id? fes <u> </u>
Remarks:	' higher than DD	04	4	
Sample point on toeslope approximatley 1.5	nigner than DP	u4-we	l.	
VECETATION Lies ecientific names	of plants			
VEGETATION - Use scientific names		nt l	ndicator	_
Tues Chushama Diet size (OO Feet Dedias)	Absolute Domia % Cover: Specie		Ridicator Status	Dominance Test worksheet
				Number of Dominant Species that are OBL, FACW or FAC:
				Total Number of Dominant Species Across All Strata:  1 (B)
				Percent of Dominant Species That Are OBL, FACW, or FAC:  100 % (A/B)
Sapling/Shrub Stratum Plot size (15 Foot	Radius)			Prevalence Index worksheet
				Total % Cover of: Multiply by:
				OBL species 3 X 1 3
				FACW species 0 X 2 0
				FAC species 63 X 3 189
Herbaceous Stratum Plot size ( 5 Foot	Padius)			FACU species 3 X 4 12 UPL species 6 X 5 30
	<u>:</u>	LID	1	
Brassica juncea Carex pellita	1 <u> </u>	UP OB		Column Totals 75 (A) 234 (I
Elymus repens	10	FA		Prevalence Index = B/A = 3.12
Galium aparine	1	FA	<del></del>	Hydrophytic Vegetation Indicators
Lepidium perfoliatum	1 🗆	FA		☐ 1 - Rapid Test for Hydrophytic Vegetation
Plantago lanceolata	1 🗆		CU	✓ 2 - Dominance Test is >50%
Poa pratensis	53	FA		☐ 3 - Prevalence Index is <= 3.0
Thlaspi arvense	5 🗌	UP	L	4 - Morphological Adaptations (Provide
				supporting data in remarks or on separate
				sheet.
				5 - Wetland Non-Vascular Plants
				Problematic Hydrophytic Vegetation (Expla
Manda Vine Chrotum	Dadius)			Indicators of hydric sil and wetland hydrology must be
Woody Vine Stratum Plot size ( 30 Foot	Radius)			present, unless disturbed or problematic for #3, 4, 5.
				Hydrophytic
<b>-</b>				Vegetation Yes ✓ NO ☐ Present?
Percent Bare Ground 25 Remarks:				r resout:
	ed species and	therefo	ore passes the o	dominance test for hydrophytic vegetation, the plo
exhibits no other wetland characteristics.				
US Army Corps of Engineers				Western Mountains, Valleys, and Coasts - Version 2

SOIL									Sampling Point: DP04-up
Profile Desc	cription: (	Describe	to the depth	needed to doc	ument the	indicator	or confirm	the absence of	
Depth		Matrix			lox Feature				
(inches)		(moist)	%	Color (moist)	%	Type'	_Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-10	10YR	2/2	100					Loam	Fine roots 0-4"
10-16+	10YR	3/1	100					Loam	Hard, compacted
				Reduced Matrix, (			ed Sand Gr		tion: PL=Pore Lining, M=Matrix.
		s: (Applic	able to all L	RRs, unless oth		ted.)			for Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1) pipedon (A	2)	<u> </u>	⊒ Sandy Redox ⊒ Stripped Matr	. ,				Muck (A10) arent Material (TF2)
	istic (A3)	12)	<u> </u>	Loamy Mucky	. ,	1) (except	MIRA 1)		Shallow Dark Surface (TF12)
	en Sulfide (	(A4)		Loamy Gleye	•	, · .			(Explain in Remarks)
	d Below Da		e (A11) 💄	Depleted Mat				3	
	ark Surface	. ,	<u> </u>	Redox Dark S	,	•			of hydrophytic vegetation and
	/lucky Mine ∋leyed Mat		<u> </u>	☑ Depleted Darl ☑ Redox Depres	•				I hydrology must be present, disturbed or problematic.
Restrictive			<u> </u>	Redox Depie:	5510115 (1 0)			unless	distarbed of problematic.
	ches):			<del></del>				Hydric Soil P	resent? Yes 🔲 No 🔽
Remarks:								1	
HYDROLO									
Wetland Hy									
			one required;	check all that ap		(50) (			ary Indicators (2 or more required)
	Water (A1				ained Leav		xcept		ter-Stained Leaves (B9) (MLRA 1, 2,
High Wa	ater Table(	(A2)			1, 2, 4A,	and 4B)			IA, and IB)
$\overline{}$	larks (B1)			Salt Crus	nvertebrate	oc (P12)			inage Patterns (B10) -Season Water Table (C2)
	nt Deposits	: (B2)			n Sulfide O	, ,			uration Visible on Aerial Imagery (C9)
_	oosits (B3)	. ,				, ,	Living Roo	_	emorphic Position (D2)
	at or Crust				of Reduc	_	-		illow Aquitard (D3)
	osits (B5)						d Soils (C6		C-Neutral Test (D5)
Surface	Soil Crack	s (B6)		Stunted	or Stressed	d Plants (D	1) ( <b>LRR A</b> )	Rais	sed Ant Mounds (D6) ( <b>LRR A</b> )
Inundati	on Visible	on Aerial	Imagery (B7)	Other (E	xplain in Re	emarks)		Fros	st-Heave Hummocks (D7)
Sparsely	y Vegetate	d Concav	e Surface (B8	3)					
Field Obser									
Surface Wat			′es <u> </u>		nches):				
Water Table				Depth (i					
Saturation P (includes car			′es No	Depth (i	nches):		Wetla	ınd Hydrology F	Present? Yes 🔲 No 🔽
			n gauge, mon	itoring well, aeria	l photos, p	revious ins	pections), i	f available:	
Remarks:									
No evidence	e of wetla	nd hydro	ology observ	ed.					

Project/Site: US 93 N Peters	son		Citv/Co	<sub>untv:</sub> Lake		Sampling Dat	te: 7/6/2022
Applicant/Owner: MDT			. ,	,	State: Montana	Sampling Poi	nt. DP04-wet
Investigator(s): S Weyant			Soction		ge: S 35 T		
• 17							
Landform (hillslope, terrace, etc	c.): <u>valicy bottom</u>		_ Local r	elief (concave, co	onvex, none): corroave	14 101674	Slope (%):
Subregion (LRR): LRR E		_ Lat:		47.30231	Long:	14.101074 D	atum: NAD 63
Soil Map Unit Name: 22: Cola	ike siit loam, 0-1% slopes				NWI classific	ation: Not Mar	opea.
Are climatic / hydrologic conditi	ions on the site typical for this	time of y	ear? Ye	s <u> </u>	(If no, explain in R	temarks.)	
Are Vegetation, Soil	, or Hydrology si	gnificantly	y disturbe	ed? Are "N	Iormal Circumstances" p	present? Yes	<b>✓</b> No
Are Vegetation, Soil	, or Hydrology na	aturally pr	roblemati	ic? (If nee	ded, explain any answe	rs in Remarks.	)
SUMMARY OF FINDING	SS – Attach site map s	howin	g samp	oling point lo	cations, transects	, important	t features, etc.
Hydrophytic Vegetation Prese Hydric Soil Present? Wetland Hydrology Present?	Yes V		.	Is the Sampled A	Area d? Yes <u>v</u>	<u> </u>	
Remarks:			I				
PEM, riverine wetland. Sar	mple point located in wetla	nd adjad	cent to a	active channel.			
VEGETATION - Use so	cientific names of plant	ts					
Tree Stratum Plot size (3	0 Foot Radius) Absolute % Cover:	Domiar		icator	Dominance Test wo	rksheet	
	, % Cover.	Specie	is? Sta	atus	Number of Dominant that are OBL, FACW		2 (A)
					Total Number of Dom Species Across All St		2 (B)
Sapling/Shrub Stratum	Plot size (15 Foot Radius)				Percent of Dominant That Are OBL, FACW		100 % (A/B)
Sapinig/Siliub Stratum	Flot Size (15 Foot Radius)				Prevalence Index wo	orksheet	
					Total % Cover of	of:	Multiply by:
					OBL species	51 X1	51
					· '	35 X2	70
					FAC species	3 X3 0 X4	9
Herbaceous Stratum	Plot size ( 5 Foot Radius)				FACU species UPL species	0 A4 0 X5	0
			OBL		·		
Carex pellita Carex stipata	<u>5</u> 35		OBL OBL	<del></del>	Column Totals	(A)	130 (B)
Cirsium arvense	33	<b>✓</b>	FAC		Prevalence Inde	x = B/A = 1.	46067
Epilobium ciliatum	10		FAC\	·//	Hydrophytic Vegetat	tion Indicators	5
Myosotis laxa	2		OBL	··-	☐ 1 - Rapid Te	st for Hydroph	ytic Vegetation
Nasturtium officinale	8		OBL		🗹 2 - Dominan	nce Test is >50	%
Phalaris arundinacea	25	<b>V</b>	FAC\	W	✓ 3 - Prevalen	ice Index is <=	3.0
Typha latifolia	1		OBL		4 - Morpholo	ogical Adaptatio	ons (Provide
							or on separate
					5 - Wetland	Non-Vascular I	Plants
					Problematic	Hydrophytic V	egetation (Explain)
							,
Woody Vine Stratum	Plot size ( 30 Foot Radius)				Indicators of hydric sil present, unless disturb		
						∕es ✓ NO	
Percent Bare Grou	ınd 10				Present?		
Remarks: Evidence of hydrophytic ve	egetation includes a position	ve domir	nance te	est and a preva	lence index less than	ı 3.0.	
	5	- 2011111		a prova		2	
US Army Corps of Engineers	<u> </u>				Western Mountains, V	/alleys, and Co	pasts - Version 2.0
, , ,							

SOIL										Sa	mpling Point	DP04-wet
Profile Desc	cription: (I	Describe	to the dep	th needed to	document the	indicator	or conf	irm the at	sence of			
Depth		Matrix			Redox Featur			_				
(inches)	Color (	(moist)	%	Color (mois	<u>st) %</u>	Type <sup>1</sup> _	Loc <sup>2</sup>				Remarks	
0-06	10YR	2/1	100					Silt	Loam			
06-15	10YR	3/1	100					Silt	Loam	Grav	els	
15-20	10YR	4/1	100					Silt	Loam	Grave	els	
1Type: C=C		n D-Do	alotion DM		riv CS=Cover			Craina		n: DI = F	Ooro Lining I	U-Matrix
				=Reduced Mat LRRs, unless			u Sanu				ore Lining, I ematic Hyd	
Histosol		. (թթ		☐ Sandy Re		,				uck (A10	_	
	pipedon (A:	2)		$\equiv$	Matrix (S6)			_ <u>_</u> _ [			) erial (TF2)	
	istic (A3)	2)			ucky Mineral (	F1) (evcent	· MI DA	1)	_		irk Surface (	TF12\
	en Sulfide (	A4)			eyed Matrix (F		LIVILINA				n Remarks)	11 12)
	d Below Da		ce (A11)	_	Matrix (F3)	_,		<u> </u>	<u> </u>	EXPIGIT II	r rtornarito)	
	ark Surface		(, , , , ,	= .	irk Surface (F6	3)		<sup>3</sup> I	ndicators of	of hydrop	hytic vegetat	ion and
	Mucky Mine			$\equiv$	Dark Surface	•					/ must be pre	
	Gleyed Mat			Redox De	pressions (F8	)					or problemat	
Restrictive	Layer (if p	resent):										
Туре:												
Depth (in	ches):							Hydr	ic Soil Pre	esent?	Yes 🔽	_ No
Remarks:												
the wetland location at	l boundary same elev	y had an ⁄ation as	abrupt ed adjacent	lge (1987 CC	E Wetland [ , saturation i	Delineation	n Manu	al). Base	d on prox	imity to	active chan	rophytic, and inel and levelopment of
					'							
HYDROLO	GY											
Wetland Hy	drology In	dicators	<u> </u>									
Primary Indi	cators (min	imum of o	one require	d; check all tha	t apply)				Seconda	ry Indicat	ors (2 or moi	re required)
	Water (A1)		•		er-Stained Lea	ves (B9) (e	xcept			•	,	) (MLRA 1, 2,
	ater Table (				ILRA 1, 2, 4A,		хоорт			A, and 4E		, ( <u>_</u> ,
✓ Saturati	,	,,			Crust (B11)						erns (B10)	
	farks (B1)				atic Invertebrat	tes (B13)					Vater Table(	C2)
	nt Deposits	(B2)			ogen Sulfide (				_ ·		,	I Imagery (C9)
	posits (B3)	(52)			ized Rhizosph	, ,	Livina R	Roots (C3)	_		osition (D2)	ii iiilagaiy (aa)
	at or Crust	(B4)			ence of Reduc	_	_	(00)	Shall	•	, ,	
	posits (B5)	()			ent Iron Reduc			(C6)		Neutral 7		
	Soil Crack	s (B6)			ted or Stresse						ounds (D6) (	LRR A)
			Imagery (B		r (Explain in F		., (=:	,			łummocks (I	
			e Surface (	-	. (=/-							,
Field Obser	vations:		•	,								
Surface Wat	er Present	? \	∕es □	No 🔽 Dep	oth (inches): _							
Water Table					oth (inches): _		<del>,</del>					
Saturation P	Saturation Present? Yes No Depth (inches): 6 Wetland Hydrology Present? Yes No Discourse No											
Describe Re	corded Dat	ta (strean	n gauge, mo	onitoring well, a	ierial photos, p	orevious ins	pection	s), if availa	ble:			
Remarks:												
Evidence of										and a p	ositive FA0	C-Neutral test.
Sample pit	is at the s	ame ele	vation as t	he adjacent o	cattail marsh	with stand	ding su	rface wat	er.			

Project/Site: US 93 N Peterson	City/County: Lake Sampling Date: 7/6/2022
Applicant/Owner: MDT	State: Montana Sampling Point: DP05-up
Investigator(s): S Weyant	Section Township Range: S 35 T 19 N R 20 W
Landform (hillslope, terrace, etc.): Toeslope	Local relief (concave, convex, none): flat Slope (%):5
Subregion (LRR): LRR E Lat:	47.361239 Long: -114.099472 Datum: NAD 83
Soil Map Unit Name: 22: Colake silt loam, 0-1% slopes	Local relief (concave, convex, none): flat Slope (%): 5 47.361239 Long: -114.099472 Datum: NAD 83  NWI classification: Not Mapped.
Are climatic / hydrologic conditions on the site typical for this time of	
Are Vegetation <u>V</u> , Soil <u></u> , or Hydrology <u></u> significan	ly disturbed? Are "Normal Circumstances" present? Yes 🔽 No 🔲
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No	Is the Sampled Area within a Wetland? Yes No _✔
Wetland Hydrology Present? Yes No	within a Wetland? Yes U No _ V
Remarks: Upland sample point at toe of slope in south central portion	of mitigation site.
Opining campio point at too of olopo in ocali contrat points.	
VEGETATION - Use scientific names of plants	
Absolute Domia	
Tree Stratum Plot size (30 Foot Radius) % Cover: Speci	Number of Dominant Species that are OBL, FACW or FAC:  1 (A)
	Total Number of Dominant Species Across All Strata:  2 (B)
Ocalia (Obsah Otsatus)	Percent of Dominant Species That Are OBL, FACW, or FAC:  50 % (A/B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)	Prevalence Index worksheet
	Total % Cover of: Multiply by:
	OBL species 0 X1 0
	FACW species 0 X 2 0 FAC species 10 X 3 30
	FACU species 20 X 4 80
Herbaceous Stratum Plot size ( 5 Foot Radius)	UPL species 0 X 5 0
Elymus repens 10	FAC         Column Totals         30         (A)         110         (B)
Galium aparine 20 🔽	FACU Prevalence Index = B/A = 3.66667
	Hydrophytic Vegetation Indicators
	1 - Rapid Test for Hydrophytic Vegetation
	☐ 2 - Dominance Test is >50%
	☐ 3 - Prevalence Index is <= 3.0
	4 - Morphological Adaptations (Provide supporting data in remarks or on separate
	sheet.  5 - Wetland Non-Vascular Plants
	Problematic Hydrophytic Vegetation (Explain)
	Indicators of hydric sil and wetland hydrology must be
Woody Vine Stratum Plot size ( 30 Foot Radius)	present, unless disturbed or problematic for #3, 4, 5.
	Hydrophytic  Vegetation Yes □ NO ✓
Percent Bare Ground 70	Present?
Remarks: Vegetation appears herbicide damaged which contributes leads to community in this area.	ow cover. Species observed are representative of the non-wetland plant
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OIL						Sampling Point: DP05-up
Profile Description: (De	scribe to the dept	h needed to docu	ment the indicator	or confirm	the absence	
	atrix		ox Features			
(inches) Color (mo		Color (moist)	%Type'	Loc <sup>2</sup>	Texture	Remarks
0-16 10YR 2	2/2 100				Loam	Few cobbles
	·					
· · · · · · · · · · · · · · · · · · ·						
Type: C=Concentration,	 D=Depletion_RM=	Reduced Matrix C	 S=Covered or Coat	ed Sand Gra	ains <sup>2</sup> l oc	eation: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (				ou ound on		rs for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	• •	Sandy Redox (	-			n Muck (A10)
Histic Epipedon (A2)		Stripped Matrix	` '			Parent Material (TF2)
Black Histic (A3)			Mineral (F1) (excep	t MLRA 1)	_	Shallow Dark Surface (TF12)
Hydrogen Sulfide (A4	)	Loamy Gleyed		,		er (Explain in Remarks)
Depleted Below Dark	Surface (A11)	Depleted Matri	x (F3)			
Thick Dark Surface (A		🔲 Redox Dark Sເ	urface (F6)			rs of hydrophytic vegetation and
L Sandy Mucky Mineral		Depleted Dark	, ,			nd hydrology must be present,
Sandy Gleyed Matrix		Redox Depres	sions (F8)		unles	s disturbed or problematic.
Restrictive Layer (if pres	ent):					
Туре:						
Depth (inches):					Hydric Soil	Present? Yes No
YDROLOGY						
Wetland Hydrology Indic	ators:					
Primary Indicators (minim	um of one required	; check all that app	ly)		Secon	idary Indicators (2 or more required)
Surface Water (A1)		Water-Sta	nined Leaves (B9) (	except	w	/ater-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2	)		1, 2, 4A, and 4B)			4A, and 4B)
Saturation (A3)		Salt Crust			Di	rainage Patterns (B10)
Water Marks (B1)		Aquatic In	vertebrates (B13)			ry-Season Water Table (C2)
Sediment Deposits (B	2)	Hydrogen	Sulfide Odor (C1)			aturation Visible on Aerial Imagery (C9
Drift Deposits (B3)		Oxidized I	Rhizospheres along	Living Root	ts (C3) 🔲 G	eomorphic Position (D2)
Algal Mat or Crust (B4	<b>!</b> )	Presence	of Reduced Iron (C	4)	sı	hallow Aquitard (D3)
Iron Deposits (B5)		Recent Iro	on Reduction in Tille	ed Soils (C6)	) F/	AC-Neutral Test (D5)
Surface Soil Cracks (	36)	Stunted o	r Stressed Plants (E	01) ( <b>LRR A</b> )	R	aised Ant Mounds (D6) ( <b>LRR A</b> )
Inundation Visible on		) Other (Ex	plain in Remarks)		Fr	rost-Heave Hummocks (D7)
Sparsely Vegetated C	oncave Surface (E	38)				
Field Observations:						
Surface Water Present?	Yes 🔲 N	lo <u> </u>	iches):			
Water Table Present?	Yes N		iches):			
Saturation Present? (includes capillary fringe)	Yes N		iches):		ınd Hydrology	/ Present? Yes No
Describe Recorded Data (	stream gauge, mo	nitoring well, aerial	photos, previous in	spections), i	f available:	
Remarks:	In color 1					
No evidence of wetland	hydrology obser	ved.				

Project/Site: US 93 N Peterson	City/County: Lake	Sampling Date: 7/6/2022
Applicant/Owner: MDT	Oity/Odditty	State: Montana Sampling Point: DP05-wet
• •	Section, Township, Ran	
		9
Landform (hillslope, terrace, etc.): Valley bottom	Local relief (concave, c	Long:114.099452 Datum: NAD 83
Subregion (LRR): LRRE La		
Soil Map Unit Name: 22: Colake silt loam, 0-1% slopes		NWI classification: Not Mapped.
Are climatic / hydrologic conditions on the site typical for this tim		
Are Vegetation, Soil, or Hydrology signif		Normal Circumstances" present? Yes 🗹 No 🔲
Are Vegetation, Soil, or Hydrology natur	ally problematic? (If nee	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map sho	wing sampling point lo	cations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No		
Hydric Soil Present? Yes No	Is the Sampled	
Wetland Hydrology Present? Yes No	within a Wetland	d? Yes <u>♥</u> No <u>□</u>
Remarks:		an another become at the constitute of
PEM, riverine wetland. Sample point located in central p	ortion of mitigation site alor	ng south boundary of the wetland.
VECETATION Has a significant and a significant a		
VEGETATION - Use scientific names of plants  Absolute D	omiant Indicator	T
Tues Chushama Dist size (OO Foot Doding)	omiant Indicator pecies? Status	Dominance Test worksheet
		Number of Dominant Species that are OBL, FACW or FAC:
		Total Number of Dominant Species Across All Strata:  1 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)		Percent of Dominant Species That Are OBL, FACW, or FAC:  100 % (A/B)
Supring Structure 1 lot 0/20 (10 1 cot 1 to date)		Prevalence Index worksheet
		Total % Cover of: Multiply by:
		OBL species 94 X 1 94
		FACW species 3 X 2 6 FAC species 1 X 3 3
		FACU species 0 X 4 0
Herbaceous Stratum Plot size ( 5 Foot Radius)		UPL species 0 X 5 0
Carex aquatilis 84	<b>✓</b> OBL	Column Totals 98 (A) 103 (B)
Epilobium ciliatum 3	FACW	
Geum macrophyllum 1	FAC	Prevalence Index = B/A = 1.05102
Iris pseudacorus 3	OBL	Hydrophytic Vegetation Indicators
Myosotis laxa 2	OBL	✓ 1 - Rapid Test for Hydrophytic Vegetation
Nasturtium officinale 5	OBL	✓ 2 - Dominance Test is >50%
		✓ 3 - Prevalence Index is <= 3.0
		4 - Morphological Adaptations (Provide supporting data in remarks or on separate
		sheet.
		☐ 5 - Wetland Non-Vascular Plants
		☐ Problematic Hydrophytic Vegetation (Explain)
Woody Vine Stratum Plot size ( 30 Foot Radius)		Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5.
		Hydrophytic Vegetation Yes V NO
Percent Bare Ground 2		Present?
Remarks: Evidence of hydrophytic vegetation includes a positive i	rapid test, a positive domina	ance test, and a prevalence index less than 3.0.
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SOIL										Sampling Point: DP05-we		
Profile Desc	cription: (D	escribe	to the dept	n neede	ed to docur	nent the i	ndicato	r or confir	m the absence o			
Depth		Matrix		Cala		x Feature:		Loc <sup>2</sup>	Tandona	Damanda		
(inches)	Color (r				r (moist)	%	Type <sup>1</sup>		Texture	Remarks		
0-12	10YR	2/2	98 7	.5YR	4/6	2	С	PL	Loam			
12+									Hardpan	Hardpan. Refusal		
						-		-	· ·			
	<u> </u>								·			
									·			
<sup>1</sup> Type: C=C								ted Sand G		ation: PL=Pore Lining, M=Matrix.		
Hydric Soil		(Applie	able to all L				ed.)			s for Problematic Hydric Soils <sup>3</sup> :		
Histosol	(A1) pipedon (A2	١	_	=	idy Redox ( pped Matrix	,				Muck (A10) Parent Material (TF2)		
	istic (A3)	,	-		my Mucky M	. ,	I) (exce	ot MLRA 1	_	Shallow Dark Surface (TF12)		
	en Sulfide (A	<b>(4)</b>		_	my Gleyed					r (Explain in Remarks)		
	d Below Dar		e (A11)	_	oleted Matrix							
	ark Surface		<u>.</u>	_	lox Dark Su	, ,				s of hydrophytic vegetation and		
	Mucky Miner		_		oleted Dark	•	7)			d hydrology must be present,		
Restrictive	Bleyed Matri		_	Rec	dox Depress	ions (F8)			uniess	disturbed or problematic.		
	Layer (ii pi	oociity.										
Depth (in									Hydric Soil I	Present? Yes <u>V</u> No <u></u>		
Remarks:									,			
HYDROLO												
Wetland Hy	= =					,						
Primary India			ne required:	check	_					dary Indicators (2 or more required)		
	Water (A1)				Water-Sta			except		ater-Stained Leaves (B9) (MLRA 1,		
☐ High Wa	ater Table (A	(2)			7	1, 2, 4A, a	na 4B)			4A, and 4B)		
_	larks (B1)			+	Salt Crust Aquatic In		c (D12)		Drainage Patterns (B10) Dry-Season Water Table (C2)			
	nt Deposits (	(B2)		F	Hydrogen					turation Visible on Aerial Imagery (C		
	oosits (B3)	(02)		Ŧ	Oxidized F		, ,	Livina Ro		eomorphic Position (D2)		
	at or Crust (E	B4)			Presence				` ' —	allow Aquitard (D3)		
	oosits (B5)	,			Recent Iro		•	,	_	C-Neutral Test (D5)		
Surface	Soil Cracks	(B6)			Stunted or	Stressed	Plants (	01) ( <b>LRR A</b>	<b>A</b> ) Ra	ised Ant Mounds (D6) ( <b>LRR A</b> )		
Inundati	on Visible o	n Aerial	Imagery (B7		Other (Exp	olain in Re	marks)		Fro	ost-Heave Hummocks (D7)		
Sparsely	y Vegetated	Concav	e Surface (B	8)								
Field Obser					<b>-</b>							
Surface Wat		Υ	es <u> </u>		_							
Water Table			es N	_	Depth (in			"				
Saturation P (includes car			es N	o <u> </u>	Depth (in	ches):		Wet	land Hydrology	Present? Yes <u>V</u> No <u>U</u>		
Describe Re	corded Data	ı (stream	gauge, mor	itoring	well, aerial į	photos, pr	evious ir	spections)	, if available:			
Remarks:												
Evidence of	wetland h	ydrolog	y includes	geomo	rphic posit	ion and a	a positiv	e FAC-Ne	eutral test.			

### **MDT Montana Wetland Assessment Form (revised March 2008)**

Approx Stationing or Mileposts RP 35.5 US 93 North  Natershed 4 - Flathead Watershed/County Lake County  T. Evaluating Agency CCI - MDT 8. Wetland size acres 3.47  Purpose of Evaluation How assessed: Measured e.g. by GPS  Wetlands potentially affected by MDT project 9. Assessment area (AA) size (acres)  Mitigation Wetlands: pre-construction  Mitigation Wetlands: post construction  Other  10. Classification of Wetland and Aquatic Habitats in AA  HGM Class (Brinson) Class (Cowardin) Modifier (Cowardin) Water Regime % of AA  Riverine Emergent Wetland Impounded Permanent/Perennial 83  Riverine Scrub-Shrub Wetland Impounded Permanent/Perennial 10	1. Project name US 93	Peterson		2. MDT	project#	NH	I-5-2(122)31		Con	itrol#	9680000
Approx Stationing or Mileposts RP 35.5 US 93 North  Watershed	3. Evaluation Date 7/12/2	2021 <b>4. Evaluators</b>	S We	yant	5.	Wetl	and/Site# (s)	AA-1			
Approx Stationing or Mileposts RP 35.5 US 93 North  Watershed	6. Wetland Location(s): T	19 N <b>R</b> 2	0 W	Sec1	35	Т	R		Sec2		
A Flathead   4 - Flathead   Watershed/County   Lake County									1		
Purpose of Evaluation    Wetlands potentially affected by MDT project   Mitigation Wetlands: pre-construction   Mitigation Wetlands: pre-construction   Other			atersh	ed/Coun	ty Lake C	County	/				
Purpose of Evaluation  Wetlands potentially affected by MDT project Mitigation Wetlands: pre-construction  Witigation Wetlands: post construction  Other  10. Classification of Wetland and Aquatic Habitats in AA  HGM Class (Brinson) Class (Cowardin) Modifier (Cowardin) Modifier (Cowardin) Modifier (Cowardin) Modifier (Cowardin) Permanent/Perennial 83  Riverine Scrub-Shrub Wetland Impounded Permanent/Perennial 100  Slope Emergent Wetland Impounded Permanent/Perennial 101  Riverine Scrub-Shrub Wetland Impounded Permanent/Perennial 100  Slope Emergent Wetland Impounded Permanent/Perennial 100  Riverine Scrub-Shrub Wetlands Impoun	7. Evaluating Agency	CCI - MDT					8. Wetland	size acres			3 47
Wetlands potentially affected by MDT project   3.47 (A) size (acros)   Mitigation Wetlands: pre-construction   Mitigation Wetlands: post construction   Measured e.g. by GPS      Other	Purpose of Evaluation								·	ed e.a. b	
Mitigation Wetlands: pro-construction  ✓ Mitigation Wetlands: post construction  ✓ Other  10. Classification of Wetland and Aquatic Habitats in AA  Held Class (Brinson) Class (Cowardin) Modifier (Cowardin) Water Regime % of AA  Riverine Emergent Wetland Impounded Permanent/Perennial 8.3  Riverine Scrub-Shrub Wetland Impounded Permanent/Perennial 10.0  Sicope Emergent Wetland Impounded Seasonal/Intermittent 7  11. Estimated Relative Abundance Common  12. General Condition of AA  I. Disturbance: (use matrix below to determine [circle] appropriate response – see instructions for Montana-listed noxious weed and aquadic nulsance vegetation species (ANVS) lists)  Prodominant conditions adjacent to (within 500 feet of) AA  Londitions within AA  Conditions within AA  Conditions within AA  Conditions within AA  Conditions within AA  An occurs and is 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 certified.  AA occurs and is managed in predominantly natural state; is not grazed 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 certified.  AA not cultivated, but may be moderately grazed or hayed or activated or buildings, and noxious weed or ANVS cover is certified.  An occurs and is 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 certified.  An occurs and is managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or coupled states and contains for roads or buildings.  An occurs and is managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain for roads or buildings, or noxious weed or ANVS cover is certified.  In order the product of the bear subject to relatively minor cle		fected by MDT project					9. Assesssr	ment area			
Mitigation Wetlands: post construction  Other  10. Classification of Wetland and Aquatic Habitats in AA  HGM Class (Brinson) Class (Cowardin) Modifier (Cowardin) Water Regime % of AA  Riverine Emergent Wetland Impounded Permanent/Perennial 8.3  Riverine Scrub-Shrub Wetland Impounded Permanent/Perennial 10  Slope Emergent Wetland Impounded Seasonal/Intermittent 7  Line Estimated Relative Abundance Common  11. Estimated Relative Abundance Common  12. General Condition of AA  Line Line To a mark below to determine [circle] appropriate response – see instructions for Montana-listed noxious weed and aquatic nuisance vegetation species (ANVS) lists)  Presomment conditions adjacent to (within 500 feet of) AA  Line Line Line Line (Line Line Line Line Line Line Line Line	☐ Mitigation Wetlands: pr	e-construction					. , .	•			
Other							How assess	ed:	Measure	ed e.g. b	y GPS
Riverine   Emergent Wetland   Impounded   Permanent/Perennial   83   Riverine   Scrub-Shrub Wetland   Impounded   Permanent/Perennial   10   Riverine   Scrub-Shrub Wetland   Impounded   Permanent/Perennial   10   Riverine   Scrub-Shrub Wetland   Impounded   Permanent/Perennial   10   Riverine   Emergent Wetland   Impounded   Permanent/Perennial   10   Riverine   Emergent Wetland   Impounded   Seasonal/Intermittent   7   Riverine   Emergent Wetland   Impounded   Permanent/Perennial   10   Riverine   Emergent Wetland   Impounded   Seasonal/Intermittent   7   Riverine   Emergent Wetland   Impounded   Permanent/Perennial   10   Riverine   Emergent Wetland   Impounded   Riverine											
Stope   Emergent Wetland   Impounded   Permanent/Perennial   10		•	s in A/		er (Cowardi	in)	Water Re	egime		% of A	Δ.
Institute   Inst	Riverine	Emergent Wetland		Impour	nded		Permanent/	Perennial			83
11. Estimated Relative Abundance  12. General Condition of AA  i. Disturbance: (use matrix below to determine [circle] appropriate response – see instructions for Montana-listed noxious weed and aquatic nuisance vegetation species (ANVS) lists)    Predominant conditions adjacent to (within 500 feet of) AA   Analysed, logged, or otherwise converted; does not contain roads or occupied buildings; and 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 <-30%.    AA not cultivated, but may be moderately grazed or hayed or grazed, hayed, logged, or otherwise converted; does not contain roads or occupied buildings; and noxious weed or ANVS cover is <-30%.    AA not cultivated, but may be moderately grazed or hayed or grazed or hayed or acceptable buildings; and noxious weed or ANVS cover is <-30%.    AA not cultivated, but may be moderately grazed or hayed or grazed or hayed or grazed or hayed or acceptable buildings; and noxious weed or ANVS cover is <-30%.    AA not cultivated, but may be moderately grazed or hayed or hayed or logged; subject to relatively more clearing, fill placement, or hydrological alteration; placement, grading, clearing, or hydrologica	Riverine	Scrub-Shrub Wetland		Impoun	nded		Permanent/	Perennial			10
12. General Condition of AA  i. Disturbance: (use matrix below to determine [circle] appropriate response – see instructions for Montana-listed noxious weed and aquatic nuisance vegetation species (ANVS) lists)    Predominant conditions adjacent to (within 500 feet of) AA     Managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or buildings; and noxious weed or ANVS cover is cases on buildings; and noxious weed or ANVS cover is cases.     AA occurs and is 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 cases.	Slope	Emergent Wetland		Impour	nded		Seasonal/In	termittent			7
12. General Condition of AA  i. Disturbance: (use matrix below to determine [circle] appropriate response – see instructions for Montana-listed noxious weed and aquatic nuisance vegetation species (ANVS) lists)    Predominant conditions adjacent to (within 500 feet of) AA     Managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or buildings; and noxious weed or ANVS cover is cases on buildings; and noxious weed or ANVS cover is cases.     AA occurs and is 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 cases.											
12. General Condition of AA  i. Disturbance: (use matrix below to determine [circle] appropriate response – see instructions for Montana-listed noxious weed and aquatic nuisance vegetation species (ANVS) lists)    Predominant conditions adjacent to (within 500 feet of) AA											
12. General Condition of AA  i. Disturbance: (use matrix below to determine [circle] appropriate response – see instructions for Montana-listed noxious weed and aquatic nuisance vegetation species (ANVS) lists)    Predominant conditions adjacent to (within 500 feet of) AA							] [				
and a cocurs and is 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 <=30%.  AA occurs and is 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 <=30%.  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 occupied buildings; and noxious weed or ANVS cover is <=15%.  AA 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 disturbance  Ingly disturbance	i. Disturbance: (use matrix	below to determine [circle] a	ppropri	iate respor							
grazed, hayed, logged, or otherwise converted; does not contain roads or occupied buildings; and noxious weed or ANVS cover is <=15%.  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 includes an unnamed perennial stream channel and adjacent fringe wetlands and slope wetland. Wetlands within the AA were constructed and managed in a natural state. Adjacent area is subject to grazing.  ii. Prominent noxious, aquatic nuisance, other exotic species:  Cirsium arvense, Cynoglossum officinale, Iris pseudocorus, and Leucanthemum vulgare. Lepidium draba and Ventenata dubia are promined the areas surrounding the AA.  iii. Provide brief descriptive summary of AA and surrounding land use/habitat	Conditions wi	thin AA	natura hayed conve roads	al state; is no d, logged, or erted; does r s or buildings	ot grazed, otherwise not contain s; and noxious	mode select subject few i	erately grazed or hactively logged; or ha ect to minor clearing roads or buildings;	ayed or as been g; contains noxious	or logge placeme hydrolog building	ed; subject t ent, grading gical alterat density; or	o substantial fill , clearing, or ion; high road o noxious weed
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 disturbance high	grazed, hayed, logged, or otherwise coroads or occupied buildings; and noxic	onverted; does not contain	lo	ow distur	bance		low disturba	ance	mod	erate di	sturbance
substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is >=30%.    high disturbance   high disturbance	selectively logged; or has been subject placement, or hydrological alteration; or	t to relatively minor clearing, fill contains few roads or buildings;				me	oderate distu	ırbance	hi	gh distu	ırbance
AA includes an unnamed perennial stream channel and adjacent fringe wetlands and slope wetland. Wetlands within the AA were constructed and managed in a natural state. Adjacent area is subject to grazing.  ii. Prominent noxious, aquatic nuisance, other exotic species:  Cirsium arvense, Cynoglossum officinale, Iris pseudocorus, and Leucanthemum vulgare. Lepidium draba and Ventenata dubia are promine the areas surrounding the AA.  ii. Provide brief descriptive summary of AA and surrounding land use/habitat	substantial fill placement, grading, clear high road or building density; or noxio	aring, or hydrological alteration;	hi	gh distu	rbance	_	high disturba	ance	hi	gh distu	ırbance
Cirsium arvense, Cynoglossum officinale, Iris pseudocorus, and Leucanthemum vulgare. Lepidium draba and Ventenata dubia are promine the areas surrounding the AA.  ii. Provide brief descriptive summary of AA and surrounding land use/habitat	AA includes an unnamed pere	nnial stream channel and	d adja	cent fring		and sl	ope wetland. \	Wetlands v	vithin the	AA were	e constructe
· · · · · · · · · · · · · · · · · · ·	Cirsium arvense, Cynoglossi	um officinale, Iris pseudo			canthemum	vulga	are. Lepidium o	draba and	Ventenat	a dubia	are promine

13. Structural Diversity: (based on number of "Cowardin" vegetated classes present [do not include unvegetated classes], see #10 Initial Is current management preventing (passive) Modified existence of additional vegetated classes? Existing # of "Cowardin" Vegetated Classes in AA Rating Rating >=3 (or 2 if 1 is forested) classes NA NΑ Н 2 (or 1 if forested) classes NA NΑ NA Μ 1 dass, but not a monoculture М <NO YES> L 1 class, monoculture (1 species comprises>=90% of total cover) NA NΑ NA L Comments: Emergent and scrub-shrub vegetation types. SECTION PERTAINING to FUNCTIONS VALUES ASSESSMENT 14A. Habitat for Federally Listed or Proposed Threatened or Endangered Plants or Animals: i. AA is Documented (D) or Suspected (S) to contain (check one based on definitions contained in instructions): Primary or critical habitat (list species)  $\bigcirc$  D  $\bigcirc$  S  $\odot$  D  $\bigcirc$  S Secondary habitat (list Species) Grizzly bear (LT)  $\bigcirc$  D  $\bigcirc$  S Incidental habitat (list species) S No usable habitat ii. Rating (use the condusions from i above and the matrix below to arrive at [check] the functional points and rating) Highest Habitat Level doc/primary sus/primary doc/secondary sus/secondary doc/incidental sus/incidental None Functional Points and 1H .9H .8H .7M .3L .1L 0L Rating CSKT Wildlife staff observation in 2017/2018. MTNHP Environmental Summary Report - Species Occurrence Data. Sources for IPaC report. documented use 14B. Habitat for plant or animals rated S1, S2, or S3 by the Montana Natural Heritage Program: (not including species listed in14A above) i. AA is Documented (D) or Suspected (S) to contain (check one based on definitions contained in instructions): Primary or critical habitat (list species)  $\bigcirc$  D  $\bigcirc$  S  $\bigcirc$  D  $\bigcirc$  S Secondary habitat (list Species) Incidental habitat (list species) S No usable habitat ii. Rating (use the conclusions from i above and the matrix below to arrive at [check] the functional points and rating) Highest Habitat Level doc/primary sus/primary doc/secondary sus/secondary doc/incidental sus/incidental None S1 Species: Functional Points and .7M 0L 1H .8H .6M .2L .1L Rating S2 and S3 Species: Functional Points and .9H .7M .6M .5M .2L 0L .1L Rating

MTNHP Environmental Summary Report - Species Occurrence Data

Sources for documented use

																			Mod	lerate			
<i>ı<b>bstantial</b> (</i> based	•	•		٠.										-	of the follo		-						
observations							• •	•	• •	1)					ervations	during	, peak υ	ise per	iods				
abundant wildl	_						-				=		no wildlif	•									
presence of ex	-	-	-					e surro	unding a	area	=				nd food so								
interviews with	n local b	iologist	.s with k	(nowle	dge of th	he AA					in	itervie	ws with '	local bir	iologists	with kr	nowledç	ge of th	ne AA				
oderate (based o	on any c	of the fo	llowing	[check	k]):																		
observations o	-			-		uals or	r relative	ly few!	species	during	peak pe	eriods											
common occu	urrence (	of wildlif	ife sign	such a	as scat, f	tracks,	, nest str	ucture	s, game	₃ trails, ∈	etc.												
adequate adja	acent up	land foر	od sour	rces																			
interviews with	n local b	iologistد	ts with k	knowle	dge of t	.he AA																	
i. Wildlife habi from #13. For co other in terms o permanent/pere terms])	class co	cover to	o be co	onside	ered eve tion of th	venly o	distribut A (see #	uted, th #10).	he most Abbrev	st and le	least pr is for su	revale urface	ent <b>veg</b> e water	<b>getated</b> r duration	d classe tions are	ses mu re as fo	ust be v	within s: P/P =	n 20% of =	of each			
Structural diversity (see #13)				Hi	ligh							Mod	derate					L	_ow				
Class cover distribution (all vegetated classes)		Eve	∌n			Une	even			Eve	∍n 	_		Une	ven			E	Even				
Duration of surface water in ≥ 10% of AA	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	Α	P/P	S/I	T/E	А	P/P	S/I	T/E	A			
Low disturbance at AA (see #12i)	Е	Е	Е	н	Е	Е	н	н	Е	Н	Н	М	E	Н	М	М	Е	Н	М	М			
Moderate disturbance at AA (see #12i)	Н	н	н	н	н	н	Н	М	Н	Н	М	М	н	М	М	L	н	М	L	L			
High disturbance at AA (see #12i)	М	М	М	L	М	М			М	М			М		L	L							
<b>iii. Rating</b> (u Evidence of w								and f	the ma	И	Vildlife			_	s rating	g (ii)		<u>point</u>	s and ı	rating)			_
Substantial		—	+		Except	- 1		+		High		—	1			derate	e I		+		Low	<del></del>	_
Substantial Moderate			-		1E			4		.91						.8H	4		4		.7M	4	_
Moderate Minimal			4		.9H			$\bot$		.7N	_				_	.5M	4		4	_	.3L	4	_
Will little.					.6M					.4N	V					.2L					.1L		_
Comments  4D. General F	Fish H	-labitat	at Rati	ing: (	(Asses	ss this		tion if	f the A	VA is us	used by	oy fish	h or the	ne exist	sting si	ituatic	on is "	"corre					_
estorable due t  NA here a	to hab	bitat co roceed	onstra d to 14	aints, 4E.)	, or is n War	not de rm W	esired t Vater	from	a man	nagem	nent pe	erspe	ective	such	n as fis	sh ent	trappe	ed in a	-				
Duration of surface			wn i c				•	in An	. (us e	latrix w	) arnve					MIOC	andia	iting	Tay				4
in AA	estina /	-		Pe	ermanen	it / Per	ennial					Seasonal / Intermittent  ptimal Adequate Poor			+	Temporary / Ephemeral Optimal Adequate			eral Po	100			
Aquatic hiding / res escape cover	July /		Optima	al	A	dequate	'e	Pod	or	Ot Ot	ptimal		Adeq	ruate		Poor		Opti	mai	Ade	quate		·OC
			Optima	nal S	Ad O			O	oor S	Op O	optimal S	$\pm$	Adequ	quate S	0		s	Optir	s S	O	S	0	I
escape cover Thermal cover opto	otimal/	10				)	S				S		<u> </u>	·		S	_			0	S		I

Permanent / Perennial					Seasonal / Intermittent							Tem	porary/	Epheme	ral		
Opt	imal	Adeq	uate	Po	oor	Opti	mal	Ade	quate	Po	or	Opti	mal	Adeo	quate	Po	or
0	S	0	S	0	S	0	S	0	S	0	S	0	S	0	s	0	S
1E	.9Н	.8H	.7M	.6M	.5M	.9H	.8H	.7M	.6M	.5M	.4M	.7M	.6M	.5M	.4M	.3L	.3L
.9H	.8H	.7M	.6M	.5M	.5M	.8H	.7M	.6M	.5M	.4M	.4M	.6M	.5M	.4M	.3L	.2L	.2L
.8H	.7M	.6М	.5M	.5M	.4M	.7M	.6M	.5M	.4M	.4M	.3L	.5M	.4M	.3L	.2L	.2L	.1L
.5M	.5M	.5M	.4M	.4M	.3L	.4M	.4M	.4M	.3L	.3L	.2L	.2L	.2L	.2L	.1L	.1L	.1L
	O 1E .9H	Optimal  O S  1E 9H 8H 8H .7M	Optimal         Adeq           O         S         O           1E         .9H         .8H           .9H         .8H         .7M           .8H         .7M         .6M	Optimal         Adequate           O         S         O         S           1E         .9H         .8H         .7M         .6M           .9H         .8H         .7M         .6M         .5M	Optimal         Adequate         Po           O         S         O         S         O           1E         .9H         .8H         .7M         .6M         .5M           .9H         .8H         .7M         .6M         .5M         .5M           .8H         .7M         .6M         .5M         .5M         .5M	Optimal         Adequate         Poor           O         S         O         S         O         S           1E         .9H         .8H         .7M         .6M         .5M         .5M           .9H         .8H         .7M         .6M         .5M         .5M         .4M	Optimal         Adequate         Poor         Optimal           O         S         O         S         O           1E         .9H         .8H         .7M         .6M         .5M         .5M         .9H           .9H         .8H         .7M         .6M         .5M         .5M         .5M         .8H           .8H         .7M         .6M         .5M         .5M         .4M         .7M	Optimal         Adequate         Poor         Optimal           O         S         O         S         O         S           1E         .9H         .8H         .7M         .6M         .5M         .9H         .8H           .9H         .8H         .7M         .6M         .5M         .5M         .8H         .7M           .8H         .7M         .6M         .5M         .5M         .4M         .7M         .6M	Optimal         Adequate         Poor         Optimal         Ader           O         S         O         S         O         S         O           1E         .9H         .8H         .7M         .6M         .5M         .9H         .8H         .7M           .9H         .8H         .7M         .6M         .5M         .5M         .8H         .7M         .6M           .8H         .7M         .6M         .5M         .5M         .4M         .7M         .6M         .5M	Optimal         Adequate         Poor         Optimal         Adequate           O         S         O         S         O         S           1E         .9H         .8H         .7M         .6M         .5M         .9H         .8H         .7M         .6M           .9H         .8H         .7M         .6M         .5M         .5M         .8H         .7M         .6M         .5M           .8H         .7M         .6M         .5M         .5M         .4M         .7M         .6M         .5M         .4M	Optimal         Adequate         Poor         Optimal         Adequate         Poor           O         S         O         S         O         S         O         S         O           1E         .9H         .8H         .7M         .6M         .5M         .9H         .8H         .7M         .6M         .5M           .9H         .8H         .7M         .6M         .5M         .5M         .8H         .7M         .6M         .5M         .4M           .8H         .7M         .6M         .5M         .5M         .4M         .7M         .6M         .5M         .4M	Optimal         Adequate         Poor         Optimal         Adequate         Poor           O         S         O         S         O         S         O         S         O         S           1E         .9H         .8H         .7M         .6M         .5M         .9H         .8H         .7M         .6M         .5M         .4M           .9H         .8H         .7M         .6M         .5M         .5M         .8H         .7M         .6M         .5M         .4M         .4M           .8H         .7M         .6M         .5M         .5M         .4M         .7M         .6M         .5M         .4M         .4M         .3L	Optimal         Adequate         Poor         Optimal         Adequate         Poor         Optimal           O         S         O	Optimal         Adequate         Poor         Optimal         Adequate         Poor         Optimal           O         S         O	Optimal         Adequate         Poor         Optimal         Adequate         Poor         Optimal         Adequate           O         S<	Optimal         Adequate         Poor         Optimal         Adequate         Poor         Optimal         Adequate           O         S	Optimal         Adequate         Poor         Optimal         Adequate         Poor         Optimal         Adequate         Poor           O         S <td< td=""></td<>

Sources used for identifying fish sp. potentially for	ınd in Az	<b>4</b> <i>:</i>										
ii. Modified Rating (NOTE: Modified score car a) Is fish use of the AA significantly reduced by a current final MDEQ list of waterbodies in need of fishery or aquatic life support, or do aquatic nuisa yes, reduce score in i above by 0.1: Modified	culvert, d TMDL de nce plan	dike, or other n evelopment wit	nan-made s h listed "Pr	obable Imp	paired (	Jses" includi	ng cold or v	varm water	ne If			
b) Does the AA contain a documented spawning a comments) for native fish or introduced game fish	_	nther critical had			he adju	usted score i	•					
iii. Final Score and Rating: 3 L	Commo		ted fish fi	rom usin	g AA	due to im in previou s in chanr	s years. l	Rating ad	justing in			
14E. Flood Attenuation: (Applies only to wetlar channel or overbank flow, click NA here		ect to flooding ceed to 14F.)	via in-chan	nel or over	bank flo	ow. If wetlar	nds in AA ar	e not floode	d from in-			
i. Rating (working from top to bottom, use the n  Estimated or Calculated Entrenchment (Rosgen		low to arrive at					Entrenc	hed-A, F, G	etream			
1994, 1996)	Silgn	stream type			ery ent stream	renched – B type	Entrenc	types	Sucalli			
% of flooded wetland classified as forested and/or scrub/shrub	75%	6 25-75%	<25%	75%	25-7	75% <25%	75%	25-75%	<25%			
AA contains no outlet or restricted outlet	1H	.9H	.6M	.8H	.71	м .5М	.4M	.3L	.2L			
AA contains unrestricted outlet	.91	H8.	.5M	.7M	.61	M .4M	.3L	.2L	.1L			
					_							
Slightly Entrenched         Moderately Entrenched         Entrenched           ER = >2.2         ER = 1.41 - 2.2         ER = 1.0 - 1.4												
C stream type D stream type E stream	уре		m type	A	stream		F stream typ		stream type			
					<u>—</u>							
Floodprone width  Bankfull Depth    Bankfull Depth   Bankfull Width												
<ul> <li>14F. Short and Long Term Surface Wat upland surface flow, or groundwater flow. In 14G.)</li> <li>i. Rating (Working from top to bottom, us water durations are as follows: P/P = perm. further definitions of these terms.)</li> </ul>	fnowe ethem	tlands in the	AA are su arrive at	bject to fle [check] th	ooding ne fund	g or pondino ctional point	g, dick ts and ratir	<b>NA</b> here	e and proce	eed to surface		
further definitions of these terms].)  Estimated maximum acre feet of water contained in wetlands within the AA that are subject to periodic		>5 acre feet			4.4	1 to 5 acre feet			≤1 acre foot			
flooding or ponding  Duration of surface water at wetlands within the AA	DIE	1 1	T''-			I		2.0		1		
	P/P	S/I	T/E	P/F	,	S/I	T/E	P/P	S/I	T/E		
Wetlands in AA flood or pond ≥ 5 out of 10 years	1H	.9H	.8H	.8	H	.6M	.5M	.4M	.3L	.2L		
Wetlands in AA flood or pond < 5 out of 10 years	.9H	.8H	.7M	.7	М	.5M	.4M	.3L	.2L	.1L		

Comments: Log crib structures impound and store water.

= low]	)				om, use	the matr	rix belov	w to arrive	at [check	] the function							or L
	ent, nutrie within AA		toxicant	input	to compo not s	deliver levounds at les substantiall urces of nu	vels of sec evels such ly impaire utrients or	ng land use diments, nu h that other ed. Minor se r toxicants, on present.	trients, or functions a dimentation	nutrien with po	elopment ts, or toxi tential to nds such	for "probal cants <b>or</b> A deliver hig that other	ble cau A rece th level functions es of n	uses" relatives or sills of sedions are su	ated to urroun ments ubstan or toxid	ed of TMDL sediment, ding land us, nutrients, otially impair cants, or sig	or ed.
	er of wetla ice of floo					≥ 70%			0%	V-	≥ 70					'0%	
AA cor	ntains <b>no</b>	or restri	cted ou	tlet	Yes 1H	.8H		.7M	.5M	.5N		.4M	1	.3L		.2L	
AA cor	ntains <b>un</b>	restricte	d outlet		.9H	.7M	+	.6M	.4M	.41		.3L	1	.2L	-	.1L	
		The A	A =====	alv flac						n, and has a			raata				_
omr	ments:	THE A	A TOULII	lely lloc	ous and	is domina	ated by	emergent	vegetatio	ii, ailu iias a	restricte	tu oullet t	леаце	d by log	CID	siruciures	_
										s or a river, str 14H does not a			al or m		le		
	ed to 14I.)																
Cove	r of <b>wetlar</b>	nd stream	bank or		use the n	natrix belo				ional points and acent to rooted ve							
	e by speci ee <b>Appen</b> o		ability rat	ings	Perma	anent / Pere	nnial	S	easonal / Inte	ermittent	Te	emporary / E	phemer	ral			
650/						1H			.9H			.7M					
JJ /0																	
	1					.7M			.6M			.5M	1				
5-64% 5-35%	ents:	Domin	ant we	tland co	over pro	.3L	Typha la	atifolia and	.2L	arundinacea		.5M .1L	_				
5-64% 35% ommo	ents:	tion Exp	oort/Foo	od Chair	n Suppoi	.3L vided by 'rt:	I fish hab	atifolia and	.2L d Phalaris [check])				_				
5-64% 35% 0mm 14l. i. Lo	ents: Product	tion Exp Biologica h Habita	oort/Foo	od Chair ity (syntl Ge E/H	n Suppoi	.3L vided by rt: vildlife and ildlife Hal	l fish hab bitat Rat	oitat ratings ing (14C.ii	.2Ld Phalaris				_				
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5-64% 35% 0mme 14l. i. Le	ents:  Product evel of B neral Fish Rating (14 M L	tion Exp Biologica h Habita 4D.iii.)	oort/Foo	od Chair ity (synth Ge E/H	n Suppoi	.3L vided by rt: vildlife and ildlife Hal	l fish hab bitat Rat	oitat ratings ing (14C.ii	.2Ld Phalaris				_				
35%  14I. i. Lt Gen	ents:  Product evel of B neral Fish Rating (14  E/H  M  L  N/A  ting (Wo d compor face outle	tion Exp Biologica h Habita 4D.iii.)	m top tone AA; Fnal three	od Chair ity (synth Ge E/H H H M H o bottom Factor B e rows pr	n Supported to the support of the su	.3L vided by  rt: vidlife and ildlife Hab M M M matrix bel f biologica duration of	d fish hab bitat Rat	bitat ratings ing (14C.ii	.2L d Phalaris  [check]) i.) L M L L ck] the func		nd rating whether	. Factor A	= acre	ntains a	surfac	ce or	
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14I. i. Lu Gen R	ents:  Product evel of B neral Fish Rating (14  E/H  M  L  N/A  ting (Wo d compor face outl structions	rking fronent in the first the first the first Veget	m top tone AA; Fnal three defilinated comp	od Chair  Ge E/H  H  M  H  o bottom Factor B  e rows penitions of onent > 5 a rate	n Support support to the support to	.3L  vided by   rt:  videlife and  ildlife Hab  M  M  M  matrix bel f biologica  duration of  erms].)	low to an	rive at [cherating from water in th	.2L d Phalaris  [check]) i.) L M L L ck] the funcabove (14le AA, wher	arundinacea  ctional points a l.i.); Factor C = e P/P, S/I, and cres Low	nd rating whether T/E are	. Factor A or not the as previou	= acre AA co siy del	ontains a fined, an ponent <1 a	surfacted A =	ce or "absent"	
35%  14I. i. Lt Gen R	ents:  Product evel of B eral Fish Rating (14  E/H  M  L  N/A  ting (Wood comport face outlestructions  Higher Higher Higher Higher Higher)	rking fronce the first the	m top to the AA; Fender definated comp	ed Chair  Ge E/H  H  H  M  H  Factor B  Factor B  Factor S  Factor	, use the elevel of these tecres	vided by vid	low to an activity f surface	rive at [cherating from water in the Vegetated colors when the vegetated colors with the vegetat	[check]) i.) L M L L ck] the func above (14le AA, where mponent 1-5 ac oderate No	arundinacea  arundinacea  arundinacea  ctional points al  l.i.); Factor C = e P/P, S/I, and  cres  Low  Yes No	nd rating whether T/E are	. Factor A or not the as previou	= acre AA cc sly det Mode Yes	ontains a fined, an ponent <1 a erate No	surfacted A =	ce or "absent"	
14I. i. Le Gen R . Raavetlann.	ents:  Product evel of B eral Fish Rating (14  E/H  M  L  N/A  ting (Wood comport face outlestructions  High Yes  1E	rking froncent in the tet; the first for furth Veget No	m top to the AA; Final Activity and AA; Final	ety (synth	, use the elevel of these tecres Low	.3L vided by  rt: videlife and ildlife Hale M  M  M  matrix bel f biologica duration of erms].)  No  .4M  .3L	low to and activity fourface  High Yes  1  8  1  1  1  1  1  1  1  1  1  1  1	rive at [cherating from water in the Vegetated column	[check]) i.) L M L L ck] the func above (14le AA, where management 1-5 according to the second secon	arundinacea  arundinacea  arundinacea  ctional points al.i.); Factor C = e P/P, S/I, and cres  Low  Yes No  .5M .3L	nd rating whether T/E are	. Factor A or not the as previou	= acre AA cc sly det ted com Mode Yes	ontains a fined, an ponent <1 a erate No .4M	surface d A = Yes .3L	ce or "absent"	

Vegetated component of AA is 3.47 acres. Emerge water outlet. Permanent/perennial water present.

14J. Groundwater Discharge/Recharge: (check the appropriate indicators in i & ii below) i. Discharge Indicators ii. Recharge Indicators Permeable substrate present without underlying impeding layer The AA is a slope wetland Springs or seeps are known or observed Wetland contains inlet but no outlet Vegetation growing during domant season/drought Stream is a known 'losing' stream; discharge volume decreases Wetland occurs at the toe of a natural slope Other Seeps are present at the wetland edge AA permanently flooded during drought periods Wetland contains an outlet, but no inlet Shallow water table and the site is saturated to the surface Other: iii. Rating (use the information from i and ii above and the table below to arrive at [check] the functional points and rating) Duration of saturation at AA Wetlands <u>FROM GROUNDWATER</u> <u>DISCHARGE OR WITH WATER</u> THAT IS RECHARGING THE GROUNDWATER SYSTEM Criteria P/P S/I None Groundwater Discharge or Recharge .1L 1H .7M .4M Insufficient Data/Information Comments: Majority of site hydrology is supplied from surface water and water retention by cribs, but seeps occur north and south of the 14K. Uniqueness: i. Rating (working from top to bottom, use the matrix below to arrive at [check] the functional points and rating) AA does not contain previously AA contains fen, bog, warm springs cited rare types and structural AA does not contain previously Replacement potential or mature (>80 yr-old) forested diversity (#13) is high or contains cited rare types or associations wetland or plant association listed plant association listed as "S2" by and structural diversity (#13) is as "S1" by the MTNHP the MTNHP low-moderate Estimated relative abundant abundant abundant commo rare rare common rare common abundance (#11) Low disturbance at AA .6M 1H .9H .8H .8H .5M .5M .4M .3L (#12i) Moderate disturbance at .9H H8. .7M .2L .7M .5M .4M .4M .3L AA (#12i) High disturbance at AA .8H .7H .6M .6M .4M .3L .3L .2L .1L (#12i) Comments: Common wetland types. 14L. Recreation/Education Potential: (affords "bonus" points if AA provides recreation or education opportunity) i. Is the AA a known or potential rec./ed. site: (check) Y  $N\bigcirc$ (if 'Yes' continue with the evaluation; if 'No' then click NA here and proceed to the overall summary and rating page) Check categories that apply to the AA: ✓ Educational/scientific study; ☐ Consumptive rec.; ☐ Non-consumptive rec.; \_\_\_Other iii. Rating (use the matrix below to arrive at [check] the functional points and rating) Known or Potential Recreation or Education Area Potential Known Public ownership or public easement with general public access (no permission required) 2H .15H Private ownership with general public access (no permission required) .15H .1M Private or public ownership without general public access, or requiring permission for public access .1M .05L Comments: Site has the potential for educational use. **General Site Notes** Wetland acreage at the site decreased 0.13-acre from 2022.

FUNCTION & VALUE SUMMARY & OVERALL RATING FOR WETLAND/SITE #(S): AA-1

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	Н	.8	1	2.78	
B. MT Natural Heritage Program Species Habitat	L	.1	1	0.35	
C. General Wildlife Habitat	Н	.9	1	3.12	<b>V</b>
D. General Fish Habitat	L	.3	1	1.04	
E. Flood Attenuation	М	.6	1	2.08	
F. Short and Long Term Surface Water Storage	Н	.8	1	2.78	
G. Sediment/Nutrient/Toxicant Removal	Н	1	1	3.47	<b>✓</b>
H. Sediment/Shoreline Stabilization	Н	1	1	3.47	<b>V</b>
Production Export/Food Chain Support	Н	.8	1	2.78	
J. Groundwater Discharge/Recharge	Н	1	1	3.47	<b>✓</b>
K. Uniqueness	М	.4	1	1.39	
L. Recreation/Education Potential (bonus points)	Н	.15	NA	0.52	
Totals:		7.85	11	27.24	
Percent of Possible Score			71.36 %		

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 #).	1
Category III Wetland: (Criteria for Categories I, II, or IV not satisfied)	
Category IV Wetland: (Criteria for Categories I or II are not satisfied and all of the following criteria are met; otherwise go to Category III)  "Low" rating for Uniqueness; and Vegetated wetland component < 1 acre (do not include upland vegetated buffer); and Percent of possible score < 35% (round to nearest whole #).	

## **OVERALL ANALYSIS AREA RATING:** (check appropriate category based on the criteria outlined above)

1   11   111   10
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 Table B-1. US93 N Peterson Mitigation Site. Comprehensive Vegetation Species List 2008-2022

Scientific Name	Common Name	WMVC Wetland Indicator <sup>(a)</sup>
Achillea millefolium	Common Yarrow	FACU
Agropyron cristatum	Crested Wheatgrass	UPL
Alnus incana	Speckled Alder	FACW
Amsinckia menziesii	Small-flower Fiddle-neck	UPL
Asparagus officinalis	Asparagus	FACU
Bistorta bistortoides	American Bistort	FACW
Brassica juncea	Chinese Mustard	UPL
Bromus arvensis	Field Brome	UPL
Bromus inermis	Smooth Brome	UPL
Bromus tectorum	Cheatgrass	UPL
Cardaria draba	Whitetop	UPL
Carex aquatilis	Leafy Tussock Sedge	OBL
Carex nebrascensis	Nebraska Sedge	OBL
Carex pellita	Woolly Sedge	OBL
Carex praegracilis	Clustered Field Sedge	FACW
Carex sp.	Sedge	N/A
Carex stipata	Stalk-Grain Sedge	OBL
Carex utriculata	Northwest Territory Sedge	OBL
Carex vesicaria	Lesser Bladder Sedge	OBL
Cirsium arvense	Canadian Thistle	FAC
Cirsium vulgare	Bull Thistle	FACU
Cornus alba	Red Osier	FACW
Cynoglossum officincale	Gypsy-Flower	FACU
Dactylis glomerata	Orchard Grass	FACU
Descurainia sophia	Herb Sophia	UPL
Dianthus sp.	Pink	N/A
Dipsacus fullonum	Fuller's Teasel	FAC
Eleocharis palustris	Common Spike-Rush	OBL
Elodea sp.	Waterweed	N/A
Elymus repens	Creeping Wild Rye	FAC
Epilobium ciliatum	Fringed Willowherb	FACW
Festuca arundinacea	Tall fescue	UPL
Festuca sp.	Fescue	N/A
Gallium aperine	Sticky-Willy	FACU
Geum macrophyllum	Large-Leaf Avens	FAC
Glyceria grandis	American Manna Grass	OBL
Helianthus pauciflorus	Stiff Sunflower	UPL
Hordeum jubatum	Fox-Tail Barley	FAC
Impatiens ecalcarata	Spurless Touch-Me-Not	FACW
Iris pseudacorus	Pale-Yellow Iris	OBL

 Table B-1. US93 N Peterson Mitigation Site. Comprehensive Vegetation Species List 2008-2022

Scientific Name	Common Name	WMVC Wetland Indicator <sup>(a)</sup>
Juncus balticus	Baltic Rush	FACW
Juncus ensifolius	Dagger-Leaf Rush	FACW
Juncus sp.	Rush	N/A
Juncus tenuis	Lesser Poverty Rush	FAC
Kochia scoparia	Mexican Kochia	FAC
Lactuca serriola	Prickly Lettuce	FACU
Lemna minor	Common Duckweed	OBL
Lepidium campestre	Field Pepper-grass	UPL
Lepidium perfoliatum	Clasping Pepperwort	FACU
Leucanthemum vulgare	Ox-Eye Daisy	FACU
Malva neglecta	Dwarf Cheeseweed	UPL
Medicago sativa	Alfalfa	UPL
Melilotus officinalis	Yellow Sweet-Clover	FACU
Mentha arvensis	American Wild Mint	FACW
Myosotis laxa	Bay Forget-Me-Not	OBL
Myriophyllum sibiricum	Siberian Water-Milfoil	OBL
Nasturtium microphyllum	One-Row Watercress	OBL
Nasturtium officinale	Watercress	OBL
Nepeta cataria	Catnip	FACU
Oenanthe sp.	Waterdropwort	N/A
Pascopyrum smithii	Western-Wheat Grass	FACU
Persicaria amphibia	Water Smartweed	OBL
Persicaria lapathifolia	Dock-Leaf Smartweed	FACW
Phalaris arundinacea	Reed Canary Grass	FACW
Plantago lanceolata	English Plantain	FACU
Poa palustris	Fowl Blue Grass	FAC
Poa pratensis	Kentucky Blue Grass	FAC
Poa sp.	Bluegrass	N/A
Potentilla recta	Sulphur Cinquefoil	UPL
Potentilla sp.	Cinquefoil	N/A
Prunella vulgaris	Common Selfheal	FACU
Rosa woodsii	Woods' Rose	FACU
Rumex crispus	Curly Dock	FAC
Salix bebbiana	Gray Willow	FACW
Salix drummondiana	Drummond's Willow	FACW
Salix exigua	Narrowleaf Willow	FACW
Salix sp.	Willow	N/A
Schoenoplectus acutus	Hard-Stem Club-Rush	OBL
Scirpus microcarpus	Red-Tinge Bulrush	OBL

 Table B-1. US93 N Peterson Mitigation Site. Comprehensive Vegetation Species List 2008-2022

Scientific Name	Common Name	WMVC Wetland Indicator <sup>(a)</sup>
Silene latifolia	Bladder Campion	UPL
Sisymbrium altissimum	Tall Hedge-Mustard	FACU
Solanum dulcamara	Climbing Nightshade	FAC
Sonchus arvensis	Field Sow-Thistle	FACU
Suaeda calceoliformis	Paiuteweed	FACW
Symphoricarpos albus	Common Snowberry	FACU
Symphoricarpos albus	Common Snowberry	FACU
Thlaspi arvense	Field Pennycress	UPL
Tragopogon dubius	Meadow Goat's-beard	UPL
Trifolium pratense	Red Clover	FACU
Trifolium sp.	Clover	N/A
Typha latifolia	Broad-Leaf Cat-Tail	OBL
Ventenata dubia	Ventenata	UPL
Verbascum blattaria	White Moth Mullein	UPL
Verbascum thapsus	Great Mullein	FACU
Veronica sp.	Speedwell	N/A

<sup>(</sup>a) 2020 NWPL (USACE 2020)

# APPENDIX C PROJECT AREA PHOTOGRAPHS

MDT Wetland Mitigation Monitoring US 93 Peterson Lake County, Montana

### **US93 Peterson: Photo Point Photographs**



**Photo Point: 1** Bearing: 135 degrees



**Photo Point: 1** Bearing: 135 degrees



Location: PP1 Year: 2022



**Photo Point: 2** Bearing: 35 degrees



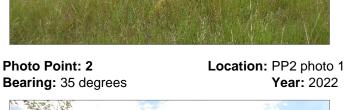
Location: PP2 photo 1 Year: 2017

Location: PP1

Year: 2017



Bearing: 35 degrees





**Photo Point: 2** Bearing: 110 degrees





**Photo Point: 2** Bearing: 110 degrees

Location: PP2 photo 2 Year: 2022

### **US93 Peterson: Photo Point Photographs**



**Photo Point: 4** Bearing: 30 degrees



Location: Looking across T-2 Year: 2017



**Photo Point: 4** Bearing: 30 degrees



Location: Looking across T-2 Year: 2022



**Photo Point: 5** Bearing: 175 degrees



Location: Wetland boundary Year: 2017



**Photo Point: 5** Bearing: 175 degrees





**Photo Point: 6** Bearing: 315 degrees

Location: Transect 2 Start Year: 2017



**Photo Point: 6** Bearing: 315 degrees

Location: Transect 2 Start Year: 2022

### **US93 Peterson: Photo Point Photographs**



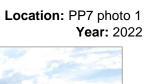
**Photo Point: 7** Bearing: 5 degrees



Location: PP7 photo 1 Year: 2020



**Photo Point: 7** Bearing: 5 degrees



Location: PP7 photo 2

**Photo Point: 7** Bearing: 267 degrees



Location: PP7 photo 2 Year: 2020



**Photo Point: 7** Bearing: 267 degrees



**Photo Point: 8** Bearing: 34 degrees



Location: New crib structure. Year: 2022

**Photo Point: 8** Bearing: 34 degrees

Location: New crib structure. Year: 2020

### **US93 Peterson: Transect Photographs**



**Photo Point: T-1 Start** Bearing: 215 degrees



**Photo Point: T-1 Start** Bearing: 215 degrees



Location: T-1 Start Year: 2022

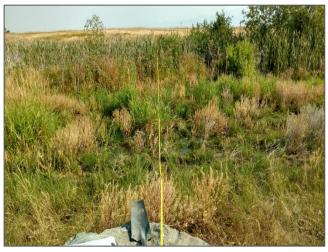


Photo Point 3 (T-1 End) Bearing: 45 degrees



Location: T-1 Start

Location: T-1 End Year: 2017



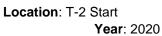
Photo Point 3 (T-1 End) Bearing: 45 degrees



Location: T-1 End Year: 2022



**Photo Point: T-2 Start** Bearing: 135





**Photo Point: T-2 Start** Bearing: 135

Location: T-2 Start Year: 2022



Photo Point: T-2 End Bearing: 315 degrees

Location: T-2 End Year: 2020



Photo Point: T-2 End Bearing: 315 degrees

Location: T-2 End Year: 2022

# **US93 Peterson: Data Point Photographs**



Data Point: DP01-wet

Year: 2022



Data Point: DP02-wet

Year: 2022



Data Point: DP03-wet

Year: 2022



Data Point: DP01-up

Year: 2022



Data Point: DP02-up

Year: 2022



Data Point: DP03-up



Data Point: DP04-wet

Year: 2022



Data Point: DP05-wet

Year: 2022



Data Point: DP04-up

Year: 2022



Data Point: DP05-up

### **US93 Peterson: Additional Site Photographs**



**Additional Photo 1.** Looking N/E at recently constructed upstream crib structure (2020).



**Additional Photo 2.** Looking N/NE at new middle crib structure (2022).



**Additional Photo 4.** Looking south at downstream outfall structure (2022).



**Additional Photo 1.** Looking N/E at recently constructed upstream crib structure (2022).



**Additional Photo 3.** Looking N/NE at middle crib structure outfall (2022).



**Additional Photo 5.** Looking north from south side of last downstream crib structure (2022).