### Montana Department of Transportation Wetland Mitigation Monitoring Report

### KINDSFATER MITIGATION SITE

### **Project Overview**

MDT Project Number: STPX 56 (56) UPN # 5034

Watershed: Watershed #13 – Upper Yellowstone River Basin

Monitoring Year: 2024

Years Monitored: 12th year of monitoring

Corps Permit Number: NWO-2007-00824-MTB

Monitoring Conducted By: Confluence Consulting Inc Dates Monitoring Was Conducted: June 4-5, 2024

**Purpose of the Approved Project:** 

The site is intended to provide 32.7 acres of wetland mitigation credits to assist the Montana Department of Transportation (MDT) in meeting compensatory mitigation requirements for proposed construction projects in Watershed #13 – Upper Yellowstone. The objectives of this project include the creation, restoration, enhancement, and preservation of wetland habitat within the historic Kindsfater gravel pit. Construction included excavating 14 wetland cells that range in size from 0.24 to 1.39 acres to diversify wetland habitat and to intercept shallow groundwater.

### Site Location:

Latitude: 45.693478 Longitude: -108.693517 County: Yellowstone Nearest Town: Laurel, MT

Map Included: See Figure 2, page 12

Mitigation Site Construction Started: 2012 Construction Ended: 2012

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

Activity: N/A

**Specific recommendations for additional corrective actions:** Continue to implement noxious weed-control measures in 2024. Repair the damaged fence on the southwest boundary of the mitigation site near the MDT entrance gate.

**Anticipated Wetland Credit Acres: 32.7** 

Wetland Credit Acres Generated to Date: 24.49

Previous Monitoring Reports: <a href="https://www.mdt.mt.gov/publications/brochures/wetland-">https://www.mdt.mt.gov/publications/brochures/wetland-</a>

mitigation.aspx

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

<u>Requirements</u> (from approved mitigation plan, banking instrument, and US Army Corps of Engineers (USACE) permit conditions)

**Performance Standards:** A summary of performance standards established for the Kindsfater site and a discussion of achievement status for each criterion are provided in Table 1. In 2024, the site achieved 13 of the 14 success criteria.

**Table 1. Summary of Performance Standards.** 

Performance Standards	Success Criteria	Criteria Achieved Y/N	Discussion
Wetland Characteristics	The three parameter criteria for hydrology, vegetation, and soils are met as outlined in the 1987 Wetland Manual and 2010 Regional Supplement.	Y	Areas identified as wetland habitat within the mitigation site meet the three-parameter criteria, as documented in the USACE wetland determination data forms (Appendix B).
Wetland Hydrology	Soil saturation present for at least 12.5 percent of the growing season.	Y	Areas identified as wetland habitat within the mitigation site exhibit soil saturation for a minimum 12.5 percent of the growing season, as documented by areas of inundation shown in aerial imagery, as well as in the USACE wetland determination data forms (Appendix A and B). Water depths ranged from 1 to 50 inches deep in 2024.
Lhadria Cail	Hydric soil conditions present or appear to be forming.	Y	The constructed wetland complex exhibits hydric soil development. In 2024, five different hydric soil indicators were observed in wetlands across the site.
Hydric Soil	Soil is sufficiently stable to prevent erosion.	Y	Disturbed soil is stable and does not exhibit signs of erosion.
	Soil is able to support plant cover.	Y	Plant cover has continued to develop and expand across disturbed soils.
	Achieved when hydrophytic vegetation is dominant, per technical guidelines outlined in the 1987 Wetland Manual and 2010 Regional Supplement.	Y	Areas identified as wetland habitat within the mitigation site support a prevalence of hydrophytic vegetation (OBL, FACW, and FAC) as documented in the USACE wetland determination data forms (Appendix B).
Hydrophytic Vegetation	Noxious weeds do not exceed 5 percent cover.	Y	Although several noxious weed infestations have been mapped across the site, these infestations are generally located outside of excavated wetlands. Overall, the estimated noxious weed cover within delineated wetlands is approximately 3 percent.
	Hydrophytic vegetation success will include achieving a minimum overall vegetation cover of 80 percent in created wetland areas within 5 years following site construction.	Y	The majority of created wetlands exhibited 80 percent hydrophytic vegetation cover during the 2024 monitoring event. All wetlands that were designed to provide 80 percent vegetative cover are currently achieving this performance standard.

Performance Standards	Success Criteria	Criteria Achieved Y/N	Discussion
Woody Plants	Plantings will be considered successful where they exceed 50 percent survival after 5 years.	N	This performance criteria was not met after five years (2017). In 2024, survival of the original woody plantings was estimated at less than 15%. Shrub cover continues to decrease due to inundation in wetland cells. However, volunteer woody cover is recorded in wetland cells 9, 13, and 14. Total aerial cover of woody species within these wetlands is approximately 35%, which provides important habitat and structural diversity across the site.
Open-Water Areas	Open water that is established within the designated wetland cells will be considered successful and creditable.	Y	Open water has increased in 2024. Areas with less than 5% vegetative cover were mapped as open water (Cells 1, 2, 3, and 8). Shallow ponded water areas, with greater than 5 percent vegetative cover, were also observed on site within many of the other wetland cells. Overall water depths ranged from 1 to 50 inches deep.
Upland Buffer	Success will be achieved when noxious weeds do not exceed 5 percent cover within the buffer areas on site.	Y	Noxious weed cover was approximately 1.5 percent within upland buffer areas. MDT will continue to implement weed-control measures to maintain this criterion.
	Any area disturbed within creditable buffer zones must have at least 50 percent aerial cover of non-weed species by the end of the monitoring period.	Y	Upland buffers surrounding wetland areas exhibited greater than 50 percent aerial cover of non-weed species.
Weed Control	Success will be achieved where <5 percent absolute cover of noxious weed species occurs across the site.	Y	The absolute cover of state-listed noxious weed species across the entire site was approximately 4.5 percent in 2024.
Fencing	Install wildlife-friendly fencing along the easement boundaries.	Y	Wildlife-friendly fencing around the easement boundaries is in fair condition. Fencing repairs are required on the southwest project area boundary.

### **Summary Data**

**Wetland Delineation** – The overall wetland acreage of 37.23 acres delineated in 2024 decreased by 0.95 from the previous year due to increased open water acreage. The delineation confirmed 19.01 acres in preservation areas, 8.94 acres in the restoration areas (reestablishment (7.90-acres) and rehabilitation (1.04-acres)), 2.78 acres in the enhancement area, and 6.50 acres of created wetland in the excavated cells (Table 2). The wetland boundary expanded in the western region of the site around wetland cell 4, as well as around wetland cell

6. However, the wetland boundary receded in response to an increase in open water in wetland cells 1, 2, 3 and 8.

In 2020, the USACE (N. Green, personal communication, May 6, 2020) provided guidance on open water, defining it as "areas of open water of any depth with less than 5% rooted emergent vegetation, no vegetation, submerged non-rooted vegetation, and/or submerged vegetation rooted in the substrate that does not extend above the water surface." In accordance with this USACE guidance, open water accounted for 2.26-acres of the mitigation site in 2024 (Table 2). Uplands accounted for the remaining 76.24 acres of the mitigation site. USACE wetland determination data forms (USACE, 2010) are provided in Appendix B.

Table 2. Wetland & Aquatic Habitat Acreage Delineated From 2020 Through 2024 at the Kindsfater Site.

Habitat Type	2020 Acreage	2021 Acreage	2022 Acreage	2023 Acreage	2024 Acreage
Preservation	18.37	18.85	19.10	19.04	19.01
Re-establishment (Restoration)	7.41	9.30	10.10	9.24	7.90
Rehabilitation (Restoration)	1.12	1.14	1.10	1.04	1.04
Enhancement	2.92	3.04	3.00	3.04	2.78
Creation	4.88	5.25	5.90	5.82	6.50
Open Water	0.40	0.47	0.70	0.74	2.26
Total Wetland & Aquatic Habitat	35.10	38.04	39.90	38.92	39.49

**Vegetation** — A total of 154 plant species were identified on the site from 2013 through 2024. Vegetation communities were identified by species composition and dominance. The dominant Upland Type (UT) at the site is UT 18 (*Bromus tectorum*), which was first documented in 2022 to reflect the proliferation of cheatgrass (*Bromus tectorum*) in the uplands across the site. Some of the areas have combined vegetation communities, such as UT 4/18 and WT 5/19, because a mosaic of two communities exists within an area and could not be individually mapped. The species composition for each community type is provided in detail on the Wetland Mitigation Site Monitoring form (Appendix B), and the community boundaries are shown in Figure A-3 (Appendix A).

The following vegetation community types were identified in 2024:

- Upland Type 4 Elaeagnus angustifolia
- Upland Type 14 *Elymus* spp./*Bromus* spp.
- Upland Type 17 Bromus spp./Poa pratensis
- Upland Type 18 Bromus tectorum
- Upland Type 20 Populus deltoides/Elaeagnus angustifolia
- Wetland Type 2 Eleocharis palustris/Schoenoplectus spp.
- Wetland Type 5 Typha latifolia
- Wetland Type 8 Populus deltoides
- Wetland Type 9 Salix exigua
- Wetland Type 11 Phalaris arundinacea

- Wetland Type 16 Juncus spp./Carex spp.
- Wetland Type 19 Alopecurus arundinaceus

Vegetation cover was measured along three transects in 2024 (Figure A-2, Appendix A). Details of each transect are provided in the Wetland Mitigation Site Monitoring form (Appendix B). Photographs of the transect endpoints are provided in Appendix C. Table 3 summarizes the data for T-1. T-1 extends 300 feet through wetland types (WT) 8 and 9, and UT 14. Total vegetative cover along this transect remains consistent with previous years at 85 percent. The total number of species along the transect increased by one and the number of hydrophytic species increased by three. T-1 extends across cell 14, which was inundated with up to 1.5' of water in 2024.

Table 3. Data Summary for T-1 From 2019 Through 2024 at the Kindsfater Site.

Monitoring Year	2019	2020	2021	2022	2023	2024
Transect Length (feet)	300	300	300	300	300	300
Vegetation Community Transitions along Transect	4	4	4	3	3	3
Vegetation Communities along Transect	3	3	3	3	3	3
Hydrophytic Vegetation Communities Along Transect	2	2	2	2	2	2
Total Vegetative Species	40	35	34	32	32	33
Total Hydrophytic Species	12	8	8	12	11	15
Total Upland Species	28	27	26	20	21	18
Estimated % Total Vegetative Cover	84	85	85	85	85	85
Estimated % Unvegetated	16	15	15	15	15	15
% Transect Length Comprising Hydrophytic Vegetation Communities	55	53	53	48	48	48
% Transect Length Comprising Upland Vegetation Communities	45	47	47	52	52	52
% Transect Length Comprising Unvegetated Open Water	0	0	0	0	0	0
% Transect Length Comprising Mudflat	0	0	0	0	0	0

Data collected on T-2 (Wetland Mitigation Site Monitoring form, Appendix B) are summarized in Table 4. T-2 is 388 feet long and intersects WT 5, 19, and open water. Open water was added in 2024 due to increased inundation and now makes up 31.2% of the transect. Consequently, total vegetative cover decreased from 25% in 2023 to 15% in 2024. Inundation in the cell was up to 2 feet deep. The total number of species observed along the transect decreased by nine from the previous year due to declines in upland species and the addition of open water. Hydrophytic species also decreased by three from the previous year.

Table 4. Data Summary for T-2 From 2019 Through 2024 at the Kindsfater Site.

Monitoring Year	2019	2020	2021	2022	2023	2024
Transect Length (feet)	388	388	388	388	388	388
Vegetation Community Transitions along Transect	2	2	2	2	1	3
Vegetation Communities along Transect	3	2	2	2	2	2
Hydrophytic Vegetation Communities Along Transect	2	1	2	2	2	2
Total Vegetative Species	27	21	21	22	20	11
Total Hydrophytic Species	20	12	12	13	14	11
Total Upland Species	7	9	9	9	6	0
Estimated % Total Vegetative Cover	88	90	92	25	25	15
Estimated % Unvegetated	12	10	8	75	75	85
% Transect Length Comprising Hydrophytic Vegetation Communities	100	100	100	100	100	68.8
% Transect Length Comprising Upland Vegetation Communities	0	0	0	0	0	0
% Transect Length Comprising Unvegetated Open Water	0	0	0	0	0	31.2
% Transect Length Comprising Mudflat	0	0	0	0	0	0

Data collected on T-3 (Wetland Mitigation Site Monitoring form, Appendix B) are summarized in Table 5. T-3 is 292 feet long and intersects WT 5 and WT 19. The transect has been comprised entirely of wetland habitat since 2021. Total vegetative cover along this transect was estimated at 90 percent, consistent with observations in 2023. The total number of species observed along the transect remained consistent from the previous year. In 2024, the number of hydrophytic species increased while the number of upland species continued to decrease.

Table 5. Data Summary for T-3 From 2019 Through 2024 at the Kindsfater Site.

Monitoring Year	2019	2020	2021	2022	2023	2024
Transect Length (feet)	292	292	292	292	292	292
Vegetation Community Transitions along Transect	2	2	2	2	2	2
Vegetation Communities along Transect	3	3	2	2	2	2
Hydrophytic Vegetation Communities Along Transect	2	2	2	2	2	2
Total Vegetative Species	24	27	27	17	11	11
Total Hydrophytic Species	15	14	14	6	5	9
Total Upland Species	9	13	13	11	6	2
Estimated % Total Vegetative Cover	88	90	92	90	90	90
Estimated % Unvegetated	12	10	8	10	10	10
% Transect Length Comprising Hydrophytic Vegetation Communities	91.8	91.8	100	100	100	100
% Transect Length Comprising Upland Vegetation Communities	8.2	8.2	0	0	0	0
% Transect Length Comprising Unvegetated Open Water	0	0	0	0	0	0
% Transect Length Comprising Mudflat	0	0	0	0	0	0

Montana State-Listed Priority 2B noxious weeds identified within the Kindsfater mitigation site in 2024 included Canada thistle (*Cirsium arvense*), leafy spurge (*Euphorbia esula*), field bindweed (*Convolvulus arvensis*), spotted knapweed (*Centaurea stoebe*), gypsy-flower (*Cynoglossum officinale*), and isolated occurrences of five-stamen tamarisk (*Tamarix chinensis*). Infestation areas, with the exception of isolated occurrences, were mapped in 2024 and are shown in Figure A-3 (Appendix A). MDT has an ongoing weed-control program for their mitigation sites that includes an annual assessment of identified weed populations and weed management treatments for the specific weed species and locations identified within this report. Weed control efforts were conducted in September 2023, with follow-up treatments occurring on August 19, 2024. The absolute cover of state-listed noxious weed species across the entire site was estimated at less than 5 percent in 2024, indicating a steady decline in noxious weeds across the site since weed management practices have been implemented.

Cuttings and containerized materials were planted in approximately 27 clusters (Figure A-2, Appendix A) around the Kindsfater site following construction completion. The woody planting zones were generally located around the excavated wetland cells. The success criteria of at least fifty percent survival of woody plants after five years was not met during the fifth monitoring event in 2017. Planting clusters were observed in 2024, and the survival rate appeared to be consistent with that reported in 2023. Woody volunteers of Rocky Mountain juniper (*Juniperus scopulorum*), Woods' rose (*Rosa woodsii*), and silver buffaloberry (*Shepherdia argentea*) were observed and continue to develop across the mitigation site. Additionally, Eastern cottonwood (*Populus deltoides*), narrow- leaf willow (*Salix exigua*), and yellow willow (*Salix lutea*) in wetland cells 9, 13, and 14 are continuing to thrive and expand. The planted and surviving species are listed on the Wetland Mitigation Site Monitoring form (Appendix B).

*Hydrology* – The hydrology for the site is supplied from multiple sources, including a shallow seasonal groundwater table, direct precipitation, and surface runoff. During the June 2024 monitoring, all areas defined as wetlands across the site were inundated, saturated, or exhibited signs of periodic saturation within 12 inches of the ground surface. Prior to the monitoring event, the area had not received any rain. On the first day of monitoring, the area received 0.08 inch of rain (June 1-4; NRCS, 2024c). Despite lack of precipitation before the monitoring event, the area of inundation was significantly higher in 2024. This resulted in increased open water, expanded wetland area, and expanded areas of inundation in PEM wetlands. It has been noted that the gravel pit to the north of the site is being filled in, which may be contributing to increasing groundwater levels. Additionally, a record rainfall event in the area was recorded in May 2024, which may have also contributed to increased inundation.

Shallow surface water was documented within all wetland cells and ranged in depth from 1-50 inches. Constructed cells 1, 2, 3, and 8 were identified as open water areas surrounded by an emergent wetland fringe. Constructed cells 7, 9, 13, and 14 represented isolated wetland depressions surrounded by upland habitat. The remaining constructed cells were situated within a contiguous wetland mosaic with frequent surface drainages between cells as designed for a flow through system to accommodate surface runoff from storm events. Shallow groundwater and storm water runoff flows through the cells that were constructed along the upper terrace, then discharges into the natural slope wetlands to recharge the depressional wetlands along the lower terrace.

Long-term groundwater monitoring of four wells conducted by the US Geological Survey (USGS) at the Kindsfater site indicates that groundwater levels steadily declined from 2006 through 2015, potentially a result of prolonged drought conditions in the region and de-watering by the active gravel operation to the north of the site (Figure 1). According to the USGS, groundwater elevations in some areas of the site are also influenced by the active gravel mining operation north of the site and, to a lesser extent, by a large irrigation canal just south of the site (USGS, 2020). Groundwater levels within the site have steadily increased since 2015, which may be a result of higher-than-average precipitation in the region, and/or movement of dewatering operations by the gravel operation further north away from the wetland, thereby allowing groundwater elevations to return towards original levels. Monitoring efforts completed by the USGS in 2024 show groundwater levels have followed a similar pattern across the site

and have ranged from a high of roughly 3.14 feet below land surface (BLS) at well MDT7 to a low of approximately 16.3 feet BLS at well KNF 04 (See Well Locations on Figure 1).

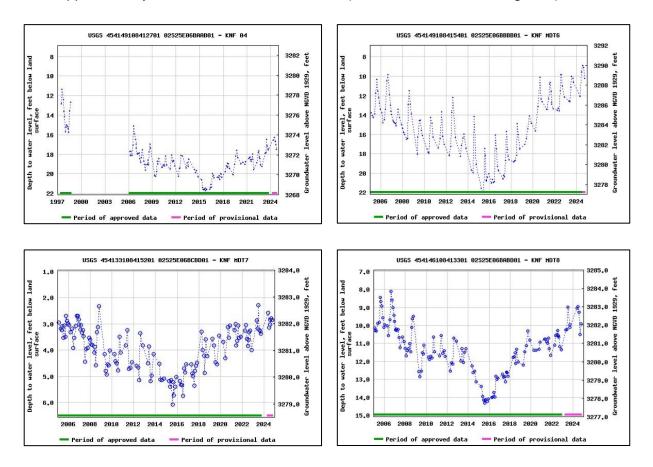


Figure 1. USGS Groundwater Well Data from 2006-2024

**Soils** – The Yellowstone County Soil Survey (NRCS, 2024a) indicates that eight soil series were mapped within the monitoring area, including the Bew silty clay loam, Wanetta clay loam, Shorey gravelly loam, Larim gravelly loam, alluvial land (wet), Toluca clay loam, Keiser and Hesper silty clay loams, and Lonna-Vanstel complex. In the 1970s, much of the site was excavated for gravel and borrow material; consequently, the original soil mapping may not necessarily represent existing conditions at the site. Paired soil pits were excavated at 12 locations (24 pits) across the site (Figure A-2, Appendix A). Many of the soil test pits encountered a barrier of cobbles as shallow as 4" and were not excavated further. Soil textures within wetland test pits ranged from sandy loam to peat. Hydric soil indicators were observed in all wetland test pits. Hydric soil indicators reported at the site in 2024 included depleted matrix, loamy mucky mineral, hydrogen sulfide, and histosol.

Soil textures in upland test pits ranged from loamy sand to silty clay loam. Although one upland test pit (DP04u) demonstrated a depleted matrix, the data point and the surrounding area did not support a hydrophytic vegetation community or show evidence of wetland hydrology. Complete field observations for the 24 data points are provided in the wetland determination data forms in Appendix B.

**Photographs** – Photographs were taken at photo points 1–12 (PP1 to PP12), transect endpoints, and data points and are provided in Appendix C with comparisons between 2024 and the first year of monitoring. Please refer to previous years' monitoring reports for the Kindsfater site and all previous photographs (<a href="https://www.mdt.mt.gov/publications/brochures/wetland-mitigation.aspx">https://www.mdt.mt.gov/publications/brochures/wetland-mitigation.aspx</a>).

**Functional Assessment** – The 2024 results of the functional assessments are summarized in Table 6. A completed Montana Wetland Assessment Method (MWAM) form (Berglund and

McEldowney, 2008) for the Kindsfater Site is provided in Appendix B. Functional Unit Crediting for the Kindsfater site can be found in Table 8.

Table 6. Montana Wetland Assessment Method Summary for the Kindsfater Site.

Function and Value Parameters From the 2008 Montana Wetland Assessment Method	2024 AA1 (Existing Wetlands)	2024 AA2 (Established (Created) Wetlands)
Listed/Proposed Threatened & Endangered (T&E) Species Habitat	Low (0.10)	Low (0.10)
Montana Natural Heritage Program Species (MTNHP) Habitat	Low (0)	Low (0)
General Wildlife Habitat	Mod (0.5)	Mod (0.7)
General Fish/Aquatic Habitat	N/A	N/A
Flood Attenuation	N/A	N/A
Short- and Long-Term, Surface-Water Storage	High (0.9)	Mod (0.6)
Sediment/Nutrient/Toxicant Removal	High (0.9)	High (1.0)
Sediment/Shoreline Stabilization	High (0.9)	Mod (0.6)
Production Export/Food Chain Support	High (0.8)	High (0.8)
Groundwater Discharge/Recharge	Mod (0.7)	Mod (0.7)
Uniqueness	Low (0.3)	Mod (0.5)
Recreation/Education Potential (bonus points)	High (0.2)	High (0.2)
Actual Points/Possible Points	5.3/9	5.2/9
% of Possible Score Achieved	59%	58%
Overall Category	III	III

<sup>\*</sup>AA1 - 'Existing Wetlands' includes Preserved, Restored, and Enhanced Wetland Areas

**Wildlife** – In 2024, a total of 27 bird species were identified at the Kindsfater wetland mitigation site. Chorus frogs were heard in wetlands and white-tailed deer were observed grazing. Tracks and scat indicated use by other mammals such as raccoons. An unknown turtle species was found dead on the bank of wetland cell 8.

Credit Summary – Table 7 summarizes the estimated wetland credits based on the USACE-approved credit ratios (USACE, 2005) and the wetland delineation that was completed in June 2024. A total of 37.23 acres of wetland habitat were delineated at the Kindsfater site in 2024, including 6.50 acres of creation, 7.90 acres of reestablishment, 1.04 acres of rehabilitation, 2.78 acres of enhancement, and 19.01 acres of wetland preservation. A total of 46.79 acres, including 7.3 acres of upland buffer and 2.26 acres of open water, were used to calculate the mitigation credit acres. After applying the USACE-approved ratios to these values, a total of 24.49 acres of mitigation credits were estimated in 2024, which is 8.21 credit acres below the targeted 32.7 credit acres anticipated at this site. This deficiency in credit generation is primarily due to a lack of wetland development in the re-establishment and rehabilitation areas of the site and an increase in open water acreage.

Table 7. Wetland Mitigation Credits Estimated for the Kindsfater Wetland Mitigation Site (2022-2024).

Compensatory Mitigation Type	Mitigation Area Description	Wetland Type (Cowardin)	Anticipated Mitigation Surface Area (acres)	USACE Approved Mitigation Ratios	Anticipated Mitigation Credit (acres)	2022 Delineated Acres <sup>(c)</sup>	2022 Mitigation Credit (acres)	2023 Delineated Acres <sup>(c)</sup>	2023 Mitigation Credit (acres)	2024 Delineated Acres <sup>(c)</sup>	2024 Mitigation Credit (acres)
Creation (Establishment)	Wetland Cells 7, 9, 13 & 14	Lacustrine emergent	4.6	1:1	4.6	5.90	5.90	5.82	5.82	6.50	6.50
Restoration (Re- establishment)	Wetland Cells 1-6 and partial Cell 18	Lacustrine emergent and Palustrine emergent, scrub-shrub	14.0	1:1	14.0	10.10	10.10	9.24	9.24	7.90	7.90
Restoration (Rehabilitation)	Areas adjacent to Wetland Cells 1-12	Palustrine emergent, scrub-shrub	9.2	1.5:1	6.1	1.10	0.73	1.04	0.69	1.04	0.69
Enhancement	Wetland Cells 10-12 & partial Cell 8	Palustrine emergent, scrub-shrub	3.1	3:1	1.0	3.00	1.00	3.04	1.01	2.78	0.93
Preservation	Existing Wetland Areas	Palustrine emergent, scrub-shrub	21.9	4:1	5.5	19.10	4.78	19.04	4.76	19.01	4.75
Upland Buffer	50-foot wide upland perimeter	N/A	7.3	5:1	1.5	7.30	1.46	7.30	1.46	7.30	1.46
Open Water	Wetland Cells 1, 2, 3, & 8	Palustrine emergent	TBD	1:1	TBD	0.70	0.70	0.74	0.74	2.26	2.26
(-) FODO 0040		Totals	60.1		32.7	45.34	22.96	47.20	24.67	46.79	24.49

<sup>(</sup>a) FGDC 2013.

<sup>(</sup>b) Mitigation crediting for Open Water was approved by the USACE in permit # NWO-2007-00824-MTB for this project.

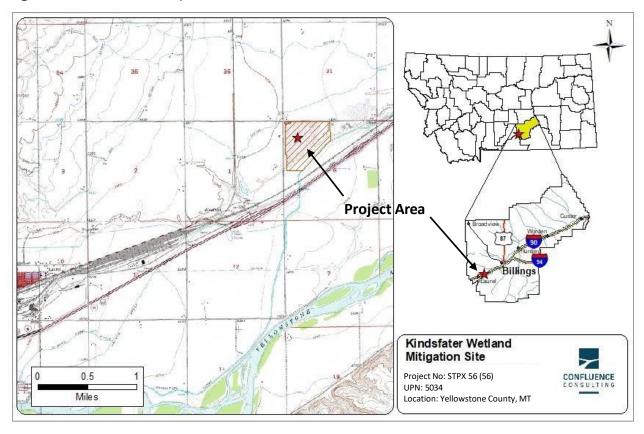
<u>Functional Unit Credits Summary –</u> The 2024 functional units summary is summarized in Table 8. A total of 109.44 functional units were generated at the Kindsfater site after applying the appropriate mitigation ratios to the 2024 wetland acreage and multiplying that value by the points generated from each assessment area.

Table 8. Functional Units Credit Summary for the Kindsfater Site.

Mitigation Type	2024 Delineated Acreage	Ratio	2024 Mitigation Credit Acres	MWAM Actual Points	Functional Units
Creation (Establishment)	6.50	1:1	6.50	5.20	33.80
Restoration (Reestablishment)	7.90	1:1	7.90	5.30	41.87
Restoration (Rehabilitation)	1.04	1.5:1	0.69	5.30	3.66
Enhancement	2.78	3:1	0.93	5.30	4.93
Preservation	19.01	4:1	4.75	5.30	25.18
Functional Units (Mitigation Credit Acres × Actual Points)					109.44

### Maps, Plans, Photos

Figure 2. Site Location Map



**Project Area Maps/Figures:** See Appendix A (Figure A-2 – 2024 Monitoring Activity Locations; Figure A-2 – 2024 Monitoring Activity Locations;

Figure A-3 – 2024 Mapped Site Features; and Figure A-4 – 2024 Wetland Delineation)

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

Plant List: See Table B-1 in Appendix B

Photos: See Appendix C

Plans: See Appendix D of 2018 Kindsfater Monitoring Report located at this website:

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

### Conclusions

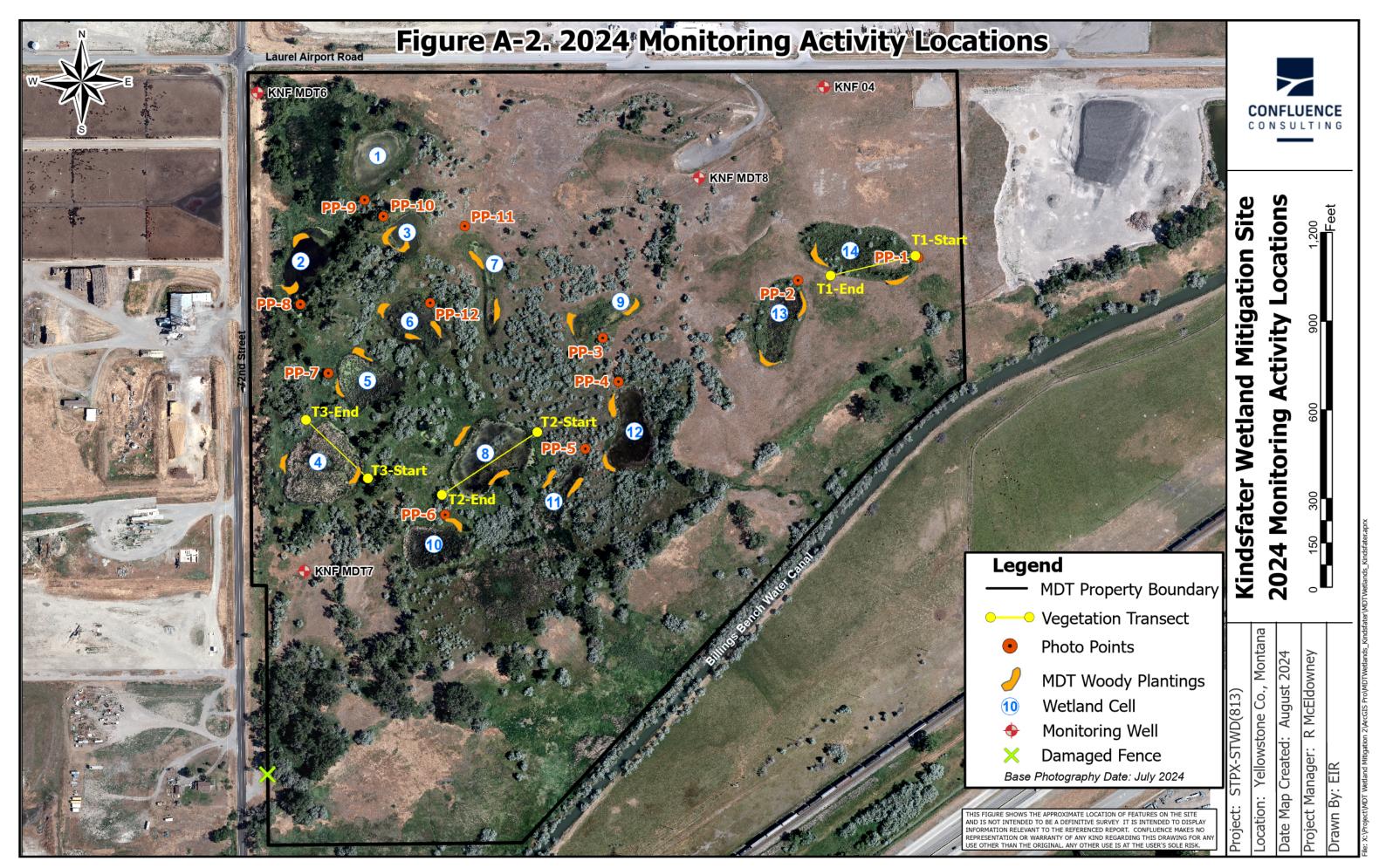
Based on the results of the twelfth year of monitoring, the Kindsfater mitigation site continues to develop into a diverse wetland ecosystem. The site has met all but one of the project's performance standards since 2019. The performance standard for woody planting survival will not be achieved in the future as it is a time-constrained success criterion. However, cover provided by volunteer willows (*Salix* spp.) and Eastern cottonwood, particularly in wetland cells 9, 13, and 14, provide a structural diversity and constitute scrub-shrub habitat. Other volunteer woody species such as Rocky Mountain juniper (*Juniperus scopulorum*), Woods' rose (*Rosa woodsii*), and silver buffaloberry (*Shepherdia argentea*) continue to develop and add structural diversity throughout the entirety of the site.

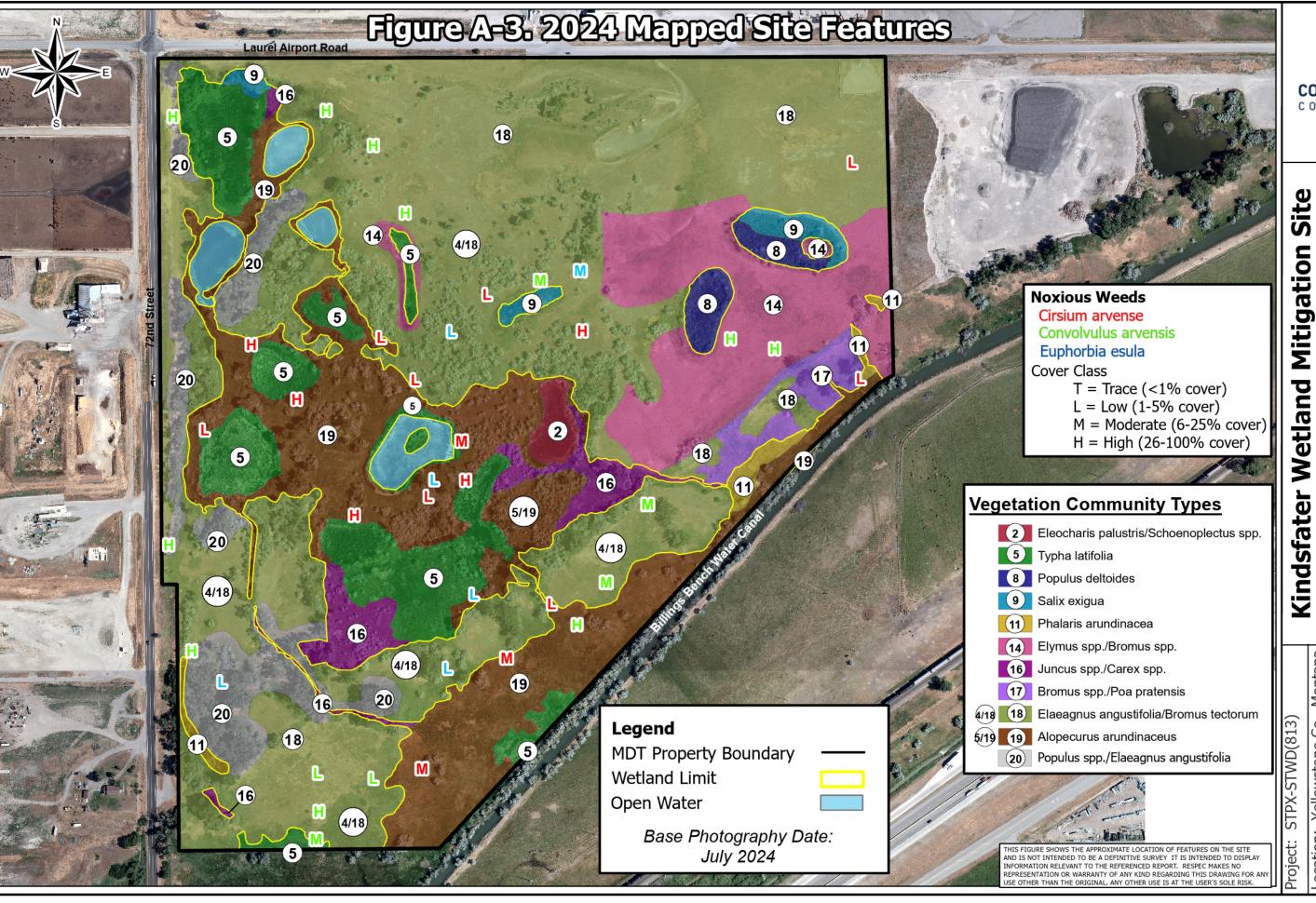
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# APPENDIX A PROJECT AREA MAPS

MDT Wetland Mitigation Monitoring Kindsfater Yellowstone County, Montana

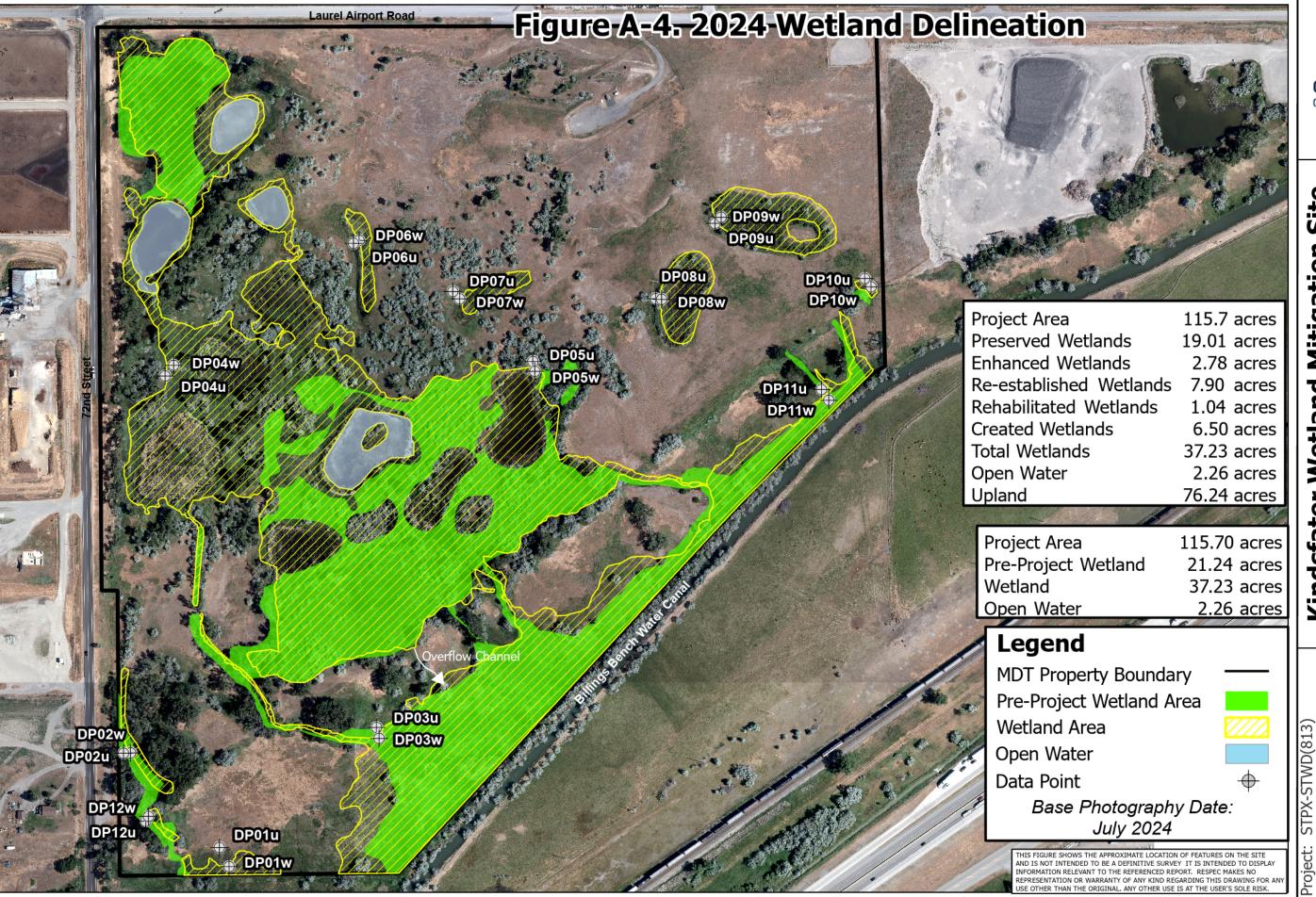




# indsfater Wetland Mitigation Site 2024 Mapped Site Features

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# Mitigation

## APPENDIX B MONITORING FORMS

MDT Wetland Mitigation Monitoring Kindsfater Yellowstone County, Montana

### MDT WETLAND MITIGATION SITE MONITORING FORM

Project Site: <u>K</u>	indsfater	Assessment Date/Time	6/4/2024
Person(s) cond	ucting the assessme	ent: <u>J Trilling, E Reynaud, R Cutle</u> r	
Weather: <u>75 de</u>	egrees, sunny, wind	ly Location: Laurel, MT	
MDT District: E	Billings	Milepost: NA	
Legal Descripti	on: T <u>2S</u> R <u>25E</u>	Section(s) 6	
Initial Evaluatio	n Date <u>: 8/22/2013</u>	Monitoring Year: <u>12</u> #Visits in Year: <u>1</u>	
Size of Evaluat	ion Area: 115.69 (a	acres)	
Commercial a	•	use surrounds the site. This includes gravel oper e lands to the south, and a feedlot to the west.	ations to the
		HYDROLOGY	
Surface Water Sou	rce: Groundwater,	precipitation	
Inundation:	Average D	Depth: 1 (ft) Range of Depths: 0-4.5	(ft)
	nent area under inun		
Depth at emergent	vegetation-open wat	ter boundary: <u>0.5 <b>(ft)</b></u>	
_		n are the soils saturated within 12 inches of surface:	Yes
		(ex. – drift lines, erosion, stained vegetation, etc:	
Other evidence or i	- Iyurology on the site	(ex. – unit lines, erosion, stained vogetation, co.	
Groundwater M	lonitoring Wells		
Record depth of	water surface below	w ground surface, in feet.	
Well ID	Water Surface D	Depth (ft)	
KNF 04	16.3		
KNF MDT 8	8.96		
KNF MDT6	9.58		
KNF MDT7	3.14		
Additional Activities Chec	:klist:		
☐ Map emergent veg	getation-open water bound	dary on aerial photograph.	
✓ Observe extent of	surface water during each	n site visit and look for evidence of past surface water	
elevations (drift lines, ero	sion, vegetation staining,	etc.)	
	y groundwater monitoring	well locations, if present.	
Hydrology Notes:			
		e that are monitored by the USGS and are include (BLS) and measurements were taken by the USC	_

06/27/2024.

### **VEGETATION COMMUNITIES**

Site\_Kindsfater

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

Community # 2 Community Type: Eleocharis palustris / Schoenoplectus spp. Acres: 0.72

Species	Cover class	Species	Cover class
Alopecurus arundinaceus	1	Bare Ground	2
Carex pellita	2	Eleocharis palustris	4
luncus balticus	1	Juncus compressus	1
Open Water	4	Phalaris arundinacea	2
opulus deltoides	1	Salix exigua	2
alix lutea	1	Schoenoplectus pungens	3
cirpus microcarpus	1	Typha latifolia	1
eronica anagallis-aquatica	1		

### **Comments:**

PEM wetland community. This WT persists in one location (Wetland Cell 12) in the center of the site.

Community # 4 Community Type: Elaeagnus angustifolia / Acres:

Species	Cover class	Species	Cover class
Asclepias speciosa	0	Bromus inermis	1
Bromus tectorum	2	Carex aurea	0
Carex praegracilis	0	Convolvulus arvensis	0
Elaeagnus angustifolia	5	Elaeagnus commutata	1
Elymus repens	1	Elymus trachycaulus	1
Euphorbia esula	0	Poa pratensis	1
Populus balsamifera	1	Populus deltoides	2

### Comments:

Scrub-shrub and forested community interspersed throughout UT 18. The acreage for UT 4 is not calculated separately from UT 18. Increasing cover of Elaeagnus angustifolia threatens wetlands due to the FACU status of the plant. Need to coordinate with weed contractor to start treating Elaeagnus angustifolia saplings in 2025 to reduce spread.

Community # 5 Community Type: Typha latifolia / Acres: 9.93

Species	Cover class	Species	Cover class
Alopecurus arundinaceus	2	Bare Ground	1
Carex nebrascensis	1	Carex pellita	2
Carex utriculata	1	Cirsium arvense	0
Elaeagnus angustifolia	1	Eleocharis palustris	1
Elymus repens	0	Juncus balticus	1
Juncus compressus	2	Lemna minor	0
Marrubium vulgare	1	Open Water	2
Persicaria amphibia	1	Phalaris arundinacea	1
Poa palustris	0	Poa pratensis	0
Polypogon monspeliensis	1	Populus deltoides	1
Salix exigua	1	Salix lutea	1
Schoenoplectus acutus	2	Schoenoplectus pungens	1
Solanum dulcamara	1	Taraxacum officinale	0
Typha latifolia	5	Veronica anagallis-aquatica	0

### Comments:

Pre-construction existing wetland community which has expanded from 2018 to 2024. This community is also interspersed across 1.7-acres of WT 19, which is not included in the 9.93 acres area provided above.

Community # 8 Community Type: Populus deltoides / Acres: 1.3

Species	Cover class	Species	Cover class
Asclepias speciosa	0	Asperugo procumbens	0
Bare Ground	2	Bromus inermis	0
Carex nebrascensis	1	Carex praegracilis	1
Cirsium arvense	0	Convolvulus arvensis	1
Elaeagnus angustifolia	1	Eleocharis palustris	2
Elymus repens	1	Elymus trachycaulus	1
Juncus balticus	1	Lactuca serriola	0
Medicago lupulina	0	Poa palustris	1
Polypogon monspeliensis	1	Populus deltoides	4
Salix exigua	3	Salix lutea	1
Schoenoplectus pungens	2	Sonchus arvensis	0
Taraxacum officinale	0		

### Comments:

PSS wetland type. Natural encroachment of Populus deltoides seedlings and saplings observed in several depressional wetland cells now comprise the dominant vegetation in these areas.

Community # 9 Community Type: Salix exigua / Acres: 1.16

Species	Cover class	Species	Cover class
Bare Ground	1	Bromus inermis	0
Cardaria chalepense	0	Carex praeceptorum	1
Cirsium arvense	0	Eleocharis palustris	1
lymus trachycaulus	1	Epilobium ciliatum	1
uncus balticus	2	Juncus compressus	1
epeta cataria	0	Poa palustris	1
pulus deltoides	2	Salix exigua	5
alix lutea	1	Schoenoplectus acutus	2
choenoplectus pungens	2	Scirpus microcarpus	1
olanum dulcamara	1	Typha latifolia	1

### **Comments:**

WT first documented in 2016. Since 2016, this WT has continued to expand slowly across portions of the depressional wetlands including NW of Cell 1, Cell 9, and Cell 14.

Community # 11 Community Type: Phalaris arundinacea / Acres: 0.86

Species	Cover class	Species	Cover class
Alopecurus arundinaceus	2	Cirsium arvense	0
Elymus repens	2	Juncus balticus	1
Phalaris arundinacea	5	Poa pratensis	1
Taraxacum officinale	0		

### **Comments:**

This WT comprises two pre-existing wetland areas (near the west boundary and the east boundary), as well as portions of created wetlands on the lower terrace (southeast quadrant of the site).

Community # 14 Community Type: Elymus spp. / Bromus spp. Acres: 11

Species	Cover class	Species	Cover class
Agropyron cristatum	1	Alopecurus arundinaceus	0
Alyssum alyssoides	1	Artemisia frigida	1
Bare Ground	1	Bromus inermis	2
Bromus japonicus	2	Bromus tectorum	4
Cirsium arvense	1	Convolvulus arvensis	1
Elaeagnus angustifolia	1	Elymus lanceolatus	1
Elymus repens	4	Elymus trachycaulus	1
Erodium cicutarium	1	Heterotheca villosa	0
Lactuca serriola	0	Marrubium vulgare	0
Medicago lupulina	0	Melilotus officinalis	0
Nassella viridula	1	Pascopyrum smithii	1
Phalaris arundinacea	0	Poa compressa	0
Poa pratensis	1	Salix exigua	0
Schedonorus pratensis	1	Sisymbrium loeselii	1
Sonchus arvensis	0	Sporobolus cryptandrus	0
Thlaspi arvense	1	Tragopogon dubius	1
Verbascum thapsus	0		

### **Comments:**

Much of the area that was classified as UT 14 and UT 4/14 in 2021 was remapped as UT 18 and 4/18 in 2023 due to the prevalence of Bromus tectorum across the site. This UT is primarily present at the eastern portion of the site where Elymus species are still a major component of the dry upland areas.

Community # 16 Community Type: Juncus spp. / Carex spp. Acres: 3.04

Species	Cover class	Species	Cover class
Alopecurus arundinaceus	1	Carex aquatilis	1
Carex aurea	1	Carex nebrascensis	2
Carex pellita	3	Carex utriculata	1
Eleocharis palustris	1	Juncus balticus	3
Juncus compressus	1	Juncus torreyi	1
Lactuca serriola	1	Persicaria amphibia	0
Phalaris arundinacea	2	Typha latifolia	2

### **Comments:**

WT first classified in 2018 where Juncus spp. had replaced small areas of WT 5 and WT 2. In 2019, Carex spp. was added as codominant. This community was largely unchanged from 2022-2024. In general, areas mapped as WT 16 had 1"-3" of standing water.

Community # 17 Community Type: Bromus spp. / Poa pratensis Acres: 1.73

Species	Cover class	Species	Cover class
Alopecurus arundinaceus	1	Bare Ground	1
Bromus inermis	3	Bromus tectorum	3
Cirsium arvense	1	Convolvulus arvensis	1
Elymus repens	1	Elymus trachycaulus	1
Lactuca serriola	1	Pascopyrum smithii	2
Poa compressa	1	Poa pratensis	3

### Comments:

UT 17 was greatly reduced in size in 2022 due to UT 18 replacing a large portion of this UT. In 2024, this community is largely the same as reported in the previous year.

Community # 18 Community Type: Bromus tectorum / Acres: 14.81

Species	Cover class	Species	Cover class
Agropyron cristatum	2	Alyssum alyssoides	1
Artemisia frigida	0	Bare Ground	2
Bassia scoparia	0	Bromus inermis	2
Bromus japonicus	1	Bromus tectorum	5
Convolvulus arvensis	1	Elaeagnus angustifolia	0
Elymus repens	2	Elymus trachycaulus	1
Erodium cicutarium	0	Juncus balticus	0
Lactuca serriola	0	Nassella viridula	1
Poa pratensis	2	Sisymbrium altissimum	1
Sisymbrium loeselii	0	Sporobolus cryptandrus	1
Thlaspi arvense	0	Tragopogon dubius	0

### **Comments:**

This UT, created in 2022, replaced many areas of UT 4/14, 4/15, 15, and 17 due to the increased dominance of Bromus tectorum throughout uplands. The prevalence of Bromus tectorum across the site has greatly increased and is expected to replace more of UT 14 and 17 in the future. The acreage reported for this UT does not include 42.2-acres mapped as UT 4/18.

Community # 19 Community Type: Alopecurus arundinaceus / Acres: 18.71

Species	Cover class	Species	Cover class
Agrostis stolonifera	0	Alopecurus arundinaceus	4
Asclepias speciosa	1	Bare Ground	1
Bromus inermis	1	Bromus tectorum	2
Carex aquatilis	0	Carex nebrascensis	1
Carex pellita	2	Carex praegracilis	1
Carex utriculata	1	Cirsium arvense	1
Conium maculatum	1	Convolvulus arvensis	1
Elaeagnus angustifolia	3	Eleocharis palustris	0
Elymus repens	3	Elymus trachycaulus	1
Juncus balticus	2	Euphorbia esula	0
Lycopus asper	1	Lactuca serriola	0
Pascopyrum smithii	1	Mentha arvensis	0
Phalaris arundinacea	1	Persicaria amphibia	0
Poa pratensis	3	Poa pratensis	0
Salix lucida	0	Populus deltoides	2
Schoenoplectus acutus	1	Schedonorus pratensis	1
Sisymbrium loeselii	0	Schoenoplectus pungens	1
Taraxacum officinale	0	Sonchus arvensis	1
Tragopogon dubius	0	Thlaspi arvense	1
Comments:		Typha latifolia	0

This WT comprises a majority of the wetland acres between excavated wetland cells, as well as the wet meadow habitat on the lower terrace along the southeast site boundary.

Community # 20 Community Type: Populus spp. / Elaeagnus angustifolia Acres: 6.62

Species	Cover class	Species	Cover class
Asperugo procumbens	0	Bromus inermis	2
Bromus tectorum	1	Convolvulus arvensis	0
Dactylis glomerata	1	Elaeagnus angustifolia	5
Elymus repens	2	Elymus repens	2
Galium aparine	1	Lactuca serriola	1
Phalaris arundinacea	1	Poa pratensis	3
Populus angustifolia	4	Populus deltoides	4
Schedonorus pratensis	1	Rhamnus cathartica	1
Comments:		Thlaspi arvense	1

This UT was created in 2023 to distinguish cottonwood galleries at the site which were previously lumped into UT 4/18. Elaeagnus angustifolia continues to increase in cover and threaten wetland communities.

\*Note that Total Vegetation Community Acreage does not sum to the total 115.7-acres of the project area. Open water and areas mapped as two community types (i.e. 4/18) are not included in this calculation.

### **VEGETATION TRANSECTS**

Kındstater		[	Date:6/4/2024	
Transect Number: Co		Compa	ass Direction from Sta	rt: <u>240</u>
Interval Data:				
Ending Station	35	Community Type:	Salix exigua /	
Species		Cover class	Species	Cover class
Bare Ground		0	Juncus balticus	2
Populus deltoides		2	Salix exigua	5
Salix lutea		1	Schoenoplectus pungens	0
Ending Station	118	Community Type:	Elymus spp. / Bromus spp.	
Species		Cover class	Species	Cover class
Agropyron cristatum		1	Bare Ground	3
Bromus inermis		2	Bromus japonicus	0
Bromus tectorum		4	Cirsium arvense	1
Convolvulus arvensis		2	Elymus repens	1
Elymus trachycaulus		0	Heterotheca villosa	1
_actuca serriola		1	Marrubium vulgare	1
Nassella viridula		3	Sporobolus cryptandrus	2
Verbascum thapsus		0		
Ending Station	226	Community Type:	Populus deltoides /	
Species		Cover class	Species	Cover class
Asclepias speciosa		1	Bare Ground	0
Bromus inermis		1	Carex nebrascensis	0
Carex praegracilis		2	Cirsium arvense	1
Convolvulus arvensis		1	Elaeagnus angustifolia	1
Eleocharis palustris		2	Elymus repens	0
Elymus trachycaulus		1	Juncus balticus	2
Lactuca serriola		1	Medicago lupulina	0
Poa palustris		1	Populus deltoides	4
Salix exigua		4	Salix lutea	1
Schoenoplectus pungens		1	Sonchus arvensis	1
Taraxacum officinale		0	Verbascum thansus	0

Ending Station	300 Community Type:	Elymus spp. / Bromus spp.	
Species	Cover class	Species	Cover class
Agropyron cristatum	1	Alyssum alyssoides	0
Bare Ground	2	Bromus inermis	2
Bromus japonicus	1	Bromus tectorum	3
Cirsium arvense	0	Convolvulus arvensis	1
Erodium cicutarium	0	Melilotus officinalis	1
Nassella viridula	2	Poa compressa	0
Poa pratensis	0	Salix exigua	1
Sporobolus cryptandrus	1	Tragopogon dubius	0

### Transect Notes:

Increased inundation at T-1 start.

Transect Number: 2 Compass Direction from Start: 225

### **Interval Data:**

Ending Station	12	Community Type:	Typha latifolia /	
Species		Cover class	Species	Cover class
Alopecurus arundinaceus Typha latifolia		1 4	Carex pellita	1
Ending Station	321	Community Type:	Open Water /	
Species		Cover class	Species	Cover class
Open Water		5	Typha latifolia	0
Ending Station	331	Community Type:	Typha latifolia /	
Species		Cover class	Species	Cover class
Species Lemna minor		Cover class	Species Schoenoplectus acutus	Cover class
•			•	Cover class
Lemna minor	338	2 5	•	Cover class
Lemna minor Typha latifolia	338	2 5	Schoenoplectus acutus	Cover class  Cover class
Lemna minor Typha latifolia Ending Station	338	2 5 Community Type:	Schoenoplectus acutus  Alopecurus arundinaceus /	1
Lemna minor Typha latifolia Ending Station Species	338	2 5 Community Type:	Schoenoplectus acutus  Alopecurus arundinaceus /  Species	1
Lemna minor Typha latifolia Ending Station Species Alopecurus arundinaceus	338	2 5 Community Type:	Schoenoplectus acutus  Alopecurus arundinaceus /  Species  Bare Ground	Cover class

### Transect Notes:

The majority of wetland cell 8 has transitioned into open water. Shrub species (mainly Elaeagnus angustifolia) are dying due to increased inundation. MDT anticipates that groundwater levels will continue to increase to pre-construction levels across the site due to de-watering operations at the gravel pit.

Transect Number: 3 Compass Direction from Start: 290

### **Interval Data:**

Ending Station	13 Community Type:	Alopecurus arundinaceus /	
Species	Cover class	Species	Cover class
Alopecurus arundinaceus	5	Bare Ground	0
Poa pratensis	1		

Ending Station 246 Community Type: Typha latifolia /

Species	Cover class	Species	Cover class	
Alopecurus arundinaceus	1	Lemna minor	1	
Open Water	2	Persicaria amphibia	0	
Phalaris arundinacea	2	Schoenoplectus acutus	1	
Typha latifolia	5			

Ending Station 292 Community Type: Alopecurus arundinaceus /

Species	Cover class	Species	Cover class
Alopecurus arundinaceus	3	Bare Ground	0
Convolvulus arvensis	0	Elaeagnus angustifolia	1
Elymus repens	2	Phalaris arundinacea	3
Poa pratensis	2	Schedonorus pratensis	1

### **Transect Notes:**

Typha latifolia is crowding out Schoenoplectus acutus, resulting in loss of species diversity along the transect.

### PLANTED WOODY VEGETATION SURVIVAL

### Kindsfater

Planting Type	#Planted	#Alive Notes
Cornus alba	130	
Crataegus douglasii	50	
Juniperus scopulorum	50	
Populus spp.	140	
Prunus virginiana	50	
Rosa woodsii	50	
Salix spp.	2800	
Shepherdia argentea	50	
TOTAL	3320	

### **Comments**

Approximately 27 woody planting areas were mapped by MDT in 2013, generally located around the excavated basins. Locations for the planted vegetation are shown on Figure A-2. Survival of woody plantings was not quantitatively assessed during the 2024 monitoring event because the success criteria is tied to survival after a five year period. However, volunteer woody species (Salix spp. and Populus spp.) are observed across the site, particularly in the excavated wetland cells in the east portion of the site. The woody vegetation provides important structural and habitat diversity for birds and other wildlife.

### Kindsfater

### **WILDLIFE**

Birds	
-------	--

Were man-made nesting structures installed? _	No
f 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
American Redstart	1	L	
American Robin	3	L, F	
Bald Eagle	1	FO	
Barn Swallow	5	FO	
Canada Goose	1	FO	
Common Grackle	2	L	
Common Yellowthroat	5	L, FO	
European Starling	30	L, FO	
House Wren	4	L, FO	
Killdeer	2	L, FO, F	
Mallard	2	L	
Marsh Wren	2	L	
Mourning Dove	2	L	
Pheasant	1	F	
Red-winged Blackbird	10	L, FO, F	
Song Sparrow	4	L	
Sora	1	F	
Wilson's Snipe	3	L, F, N	
Yellow Warbler	4	L, F	
Yellow-headed Blackbir	d 2	L, F	

### Kindsfater

### **WILDLIFE**

Species	#Observed	Behavior	Habitat
Cinnamon Teal	2	F	
Cormorant	1	F	
Lazuli Bunting	1	F	
Owl spp.	1	L	
Pelican	7	FO	
Western Tanager	2	F	
Wigeon	2	F	

### **Bird Comments**

A total of 27 bird species were observed at the mitigation the site in 2024.

### **BEHAVIOR CODES**

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

Chorus frog	10	No	No	No	Heard
White-tailed Deer	2	No	Yes	No	Observed grazing
Turtle spp.	1	No	No	No	Dead
Raccoon	1	Yes	No	No	Tracks observed

### Wildlife Comments:

This site provides a diversity of habitat features for birds and other wildlife.

### Kindsfater

### **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 and of the vegetation transact, abouting the transact					

✓	One photograph from	each end of the vegetatior	transect, showing the transect.
---	---------------------	----------------------------	---------------------------------

Photo #	Latitude	Longitude	Bearing	Description	
DP01u	45.69014091	-108.69778483			
DP01w	45.6899779	-108.69766982			
DP02u	45.69094502	-108.69892859			
DP02w	45.69094699	-108.69884348			
DP03u	45.69114125	-108.6958769			
DP03w	45.69104817	-108.69584761			
DP04u	45.6941286	-108.69838112			
DP04w	45.69421897	-108.69827608			
DP05u	45.69421947	-108.69394753			
DP05w	45.69413632	-108.69392545			
DP06u	45.6952335	-108.69609377			
DP06w	45.69525734	-108.69602697			
DP07u	45.69481794	-108.69490368			
DP07w	45.69475507	-108.69482224			
DP08u	45.69473947	-108.69246151			
DP08w	45.69473302	-108.69238803			
DP09u	45.69537096	-108.69173541			
DP09w	45.69542183	-108.69166014			
DP10u	45.69489175	-108.68993816			
DP10w	45.69482042	-108.68986236			
DP11u	45.69395711	-108.6904736			
DP11w	45.69386619	-108.69038631			
DP12u	45.69036882	-108.69866902			
DP12w	45.69040917	-108.69863565			
PP-1	45.69342	-108.690247	280	Wetland cell 14	
PP-10	45.694847	-108.698418	140	Wetland cell 3	
PP-11	45.695892	-108.697601	350	Wetland cell 7	

PP-12	45.694939	-108.696663	230	Wetland cell 6
PP-2	45.695136	-108.691839	280	Wetland cell 13
PP-3	45.694612	-108.69443	0	Wetland cell 9
PP-4	45.694935	-108.691902	200	Wetland cell 12
PP-5	45.694748	-108.694458	10	Wetland cell 11
PP-6	45.694084	-108.694321	150	Wetland cell 10
PP-7	45.698065	-108.698065	90	Wetland cell 5
PP-8	45.694939	-108.698429	315	Wetland cell 2
PP-9	45.694302	-108.698044	90	Wetland cell 1
T-1-E	45.695072	-108.691437	50	Transect 1 end
T-1-S	45.695357	-108.690285	240	Transect 1 start
T-2-E	45.693184	-208.696573	40	Transect 2 end
T-2-S	45.693763	-108.695288	225	Transect 2 start
T-3-E	45.693317	-108.698486	110	Transect 3 end
T-3-S	45.693317	-108.697517	290	Transect 3 start

## Comments:

## Kindsfater

### **ADDITIONAL ITEMS CHECKLIST**

	Hydrology
□ ☑ Iines,	Map emergent vegetation/open water boundary on aerial photos.  Observe extent of surface water. Look for evidence of past surface water elevations (e.g. drift vegetation staining, erosion, etc).
	Photos
	One photo from the wetland toward each of the four cardinal directions One photo showing upland use surrounding the wetland. One photo showing the buffer around the wetland One photo from each end of each vegetation transect, toward the transect
	Vegetation
<b>✓</b> Ma	ap vegetation community boundaries
<b>✓</b> Co	mplete Vegetation Transects
	Soils
<b>✓</b> As	ssess soils
	Wetland Delineations
☑ Suppl	Delineate wetlands according to applicable USACE protocol (1987 form or lement)
	Delineate wetland – upland boundary onto aerial photograph.
Wetla	and Delineation Comments
	ne total wetland acreage delineated in 2024 was 37.23 acres. A total of 2.26-acres of open water ere delineated in wetland cells 1, 2, 3, and 8.
	Functional Assessments
<b>✓</b> forms	Complete and attach full MDT Montana Wetland Assessment Method field
Funct	ional Assessment Comments:
Th	ne overall rating for the assessment areas at the mitigation site is Category 3.

#### **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? No

If yes, are the structures in need of repair?

If yes, describe the problems below.

The wire fence (near the MDT green entrance gate) along the southwest boundary of the site has been cut and needs repair.

Project/Site: Kindsfater	(	City/Co	ounty:	Yellows	tone County	Sampling	Date: 2	024-06-04
					State: Montana			
Investigator(s): J Trilling						1 3		
Landform (hillslope, terrace, etc.): Toeslope						e	Slope	e (%): 5
Subregion (LRR): G 58A								
Soil Map Unit Name: LI - Larim gravelly loam, 15 to 3					=			
Are climatic / hydrologic conditions on the site typical for this								
Are Vegetation, Soil, or Hydrologys	•				Normal Circumstances" p	,	res 🗸	No
Are Vegetation, Soil, or Hydrology n	-				eded, explain any answe			
SUMMARY OF FINDINGS – Attach site map				g point le	ocations, transects	, import	ant fea	tures, etc.
Hydrophytic Vegetation Present? Yes No Remarks:	o <u> </u>			e Sampled n a Wetlar		No _	<u> </u>	
Upland data point located north of D  VEGETATION – Use scientific names of plan								
VEGETATION – Ose scientific flames of plan	Absolute	Dom	inant	Indicator	Dominance Test work	rehoot:		
1	% Cover	Spec	ies?	Status	Number of Dominant S That Are OBL, FACW, (excluding FAC-):	pecies or FAC	0	(A)
2					Total Number of Domin	ant		
4.					Species Across All Stra		2	(B)
Sapling/Shrub Stratum (Plot size: 15 ft r			al Cov	er	Percent of Dominant S That Are OBL, FACW,		0.00	(A/B)
1 2					Prevalence Index wor	ksheet:		
3.					Total % Cover of:			
4.						x 1		
5					FACW species 0			
		= Tota	al Cov	er		x 3		
Herb Stratum (Plot size: 5 ft r )  1. Bromus tectorum	35	·	,	UPL	UPL species 35	x 4		
2. Elymus lanceolatus	30			FACU	Column Totals: 90		395	
3. Pascopyrum smithii	15			FACU				(2)
4. Elymus repens	10			FACU	Prevalence Index			
5.					Hydrophytic Vegetation			
6					1 - Rapid Test for I 2 - Dominance Tes		c vegetat	ion
7					3 - Prevalence Inde			
8					4 - Morphological A		a <sup>1</sup> (Provid	le supporting
9					data in Remark	s or on a so	eparate s	heet)
10	~~				Problematic Hydro	phytic Veg	etation <sup>1</sup> (	Explain)
Woody Vine Stratum (Plot size: 30 ft r )  1.		= Tota			<sup>1</sup> Indicators of hydric soi be present, unless dist			
2.					Hydrophytic			
		= Tota	al Cov	er	Vegetation Present? Ye	s	No V	,
% Bare Ground in Herb Stratum 10  Remarks:					riesent: fe			
Bromus tectorum and Elymus lanceo				ominar	nt upland specie	es at th	is dat	a point.

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SOIL Sampling Point: DP01u

Profile Desc	ription: (Describe	to the depth ne	eded to docur	nent the i	ndicator	or confirn	n the absence of	indicators.)
Depth	Matrix			x Features				
(inches)	Color (moist)		olor (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0 - 8	10YR 3/2	100					Loam	
				<u> </u>				
-								
-		<u> </u>						
		<del></del>					<del></del>	
	-	<del>-</del>						
		<del></del>						
		<u> </u>						
	oncentration, D=Dep					d Sand G		on: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applic	able to all LRR	s, unless othe	rwise note	ed.)			r Problematic Hydric Soils <sup>3</sup> :
Histosol	` '		Sandy (	-	. ,			ck (A9) ( <b>LRR I, J</b> )
-	pipedon (A2)		-	Redox (S5)				airie Redox (A16) (LRR F, G, H)
Black His	` '			d Matrix (S	,			ace (S7) (LRR G)
	n Sulfide (A4)	<b>-</b> \	-	Mucky Min			<del>-</del> -	ns Depressions (F16)
	Layers (A5) (LRR I			Gleyed Ma			`	H outside of MLRA 72 & 73) Vertic (F18)
	ick (A9) ( <b>LRR F, G,</b> l d Below Dark Surfac			d Matrix (F Dark Surfa				nt Material (TF2)
	ark Surface (A12)	e (ATT)		d Dark Su				llow Dark Surface (TF12)
	lucky Mineral (S1)			Depression	` ,			plain in Remarks)
	lucky Peat or Peat (	S2) ( <b>LRR G. H</b> )		ains Depre	. ,	16)		hydrophytic vegetation and
	cky Peat or Peat (S		_	RA 72 & 7				ydrology must be present,
							unless dis	sturbed or problematic.
Restrictive L	ayer (if present):							
Type:	phoo):							
Depth (inc	mes).						Hydric Soil Pro	esent? Yes No
Remarks:								
No hydri	ic soil indicat	ors obser	ved Cobl	ales re	etricte	d eyc	avation furt	ther than 8"
140 Hyan		.013 00301	vca. oobi	310310	3111010	o cho	avacion rais	and than 5.
HYDROLO	GY							
	drology Indicators:							
-	cators (minimum of c		eck all that anni	v)			Secondary	Indicators (minimum of two required)
-	Water (A1)	nie regaliea, ori	Salt Crust				·	e Soil Cracks (B6)
	ter Table (A2)		Aquatic In		e (B13)			ely Vegetated Concave Surface (B8)
Saturation	, ,		Hydrogen					ge Patterns (B10)
	arks (B1)		Dry-Seaso					ed Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized F			ina Poots		re tilled)
	oosits (B3)			not tilled)	es on Livi	ing Roots		h Burrows (C8)
	it or Crust (B4)		Presence	,	d Iron (C4	1)	<del></del>	tion Visible on Aerial Imagery (C9)
_	osits (B5)		Thin Muck		•	•)	· · · · · · · · · · · · · · · · · · ·	orphic Position (D2)
-	on Vis ble on Aerial	magory (P7)	Other (Exp				<del></del>	eutral Test (D5)
	tained Leaves (B9)	magery (B7)	Other (EX	naiii iii ixe	iliaiks)			Heave Hummocks (D7) (LRR F)
Field Observ								(27)
Surface Water		es No _	✓ Depth (in	ches):				
Water Table		es No _						
Saturation Pr		es No _ es No _					and Hydrology P	resent? Yes No
(includes cap	oillary fringe)							100
Describe Red	corded Data (stream	gauge, monitor	ing well, aerial	ohotos, pre	evious ins	pections),	if available:	
Remarks:								
No evide	ence of wetla	and hydrol	logy obse	rved.				
		,	J, 1.20					

Project/Site: Kindsfater	(	City/Cou	unty:	Yellows	tone County	Sampling Da	te: 2024-06	6-04
		•			State: Montana	Sampling Po	int: DP01w	
					nge: S06 T2S R25E	, ,		
					convex, none): Linear		Slope (%): 1	
Subregion (LRR): G 58A								
Soil Map Unit Name: An - Alluvial land, wet					NWI classific			
Are climatic / hydrologic conditions on the site typical for this								
Are Vegetation, Soil, or Hydrologys	-				Normal Circumstances" p		No_	
Are Vegetation, Soil, or Hydrologyn	aturally pro	blematic	c?	(If ne	eded, explain any answe	rs in Remarks	s.)	
SUMMARY OF FINDINGS – Attach site map	showing	samp	ling	point le	ocations, transects	, importan	t features,	etc.
Hydrophytic Vegetation Present?  Hydric Soil Present?  Wetland Hydrology Present?  Remarks:  Yes  N  N  N	o o			Sampled a Wetlar		No		
PEM, depressional wetland. Wetland  VEGETATION – Use scientific names of plan		e poi	nt le	ocated	d in SW region o	f site.		
VEGETATION – Ose scientific fiames of plan	Absolute	Domin	ant l	ndicator	Dominance Test work	shoot:		
Tree Stratum (Plot size: 30 ft r )  1	% Cover	Specie	es? _	Status	Number of Dominant Sp That Are OBL, FACW, (excluding FAC-):	pecies	(	(A)
2					Total Number of Domin	ant		,
4.					Species Across All Stra		(	(B)
Sapling/Shrub Stratum (Plot size: 15 ft r					Percent of Dominant Sp That Are OBL, FACW, o		0.00 (	A/B)
1 2					Prevalence Index wor	ksheet:		
3.					Total % Cover of:			
4					· ·	x 1 = _		
5					FACW species 55			
		= Total	Cove	r		x 3 = _		
Herb Stratum (Plot size: 5 ft r )  Juncus balticus	45	~		ACW	FACU species 0 UPL species 15	x 4 = _		
2 Bromus inermis	15			JPL	Column Totals: 80			(B)
Carex nebrascensis	10			OBL OBL	Column Totals	(^) _		(D)
4 Carex praegracilis	10			ACW	Prevalence Index			
5					Hydrophytic Vegetation			
6.					✓ 1 - Rapid Test for F		egetation	
7.					✓ 2 - Dominance Tes			
8					✓ 3 - Prevalence Inde			
9					4 - Morphological A data in Remarks	\daptations' (F s or on a sepa	Provide suppo irate sheet)	rting
10					Problematic Hydro	•	•	,
Woody Vine Stratum (Plot size: 30 ft r )  1		= Total			<sup>1</sup> Indicators of hydric soi be present, unless distu	l and wetland	hydrology mu	
2.					Hydrophytic			
		= Total	Cove	r	Vegetation	s No	0	
% Bare Ground in Herb Stratum 20  Remarks:						^~		
Evidence of hydrophytic vegetation a positive dominance test, and a pre		-			•		vegetati	on,

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SOIL Sampling Point: DP01w

Profile Desc	ription: (Describe	to the dep	th needed to docun	nent the	indicator	or confirm	n the absence of ind	icators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0 - 10	10YR 2/1	100					Silt Loam	
10 - 16	10YR 5/1	90	10YR 4/6	10	<u>C</u>		Sandy Loam	
-								
_								
								_
	-							
			=Reduced Matrix, CS			d Sand G		PL=Pore Lining, M=Matrix.
_		cable to all	LRRs, unless other					oblematic Hydric Soils <sup>3</sup> :
Histosol	` '		Sandy C	-			1 cm Muck (/	
	oipedon (A2)		Sandy F					Redox (A16) (LRR F, G, H)
Black His	` '		Stripped					e (S7) ( <b>LRR G</b> ) Depressions (F16)
	n Sulfide (A4) I Layers (A5) ( <b>LRR</b>	E)			ineral (F1) latrix (F2)			utside of MLRA 72 & 73)
	ck (A9) ( <b>LRR F, G</b> ,		<u>✓</u> Deplete				Reduced Ver	,
	Below Dark Surfac			Dark Surf	. ,			naterial (TF2)
	ark Surface (A12)	,			urface (F7)			Dark Surface (TF12)
	lucky Mineral (S1)		Redox [					in in Remarks)
2.5 cm N	lucky Peat or Peat	(S2) ( <b>LRR</b> (	<b>G, H</b> ) High Pla	ains Depr	essions (F	16)	<sup>3</sup> Indicators of hyd	rophytic vegetation and
5 cm Mu	cky Peat or Peat (S	3) ( <b>LRR F</b> )	(ML	RA 72 &	73 of LRR	H)	wetland hydro	ology must be present,
							unless distur	bed or problematic.
Restrictive L	ayer (if present):							
Type:								
Depth (inc	ches):						Hydric Soil Prese	ent? Yes No
Remarks:								
Promine	nt redoximo	rphic c	oncentration	s com	ımon w	ithin t	he depleted r	natrix.
		•					•	
HYDROLO	GY							
Wetland Hyd	drology Indicators	:						
-			d; check all that apply	<b>y</b> )			Secondary Ind	icators (minimum of two required)
Surface	Water (A1)	•	Salt Crust	(B11)			Surface So	pil Cracks (B6)
	ter Table (A2)		Aquatic Inv		es (B13)			/egetated Concave Surface (B8)
<u>✓</u> Saturatio	, ,		Hydrogen					Patterns (B10)
	arks (B1)		Dry-Seaso				_	Rhizospheres on Living Roots (C3)
	t Deposits (B2)		Oxidized R					
	oosits (B3)		(where r			-		urrows (C8)
	it or Crust (B4)		Presence			<b>!</b> )		Visible on Aerial Imagery (C9)
	osits (B5)		Thin Muck		•		<del></del>	ic Position (D2)
Inundation	on Vis ble on Aerial	Imagery (B	7) Other (Exp	lain in R	emarks)		✓ FAC-Neut	ral Test (D5)
Water-S	tained Leaves (B9)						Frost-Hea	ve Hummocks (D7) (LRR F)
Field Observ	vations:							
Surface Water	er Present?	/es	No Depth (inc	ches):		_		
Water Table			No Pepth (inc			_		
Saturation Pr			No Depth (inc			Wetl	land Hydrology Pres	ent? Yes No
(includes cap	oillary fringe)							
Describe Red	corded Data (stream	n gauge, mo	onitoring well, aerial p	onotos, p	revious ins	pections),	ıt avaılable:	
Remarks:								
Evidence	of wetland hyd	Irology ii	ncludes soil sati	uration	, geomo	rphic p	osition, and a po	sitive FAC-Neutral test.

Project/Site: Kindsfater	(	City/Coun	tv: Yellows	tone County	Sampling Date	e: 2024-06-04
Applicant/Owner: MDT				State: Montana		
Investigator(s): J Trilling						
Landform (hillslope, terrace, etc.): Road Cut					ting g	Slope (%): 20
Subregion (LRR): G 58A						
Soil Map Unit Name: LI - Larim gravelly loam, 15 to 3						
Are climatic / hydrologic conditions on the site typical for thi				<u>.</u>	·	
Are Vegetation, Soil, or Hydrologys	•	<u> </u>		Normal Circumstances"	,	✓ No
Are Vegetation, Soil, or Hydrology	naturally pro	blematic?	(If ne	eded, explain any answe	ers in Remarks.)	)
SUMMARY OF FINDINGS – Attach site map	showing	sampli	ng point l	ocations, transects	s, important	features, etc.
Hydrophytic Vegetation Present? Yes N	lo	le f	the Sampled	Area		
Hydric Soil Present? Yes N	lo		thin a Wetlar		No	,
Wetland Hydrology Present? Yes N	lo		umi a weda	100		<u> </u>
Remarks:						
sample point located on road berm v	west of	DP02	w.			
VEGETATION – Use scientific names of plan	ıts.					
Tree Stratum (Plot size: 30 ft r	Absolute		nt Indicator ? Status	Dominance Test wor		
1. Populus deltoides	30	<u>Species</u> ✔	FAC	Number of Dominant S That Are OBL, FACW,	•	
2. Elaeagnus angustifolia	10		UPL	(excluding FAC-):	2	(A)
3. Ulmus americana	10	~	FAC	Total Number of Domi	nant	
4				Species Across All Stra	_	(B)
45.6	50	= Total C	over	Percent of Dominant S	pecies	
Sapling/Shrub Stratum (Plot size: 15 ft r				That Are OBL, FACW,		00 (A/B)
1				Prevalence Index wo	rksheet:	
2		-		Total % Cover of:		tiply by:
3				OBL species 0	x 1 = <u>C</u>	)
4				FACW species 0		
5		= Total C	over		x 3 = <u>1</u>	
Herb Stratum (Plot size: 5 ft r )		Total O	OVCI		x 4 = <u>2</u>	
1. Elymus repens	50		FACU	UPL species 30		
2. Asperugo procumbens	_ 20		<u>UPL</u>	Column Totals: 120	(A) <u>4</u>	170 (B)
3				Prevalence Index	$\kappa = B/A = 3.91$	l
4				Hydrophytic Vegetati		
5				1 - Rapid Test for		getation
6				2 - Dominance Te		
7				3 - Prevalence Ind	ex is ≤3.0 <sup>1</sup>	
8				4 - Morphological	Adaptations <sup>1</sup> (Pr	rovide supporting
10					s or on a separa	•
10.	70	= Total C	over	Problematic Hydro	phytic Vegetation	on (Explain)
Woody Vine Stratum (Plot size: 30 ft r )  1.				<sup>1</sup> Indicators of hydric so be present, unless dist		
2.				Hydrophytic		
				Vegetation		V
% Bare Ground in Herb Stratum 30	<del>_</del>			Present? Ye	es No	<u>-</u>
Remarks:						
Vegetation at this data point is domi	inated b	y the	upland s	species Elymus	repens an	ıd
Asperugo procumbens. No hydrophy	vtic veo	etatio	n indica	tors observed		

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SOIL Sampling Point: DP02u

Profile Desc	ription: (Describe	to the depth	neede	d to docum	ent the i	ndicator	or confirm	the absence of inc	dicators.)	
Depth	Matrix			Redox	(Features					
(inches)	Color (moist)	<u>%</u>	Color	(moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remark	<u>s</u>
0 - 2	10YR 3/3	100						Loamy Sand		
2 - 16	10R 4/4	100						Loamy Sand		
-										
-										
¹Type: C=Cc	ncentration, D=Dep	oletion PM=P	aducad	Matrix CS	=Covered	or Coate	d Sand Gr	ains <sup>2</sup> Location	· DI =Dore I ining	M=Matrix
	ndicators: (Applic						u Sanu Gi		: PL=Pore Lining roblematic Hydr	•
Histosol		able to all Li		_ Sandy G		•			(A9) (LRR I, J)	ic cons .
	ipedon (A2)		_	-	edox (S5)				e Redox (A16) ( <b>L</b> l	RR F. G. H)
Black His			_		Matrix (S				e (S7) ( <b>LRR G</b> )	, , , , , ,
	n Sulfide (A4)		_		lucky Min				Depressions (F16	3)
	Layers (A5) (LRR	F)		_	Sleyed Ma	. ,		_	outside of MLRA	
	ck (A9) ( <b>LRR F, G</b> ,		_	-	d Matrix (F			Reduced Ve	ertic (F18)	
Depleted	Below Dark Surface	e (A11)	_	_ Redox D	ark Surfa	ce (F6)		Red Parent	Material (TF2)	
Thick Da	rk Surface (A12)		_	_ Depleted	d Dark Su	rface (F7)			w Dark Surface (T	F12)
-	ucky Mineral (S1)		_		epression				ain in Remarks)	
	lucky Peat or Peat		H) _	_	ins Depre			-	drophytic vegetati	
5 cm Mu	cky Peat or Peat (S	3) ( <b>LRR F</b> )		(MLI	RA 72 & 7	3 of LRR	H)	-	rology must be pro rbed or problemat	
Postrictive I	ayer (if present):							uniess distu	bed of problema	
Type:	la a a V							Undeia Cail Bean	40 V	No <u>✓</u>
	:hes):							Hydric Soil Pres	ent? Yes	No
Remarks:										
No hvdri	c soil indica	tors obse	erve	d.						
•										
HYDROLO	GY									
	Irology Indicators:	1								
-	•		م بامماد م	II that annly	٨			Cocondon Inc	diaatara (minimum	of two required)
-	ators (minimum of o	one required;							dicators (minimum	i or two required)
· · ·	Water (A1)			Salt Crust		(D.10)			Soil Cracks (B6)	0 ( (D0)
	ter Table (A2)			Aquatic Inv					Vegetated Conca	ve Surrace (B8)
Saturatio	` '			Hydrogen S				=	Patterns (B10)	D . (00)
· <del></del>	arks (B1)			Dry-Seaso		, ,	5			Living Roots (C3)
	t Deposits (B2)			Oxidized R		es on Livi	ng Roots (		,	
	osits (B3)			(where n	,	-1 1 (0.4	`	<del></del>	Burrows (C8)	l l (00)
-	t or Crust (B4)			Presence of			.)		n Visible on Aerial	imagery (C9)
	osits (B5)	I (D7)		Thin Muck					hic Position (D2)	
· <del></del>	on Vis ble on Aerial	imagery (B7)	_	Other (Exp	iain in Rei	marks)			tral Test (D5)	)7) (LDD E)
	ained Leaves (B9)						1	FIOSI-FIE	ave Hummocks (D	77) (LKK F)
Field Observ		/ N-	~	Daniel Co.	I \.					
Surface Water		′es No								
Water Table		/es No								/
Saturation Pr (includes cap		/es No		Depth (inc	:nes):		_   Wetla	and Hydrology Pre	sent? Yes	No
	corded Data (stream	n gauge, moni	toring w	vell, aerial p	hotos, pre	evious ins	pections),	if available:	-	
	,	- ·	3		7.1	- '	. ,,			
Remarks:										
				_	-					
No evide	ence of wetla	and hydr	olog	y obsei	ved.					
				_						

Project/Site: Kindsfater	(	City/Cou	<sub>ntv:</sub> Yellows	tone County	Sampling Date	2024-06-04
		-	-	State: Montana		
• •				nge: S06 T2S R25E	pg	
Landform (hillslope, terrace, etc.): Depression					e s	lone (%)· 2
Subregion (LRR): G 58A						
Soil Map Unit Name: LI - Larim gravelly loam, 15 to 3						
Are climatic / hydrologic conditions on the site typical for thi					· ·	
Are Vegetation, Soil, or Hydrologys	-			"Normal Circumstances" p		✓ No
Are Vegetation, Soil, or Hydrology r				eeded, explain any answe		
SUMMARY OF FINDINGS – Attach site map						features, etc.
Hydric Soil Present? Yes N	lo lo		the Sampled		No	_
PEM, depressional wetland. Wetland		oint l	ocated n	ear western bor	der of site	<b>).</b>
VEGETATION – Use scientific names of plan						
Tree Stratum (Plot size: 30 ft r ) 1	% Cover	Specie		Dominance Test work  Number of Dominant S That Are OBL, FACW, (excluding FAC-):	pecies	(A)
2				Total Number of Domin		
4.				Species Across All Stra		(B)
Sapling/Shrub Stratum (Plot size: 15 ft r			Cover	Percent of Dominant Sport That Are OBL, FACW,		00 (A/B)
1 2				Prevalence Index wor	ksheet:	
3.				Total % Cover of:		ply by:
4.					x 1 = <u>0</u>	
5				FACW species 60		
- 6		= Total (	Cover		x 3 = 0	
Herb Stratum (Plot size: 5 ft r )  1 Phalaris arundinacea	60	.,	FACW	FACU species 0 UPL species 0	x 4 = 0	
··· -				Column Totals: 60		
2				Column Totals. <u>Co</u>	(A) <u>12</u>	<u></u> (B)
4.				Prevalence Index		
5.				Hydrophytic Vegetation		
6.				1 - Rapid Test for I		etation
7				✓ 2 - Dominance Tes		
8				✓ 3 - Prevalence Inde		
9				4 - Morphological A	Adaptations' (Pro s or on a separa	ovide supporting te sheet)
10				Problematic Hydro	•	,
Woody Vine Stratum (Plot size: 30 ft r )  1		= Total (		<sup>1</sup> Indicators of hydric soi be present, unless distu		
2.				Hydrophytic		
		= Total (		Vegetation	. <b>/</b>	
% Bare Ground in Herb Stratum 40				Present? Ye	s No	
Remarks:						
Data point located in monoculture of Phalar positive rapid test, a positive dominance te						ıdes a
positive rapid test, a positive dominance te	or, and d	hicagi	ence mue)	Ciess man or equal	10 3.0.	

US Army Corps of Engineers B-27 Great Plains – Version 2.0

SOIL Sampling Point: DP02w

Profile Desc	cription: (Describe	to the depth ne	eded to docur	nent the i	ndicator	or confirn	n the absence of i	ndicators.)
Depth	Matrix			x Features		. ,		
(inches)	Color (moist)		olor (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0 - 7	10YR 2/2	100					Mucky Loam/Clay	
-								
-				_	_	_		
-							· —	
_				-				
						-		
1							. 2.	DI D. IVI MATERIA
	oncentration, D=Dep Indicators: (Applic					a Sand G		on: PL=Pore Lining, M=Matrix.  Problematic Hydric Soils <sup>3</sup> :
Histosol		Judio to all LINN		Gleyed Ma				(A9) (LRR I, J)
_	pipedon (A2)			Redox (S5	. ,			irie Redox (A16) ( <b>LRR F, G, H</b> )
	istic (A3)		Stripped	d Matrix (S	66)			ace (S7) (LRR G)
	en Sulfide (A4)		<u>✓</u> Loamy					s Depressions (F16)
	d Layers (A5) (LRR			Gleyed Ma			•	I outside of MLRA 72 & 73)
	uck (A9) ( <b>LRR F, G,</b> d Below Dark Surfac			d Matrix (F Dark Surfa				/ertic (F18) nt Material (TF2)
-	ark Surface (A12)	~ (A □ I)		d Dark Suna			<del></del>	ow Dark Surface (TF12)
	Mucky Mineral (S1)			Depression	, ,		Other (Exp	olain in Remarks)
	Mucky Peat or Peat		_	ains Depre				ydrophytic vegetation and
5 cm Mu	ucky Peat or Peat (S	3) ( <b>LRR F</b> )	(ML	RA 72 & 7	73 of LRR	H)	-	drology must be present,
Restrictive	Layer (if present):						uniess dis	turbed or problematic.
Type:	(ii pioseiii).							
Depth (inche	es):						Hydric Soil Pre	esent? Yes 🗸 No
Remarks:								
Loamv mi	ucky mineral so	oil texture inc	licates hvd	ric soils	. Cobble	es at 7 i	inches restrict	ed further excavation.
	,							
HYDROLO	GY							
	drology Indicators	:						
	cators (minimum of		eck all that appl	y)			Secondary I	ndicators (minimum of two required)
	Water (A1)		Salt Crust					Soil Cracks (B6)
	ater Table (A2)		Aquatic In		s (B13)			y Vegetated Concave Surface (B8)
<u>✓</u> Saturati			Hydrogen					e Patterns (B10)
Water M	larks (B1)		Dry-Seaso	on Water T	able (C2)		Oxidize	d Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized F		res on Livi	ing Roots	, ,	re tilled)
	posits (B3)		,	not tilled)				Burrows (C8)
	at or Crust (B4)		Presence			<b>!</b> )		on Visible on Aerial Imagery (C9)
-	oosits (B5)	Imagani (DZ)	Thin Muck					rphic Position (D2)
	on Vis ble on Aerial Stained Leaves (B9)	imagery (B7)	Other (Exp	olain in Re	marks)		·	eutral Test (D5) eave Hummocks (D7) ( <b>LRR F</b> )
Field Obser							1-1051-П	Cave Hummocks (Dr.) (LKK F)
Surface Wat		/es No _	✓ Denth (in	ches).				
Water Table		res No _ ∕es _ <b>✓</b> No _				<del>-</del>		
Saturation P		res No _ res No _				Wetl	land Hydrology Pr	resent? Yes 🗸 No
(includes cap	pillary fringe)							
Describe Re	corded Data (stream	n gauge, monitor	ing well, aerial <sub>l</sub>	photos, pro	evious ins	pections),	if available:	
D								
Remarks:								
		Irology inclu	des high wa	ater tab	le, soil s	saturatio	on, geomorph	ic position, and a positive
FAC-Neu	tral test.							

Project/Site: Kindsfater	(	City/Cour	nty: Yellows	tone County	Sampling I	Date: 2024-	-06-05
Applicant/Owner: MDT				State: Montana	Sampling I	oint: DP03	u
Investigator(s): R Cutler, J Trilling, & E Reynaud	s			ge: S06 T2S R25E			
Landform (hillslope, terrace, etc.): Toeslope		Local reli	ief (concave,	convex, none): Linear		Slope (%):	0
Subregion (LRR): G 58A	Lat: 45.	6911413	3	Long: -108.6958769		Datum: NAI	283
Soil Map Unit Name: LI - Larim gravelly loam, 15 to 3	5 percent	slopes		NWI classific	cation: Not	mapped	
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ar? Yes_	<b>✓</b> No_	(If no, explain in R	lemarks.)		
Are Vegetation, Soil, or Hydrologys	ignificantly of	disturbed	? Are "	'Normal Circumstances" p	oresent? Y	es 🔽 N	ο
Are Vegetation, Soil, or Hydrologyn	aturally prol	blematic?	? (If ne	eded, explain any answe	rs in Remar	ks.)	
SUMMARY OF FINDINGS – Attach site map	showing	sampli	ing point l	ocations, transects	, importa	ınt feature	s, etc.
Hydrophytic Vegetation Present? Yes N. Hydric Soil Present? Yes N. Wetland Hydrology Present? Yes N. Remarks:			the Sampled thin a Wetlar		No	<u> </u>	
Upland data point located on toeslop		et abo	ove DP03	Bw.			
VEGETATION – Use scientific names of plan				· · · · · · ·			
<u>Tree Stratum</u> (Plot size: <u>30 ft r</u> )  1 2	% Cover	Species		Number of Dominant S That Are OBL, FACW, (excluding FAC-):	pecies	)	(A)
3. 4.				Total Number of Domin Species Across All Stra			(B)
Sapling/Shrub Stratum (Plot size: 15 ft r )				Percent of Dominant Sport That Are OBL, FACW,		0.00	(A/B)
2.				Prevalence Index wor			
3				Total % Cover of:		Multiply by:	_
4					x 1 =	_	_
5				FACW species 0			
Harb Charture (Diet sine) 5 ft r		= Total C	Cover	FAC species 0 0	x 3 - x 4 =		_
Herb Stratum (Plot size: 5 ft r  1. Bromus inermis	95	~	UPL		^ - · · · · · · · · · · · · · · · · · ·		_
Bromus inermis 2.	• ———			Column Totals: 95		475	— (B)
3.							_ 、 /
4				Prevalence Index			
5				Hydrophytic Vegetation			
6				1 - Rapid Test for I		vegetation	
7				3 - Prevalence Inde			
8				4 - Morphological A		Provide sun	nortina
9				data in Remarks	s or on a se	parate sheet)	porting
10	OΕ			Problematic Hydro	phytic Vege	tation¹ (Expla	in)
Woody Vine Stratum (Plot size: 30 ft r )  1		= Total C		<sup>1</sup> Indicators of hydric soi be present, unless distu			nust
2				Hydrophytic			
% Bare Ground in Herb Stratum 5		= Total C	Cover	Vegetation Ye Ye	s	No	
Remarks:				1		<del></del>	
Data point is located in a vegetation of hydrophytic vegetation indicators		-	lominate	ed by Bromus inc	ermis. N	lo evide	nce

of hydrophytic vegetation indicators observed. US Army Corps of Engineers B-29 SOIL Sampling Point: DP03u

Profile Desc	ription: (Describe	to the depth ne		nent the indicator or	r confirm	the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	% C	Redox color (moist)	x Features	Loc <sup>2</sup>	Texture	Remarks
0 - 16	10YR 3/2	100	roioi (IIIOISI)		LUC	Clay Loam	Nemaiks
	10111 0/2					Oldy Louin	<u> </u>
-							
-							
¹Tvpe: C=Co	ncentration. D=Dep	oletion. RM=Red	uced Matrix. CS	=Covered or Coated	Sand Gra	ains. <sup>2</sup> Loc	ation: PL=Pore Lining, M=Matrix.
	ndicators: (Applic						for Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Sandy G	Sleyed Matrix (S4)		1 cm M	luck (A9) ( <b>LRR I, J</b> )
	ipedon (A2)		-	Redox (S5)			Prairie Redox (A16) (LRR F, G, H)
Black His				Matrix (S6)			urface (S7) (LRR G)
	n Sulfide (A4) Layers (A5) ( <b>LRR</b> I	E)		Mucky Mineral (F1) Gleyed Matrix (F2)			lains Depressions (F16) R H outside of MLRA 72 & 73)
· <del></del>	ck (A9) ( <b>LRR F, G</b> ,	•		d Matrix (F3)		•	ed Vertic (F18)
	Below Dark Surfac			Dark Surface (F6)			arent Material (TF2)
Thick Da	rk Surface (A12)			d Dark Surface (F7)			hallow Dark Surface (TF12)
-	ucky Mineral (S1)	/00\		Depressions (F8)	•		Explain in Remarks)
	lucky Peat or Peat ( cky Peat or Peat (S		-	iins Depressions (F16			of hydrophytic vegetation and I hydrology must be present,
5 CIII WIU	cky real of real (S	3) (LKK F)	(IVIL	NA 12 & 13 01 LKK I	1)		disturbed or problematic.
Restrictive L	ayer (if present):						,
Type:							
Depth (inc	ches):					Hydric Soil	Present? Yes No
Remarks:							
No hydri	c soil indicat	tors obser	ved				
140 Hyan		(013 00301	vca.				
HYDROLO	GY						
	Irology Indicators:						
	ators (minimum of o		eck all that apply	v)		Seconda	ry Indicators (minimum of two required)
-	Water (A1)	one required, en	Salt Crust	•		'	ace Soil Cracks (B6)
	ter Table (A2)			vertebrates (B13)			rsely Vegetated Concave Surface (B8)
Saturation	• •			Sulfide Odor (C1)			nage Patterns (B10)
	arks (B1)			n Water Table (C2)			lized Rhizospheres on Living Roots (C3)
Sedimen	t Deposits (B2)			hizospheres on Livin	g Roots (		here tilled)
Drift Dep	osits (B3)		(where r	not tilled)		Cray	fish Burrows (C8)
Algal Ma	t or Crust (B4)		Presence of	of Reduced Iron (C4)		Satu	ration Visible on Aerial Imagery (C9)
	osits (B5)			Surface (C7)		Geor	morphic Position (D2)
	on Vis ble on Aerial	Imagery (B7)	Other (Exp	lain in Remarks)			-Neutral Test (D5)
	ained Leaves (B9)					Fros	t-Heave Hummocks (D7) (LRR F)
Field Observ							
Surface Water				ches):			
Water Table				ches):			.,
Saturation Pr (includes cap	esent? Y	'es No _	Depth (inc	ches):	Wetla	ınd Hydrology	Present? Yes No
		n gauge, monitor	ing well, aerial p	photos, previous inspe	ections), i	f available:	
Remarks:							
No evide	ance of wetl	and hydro	laay ahsa	rved. Soils dr	v thro	uahout th	ne profile
INO EVICE	ence of wella	and mydro	logy obser	i veu. Julis ul	уши	ugnout ti	ie profile.

Project/Site: Kindsfater		City/Cou	unty: Y	ellows	tone County		Sampling	Date: 2024	1-06-05
Applicant/Owner: MDT					State: N	ontana (	Sampling	Point: DP0	3w
Investigator(s): E Reynaud		Section	, Towns	ship, Ra	nge: S06 T2S	R25E			
Landform (hillslope, terrace, etc.): Toeslope		Local re	elief (co	oncave, o	convex, none): _	Linear		Slope (%	): <u>1</u>
Subregion (LRR): G 58A	Lat: 45.	69104	82		Long: -108.6	958476		_ Datum: N	AD 83
Soil Map Unit Name: LI - Larim gravelly loam, 15 to 3									
Are climatic / hydrologic conditions on the site typical for thi	s time of yea	ar? Yes	s <b>/</b>	No	(If no, ex	plain in Re	marks.)		
Are Vegetation, Soil, or Hydrologys	-				'Normal Circums			es 🗸	No
Are Vegetation, Soil, or Hydrology r					eded, explain a				
SUMMARY OF FINDINGS – Attach site map				•	·	-		,	es, etc.
Hydrophytic Vegetation Present? Yes N	lo		s tha S	ampled	Aroa				
Hydric Soil Present? Yes N	lo			a Wetlar		Yes_	No		
Wetland Hydrology Present? Yes N	lo	_							
Remarks:  Depressional/riverine wetland. Point	tlocate	d on	large	e toes	slope land	form.			
VEGETATION – Use scientific names of plan	nts								
VEGETATION GGG GGIGHAMO HAMIOG GI PIAM	Absolute	Domin	nant Ind	dicator	Dominance T	est works	heet:		
Tree Stratum (Plot size: 30 ft r	% Cover				Number of Do				
1					That Are OBL (excluding FA		FAC	1	(4)
2						,		-	_ (^)
3					Total Number Species Acros			1	(B)
4							_		_ (5)
Sapling/Shrub Stratum (Plot size: 15 ft r )  1					Percent of Do That Are OBL			100.00	_ (A/B)
2.					Prevalence In	ndex works	sheet:		
3.						Cover of:		Multiply by:	
4					OBL species			= 0	
5					FACW specie				
Little of the Court of the Cour		= Total	Cover		FAC species FACU species			= 0	
Herb Stratum (Plot size: 5 ft r  1 Phalaris arundinacea	75	~	F	ACW	UPL species	0	x 4 x 5	= <del>0</del> - 0	
Phalaris arundinacea     2.					Column Totals	_			(B)
3.									(2)
4.						nce Index =	_		
5.					Hydrophytic	_			
6.					<u>✓</u> 1 - Rapid	-		Vegetation	
7					<ul> <li>✓ 2 - Domir</li> <li>✓ 3 - Preval</li> </ul>				
8								s¹ (Provide su	innorting
9								eparate shee	
10	7-				Problema	itic Hydroph	ıytic Vege	etation¹ (Expl	ain)
Woody Vine Stratum (Plot size: 30 ft r )  1.		= Total	Cover		<sup>1</sup> Indicators of be present, ur				must
2					Hydrophytic				
% Bare Ground in Herb Stratum 25		= Total	Cover		Vegetation Present?	Yes		No	
Remarks:					<u> </u>				
Data point located in a monoculture of Phal-	aris arun	dinace	ea. Fv	/idenc	e of hydron	hytic vec	retation	n includes	s a
positive rapid test, positive dominance test						-	-		- <del></del>

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SOIL Sampling Point: DP03w

Profile Desc	ription: (Describe	to the dep	th needed to docum	nent the	indicator	or confirm	m the absence of i	indicators.)
Depth	Matrix			C Feature				
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 10	10YR 2/2	100					Loam	
10 - 16	10YR 5/1	95	10YR 4/6	5	<u>C</u>	М	Silty Clay Loam	
-								
-					· · · · · · · · · · · · · · · · · · ·			
	-							
-				-			·	
							·	
			=Reduced Matrix, CS			ed Sand G		on: PL=Pore Lining, M=Matrix.
_		able to all	LRRs, unless other					Problematic Hydric Soils <sup>3</sup> :
Histosol	` '		Sandy G	-	. ,			k (A9) (LRR I, J)
Black Hi	oipedon (A2)		Sandy R Stripped					irie Redox (A16) (LRR F, G, H) ace (S7) (LRR G)
	n Sulfide (A4)				neral (F1)			s Depressions (F16)
	Layers (A5) (LRR	F)			atrix (F2)			l outside of MLRA 72 & 73)
1 cm Mu	ck (A9) ( <b>LRR F, G,</b>	H)	<u>✓</u> Depleted	d Matrix (	F3)		Reduced \	Vertic (F18)
	Below Dark Surfac	e (A11)	Redox D					nt Material (TF2)
	ark Surface (A12)				urface (F7)		-	low Dark Surface (TF12)
	lucky Mineral (S1) ⁄lucky Peat or Peat (	(S2) (I <b>DD</b> (	Redox D	•	ns (F8) essions (F	16)		olain in Remarks) nydrophytic vegetation and
	cky Peat or Peat (S				73 of LRR			drology must be present,
	, (.	-, (,	(			,	-	turbed or problematic.
Restrictive L	ayer (if present):							
Type:								
Depth (inc	ches):						Hydric Soil Pre	esent? Yes No
Remarks:								
Promine	nt redoximo	rphic c	oncentrations	s com	mon w	ithin t	he depleted	l matrix.
HYDROLO	GY							
	drology Indicators:	•						
-			d; check all that apply	<i>(</i> )			Secondary I	ndicators (minimum of two required)
-	Water (A1)	ono roquiro	Salt Crust				·	Soil Cracks (B6)
	ter Table (A2)		Aquatic Inv		es (B13)			y Vegetated Concave Surface (B8)
✓ Saturation	, ,		Hydrogen S					ge Patterns (B10)
Water M	arks (B1)		Dry-Seaso				_	d Rhizospheres on Living Roots (C3)
Sedimer	t Deposits (B2)		Oxidized R	hizosphe	eres on Liv	ing Roots	(C3) (wher	re tilled)
Drift Dep	oosits (B3)		(where n	ot tilled	)		Crayfish	n Burrows (C8)
Algal Ma	t or Crust (B4)		Presence of	of Reduce	ed Iron (C4	1)	Saturati	ion Visible on Aerial Imagery (C9)
Iron Dep	osits (B5)		Thin Muck	Surface	(C7)		<u></u> ✓ Geomo	rphic Position (D2)
Inundation	on Vis ble on Aerial	Imagery (B	7) Other (Exp	lain in Re	emarks)		FAC-Ne	eutral Test (D5)
Water-S	tained Leaves (B9)						Frost-H	eave Hummocks (D7) (LRR F)
Field Observ			•					
Surface Water			No Depth (inc					
Water Table			No Pepth (inc					
Saturation Pr		es 🔽	No Depth (inc	:hes): <u>5</u>		Wet	land Hydrology Pr	resent? Yes No
(includes cap Describe Red		n gauge, mo	onitoring well, aerial p	hotos, pi	revious ins	pections).	, if available:	
	( <del></del>	5 5.,	, , , , , , , , , , , , , , , , , , ,	., [-		/		
Remarks:								
Fyidence	of wetland hyd	Irology i	ncludes soil sati	ıration	deomo	rphic p	osition and a	positive FAC-Neutral test.
LVIGCTICE	o. wodana nyu	o.ogy II	ioidaco oon odtt	a1 G (1011	, gcomo	princ p	Joseph Grand	positive i no modifial test.

Project/Site: Kindsfater	(	City/Coun	ty: Yellows	tone County	Sampling Date:	2024-06-04
				State: Montana		
Investigator(s): J Trilling						
Landform (hillslope, terrace, etc.): Flat					ing <sub>Slo</sub>	ope (%): 1
Subregion (LRR): G 58A						
Soil Map Unit Name: Wf - Wanetta clay loam, 0 to						
Are climatic / hydrologic conditions on the site typical for t						•
Are Vegetation, Soil, or Hydrology				Normal Circumstances" p		✓ No
Are Vegetation, Soil, or Hydrology				eded, explain any answe		110
SUMMARY OF FINDINGS – Attach site map						eatures, etc.
Hydrophytic Vegetation Present? Yes	No. V				<u> </u>	· · · · · · · · · · · · · · · · · · ·
Hydrophytic Vegetation Present?  Hydric Soil Present?  Yes  Yes	No		the Sampled		🗸	
Wetland Hydrology Present? Yes	No 🔽	Wit	thin a Wetlar	nd? Yes	No	_
Remarks:		<u> </u>				
Upland data point located south we		DP04v	w.			
VEGETATION – Use scientific names of pla		Domina	at Indicator	Deminence Test week	ob oct.	
Tree Stratum (Plot size: 30 ft r			nt Indicator  Status	Dominance Test work  Number of Dominant Sp		
1. Populus deltoides	25		FAC	That Are OBL, FACW, of	or FAC	
2				(excluding FAC-):	1	(A)
3				Total Number of Domin	_	
4				Species Across All Stra	ta: <u>3</u>	(B)
Sapling/Shrub Stratum (Plot size: 15 ft r)	25	= Total C	over	Percent of Dominant Sp		
1. Elaeagnus angustifolia	15	~	FACU	That Are OBL, FACW, o	or FAC: 33.33	(A/B)
2				Prevalence Index wor	ksheet:	
3.				Total % Cover of:	Multip	ly by:
4					x 1 = <u>0</u>	
5				FACW species 0		
	4=	= Total C	over	FAC species 28		
Herb Stratum (Plot size: 5 ft r			E 4 OL I	FACU species 82		
1. Elymus repens	45		FACU	UPL species 2		
2. Thlaspi arvense	12		FACU	Column Totals: 112	(A) <u>42</u>	<u>2</u> (B)
3. Chenopodium album 4. Lactuca serriola	<u>10</u> 	-	FACU	Prevalence Index	= B/A = 3.76	
5. Euphorbia esula	$-\frac{3}{2}$		<u>FAC</u> UPL	Hydrophytic Vegetation		
				1 - Rapid Test for H	Hydrophytic Vege	tation
6				2 - Dominance Tes	t is >50%	
7 8				3 - Prevalence Inde	ex is ≤3.0 <sup>1</sup>	
9.				4 - Morphological A	daptations <sup>1</sup> (Prov	vide supporting
10					s or on a separate	,
	70	= Total C		Problematic Hydro	onytic vegetation	(⊏xplain)
Woody Vine Stratum (Plot size: 30 ft r )  1				<sup>1</sup> Indicators of hydric soi be present, unless distu		
2.				Hydrophytic		
		= Total C	over	Vegetation	o Ne	<b>v</b>
% Bare Ground in Herb Stratum 28				Present? Yes	s No_	
Remarks:	and ares	0.000	ioo Elwa	ulo ronone Des-	around:	+h
Data point is dominated by the upla	ına grass	s spec	ies ⊨iym	ius repens. Bear	grouna in	tne nerb

Data point is dominated by the upland grass species Elymus repens. Bear ground in the herk stratum is litter. No evidence of hydrophytic vegetation indicators observed.

SOIL Sampling Point: DP04u

Profile Desc	ription: (Describ	e to the dep	th needed to docu	ment the	indicator	or confir	m the absence of i	ndicators.)
Depth	Matrix		Redo	ox Feature	es		_	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 2	10YR 2/2	100					Loam	
2 - 8	2.5Y 4/2	98	10YR 4/6	2	<u>C</u>	M	Clay Loam	
-								
-					-			
-					-			
				_				
_				_			- <u></u>	
1Typo: C=C	ncontration D=D	nlotion PM	=Reduced Matrix, C	S=Covere	d or Coate	nd Sand C	Prains <sup>2</sup> Locatio	n: PL=Pore Lining, M=Matrix.
			LRRs, unless othe			a Sana C		Problematic Hydric Soils <sup>3</sup> :
Histosol				Gleyed M				(A9) (LRR I, J)
	oipedon (A2)			Redox (S				rie Redox (A16) ( <b>LRR F, G, H</b> )
Black Hi	stic (A3)		Strippe	d Matrix (	S6)		Dark Surfa	ce (S7) (LRR G)
	n Sulfide (A4)			-	neral (F1)		-	s Depressions (F16)
	d Layers (A5) ( <b>LRR</b>	,		Gleyed M			•	outside of MLRA 72 & 73)
	ick (A9) (LRR F, G			ed Matrix (	. ,		Reduced V	,
-	d Below Dark Surfa ark Surface (A12)	ice (A11)		Dark Surf	ace (F6) urface (F7)			t Material (TF2) ow Dark Surface (TF12)
	lucky Mineral (S1)			Depression		,		lain in Remarks)
	/lucky Peat or Peat				essions (F	16)		ydrophytic vegetation and
	ıcky Peat or Peat (				73 of LRR			drology must be present,
							unless dist	urbed or problematic.
_	_ayer (if present):							
Type:	-).							
Depth (inche	S).						Hydric Soil Pre	sent? Yes No
Remarks:								
_		-	•			-		ohytic vegetation. For this
reason, th	e observed re	dox is lik	ely relict. Cobb	les res	tricted e	excavat	ion further thai	า 8".
<b>HYDROLO</b>	GY							
Wetland Hyd	drology Indicators	S:						
Primary Indic	cators (minimum of	one require	d; check all that app	ly)			Secondary Ir	ndicators (minimum of two required)
Surface	Water (A1)		Salt Crust	t (B11)				Soil Cracks (B6)
	iter Table (A2)		Aquatic Ir					Vegetated Concave Surface (B8)
Saturation			Hydrogen				_	e Patterns (B10)
Water M			Dry-Seas					Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized	•		ing Roots		e tilled)
-	posits (B3)		,	not tilled				Burrows (C8)
_	at or Crust (B4)		Presence			1)		on Visible on Aerial Imagery (C9)
Iron Dep	` ,	l l (D	Thin Mucl				·	phic Position (D2)
	on Vis ble on Aeria		7) Other (Ex	plain in R	emarks)		·	utral Test (D5)
	tained Leaves (B9)	)				1	Frost-He	eave Hummocks (D7) (LRR F)
Field Obser		V	No. V Double (in					
Surface Wate			No Depth (ir					
Water Table			No Depth (in				stand Hudualaan Da	
Saturation Pi		Yes	No Depth (ir	icnes):		vve	liand Hydrology Pro	esent? Yes No
		m gauge, m	onitoring well, aerial	photos, p	revious ins	pections)	, if available:	
Remarks:								
No evide	ence of wet	land hv	drology obse	erved.				
			3, 250					
i								

Project/Site: Kindsfater		City/Count	y: Yellows	tone County	Sampling Date: 2024-06-04
Applicant/Owner: MDT				State: Montana	Sampling Point: DP04w
Investigator(s): E Reynaud		Section, T	ownship, Ra	nge: S06 T2S R25E	
					e Slope (%): 2
Subregion (LRR): G 58A	Lat: 45.	<b>694</b> 2190	)	Long: -108.6982576	1 Datum: NAD 83
Soil Map Unit Name: Wf - Wanetta clay loam, 0 to 1	percent sl	opes		NWI classific	ation: Not mapped
Are climatic / hydrologic conditions on the site typical for the					
Are Vegetation, Soil, or Hydrology	significantly	disturbed?	Are '	'Normal Circumstances" p	oresent? Yes No
Are Vegetation, Soil, or Hydrology	naturally pro	blematic?	(If ne	eeded, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	samplii	ng point l	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present?  Hydric Soil Present?  Wetland Hydrology Present?  Remarks:  Yes   V  N  Remarks:	No		he Sampled hin a Wetlar		No
PEM, depressional wetland. Data po		ted ne	ar west	ern boundary of	site.
		Dominar	nt Indicator	Dominance Test work	sheet:
Tree Stratum (Plot size: 30 ft r	% Cover			Number of Dominant Sp	
1 2				That Are OBL, FACW, (excluding FAC-):	or FAC (A)
3.				Total Number of Domin	ant
4.				Species Across All Stra	_
Sapling/Shrub Stratum (Plot size: 15 ft r		= Total Co	over	Percent of Dominant Sp That Are OBL, FACW, o	
1				Prevalence Index wor	ksheet:
2.				Total % Cover of:	Multiply by:
3				OBL species 40	x 1 = <u>40</u>
5		-		FACW species 60	x 2 = <u>120</u>
0		= Total Co	over		x 3 = 0
Herb Stratum (Plot size: 5 ft r )				·	x 4 = 0
1. Alopecurus arundinaceus	60		FACW		x 5 = 0
2. Schoenoplectus acutus	40		OBL	Column Totals: 100	(A) <u>160</u> (B)
3				Prevalence Index	= B/A = 1.60
4				Hydrophytic Vegetation	<u></u>
5				✓ 1 - Rapid Test for H	Hydrophytic Vegetation
6				✓ 2 - Dominance Tes	t is >50%
7				✓ 3 - Prevalence Inde	ex is ≤3.0 <sup>1</sup>
8 9				4 - Morphological A	Adaptations <sup>1</sup> (Provide supporting
10					s or on a separate sheet)
10.		= Total Co	over	Problematic Hydror	phytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 30 ft r )  1.				<sup>1</sup> Indicators of hydric soi be present, unless distu	l and wetland hydrology must urbed or problematic.
2				Hydrophytic	
W Born Convertigation to 10 to		= Total Co	over	Vegetation Present? Yes	s No
% Bare Ground in Herb Stratum				11030111: 16:	
Evidence of hydrophytic vegetation		-	sitive ra	pid test, a positi	ive dominance test,
and a proviolence index less than or	Adulal to	2 O			

and a prevalence index less than or equal to 3.0.

SOIL Sampling Point: DP04w

Profile Desc	ription: (Describe	to the de	oth needed to docu	ment the	indicator	or confir	m the absence of in	dicators.)
Depth	Matrix		Redo	ox Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0 - 7	10YR 3/2	100					Clay Loam	
7 - 16	10YR 4/1	98	10YR 4/4	2	<u>C</u>	М	Sandy Loam	
-								
-							<u> </u>	
			-				<u> </u>	
					<del></del>			
			-					
			=Reduced Matrix, C			ed Sand G		: PL=Pore Lining, M=Matrix.
		cable to all	LRRs, unless othe					Problematic Hydric Soils <sup>3</sup> :
Histosol	(AT) pipedon (A2)		Sandy	Gleyed IVI Redox (S			1 cm Muck	(A9) (LRR I, J) e Redox (A16) (LRR F, G, H)
Black Hi			-	d Matrix (				e (S7) (LRR G)
	n Sulfide (A4)			•	ineral (F1)			Depressions (F16)
	d Layers (A5) ( <b>LRR</b>	,			latrix (F2)		•	outside of MLRA 72 & 73)
	ick (A9) ( <b>LRR F, G</b> ,			ed Matrix	. ,		Reduced Ve	• •
	d Below Dark Surfa ark Surface (A12)	ce (A11)		Dark Surf	ace (F6) urface (F7)			Material (TF2) w Dark Surface (TF12)
·	fucky Mineral (S1)			Depression	, ,	,		ain in Remarks)
-	lucky Peat or Peat	(S2) ( <b>LRR</b>			essions (F	16)		drophytic vegetation and
5 cm Mu	icky Peat or Peat (	63) ( <b>LRR F</b> )	(ML	RA 72 &	73 of LRR	? <b>H</b> )	wetland hyd	rology must be present,
							unless distu	rbed or problematic.
_	_ayer (if present):							
Type:							Unadaia Cail Daga	ent? Yes V No
	ches):						Hydric Soil Pres	ent? Yes No No
Remarks:								
Promine	nt redoximo	rphic c	oncentration	is com	ımon v	ithin t	the depleted	matrix.
HYDROLO	GY							
Wetland Hyd	drology Indicators	:						
Primary Indic	cators (minimum of	one require	d; check all that app	ly)			Secondary Inc	dicators (minimum of two required)
Surface	Water (A1)		Salt Crust					Soil Cracks (B6)
_	iter Table (A2)		Aquatic Ir				-	Vegetated Concave Surface (B8)
<u>✓</u> Saturation	` '		Hydrogen					Patterns (B10)
	arks (B1)		Dry-Seas					Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized			ing Roots		
	oosits (B3) at or Crust (B4)		Presence	not tilled		1)		Burrows (C8) n Visible on Aerial Imagery (C9)
Iron Dep			Thin Mucl			<del>"</del> )		hic Position (D2)
	on Vis ble on Aerial	Imagery (E						tral Test (D5)
	tained Leaves (B9)	-3-7(	,		,			ave Hummocks (D7) (LRR F)
Field Obser	vations:							
Surface Water	er Present?	Yes	No Depth (ir	nches):				
Water Table			No Depth (ir			l l		
Saturation P		Yes	No Depth (ir	nches): 0		Wet	land Hydrology Pre	sent? Yes No
(includes cap		n dalido m	onitoring well, aerial	nhotos n	revious inc	nections)	if available:	
Describe K6	orueu Dala (Siledi	ıı yauye, III	ormornig well, aerial	ριισισδ, β	revious IIIs	φευιστίδ)	, ii avaliabic.	
Remarks:								
	of wetler distri	drolos:::	naludaa asii se				anition and	opitivo FAC November
Evidence	oi wetiand nyo	arology I	nciudes soli sat	uration	i, geomo	u buic b	osition, and a p	ositive FAC-Neutral test.

Project/Site: Kindsfater	(	City/Co	unty:	Yellows	tone County	Sampling [	<sub>Date:</sub> 202	4-06-05
Applicant/Owner: MDT					State: Montana			
Investigator(s): R Cutler, J Trilling, & E Reynaud						1 3		
Landform (hillslope, terrace, etc.): Terrace				•			Slope (	%): O
Subregion (LRR): G 58A								
Soil Map Unit Name: Wf - Wanetta clay loam, 0 to 1								
Are climatic / hydrologic conditions on the site typical for this								
Are Vegetation, Soil, or Hydrologys	-				'Normal Circumstances"		es 🗸	No
Are Vegetation, Soil, or Hydrology n					eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site map								res, etc.
Hydrophytic Vegetation Present?         YesN           Hydric Soil Present?         YesN           Wetland Hydrology Present?         YesN	o			Sampled a Wetlar		No	<u> </u>	
Remarks:	<u> </u>							
Upland sample point located north o  VEGETATION – Use scientific names of plan		św.						
7 0/ / 20 ft r	Absolute			ndicator	Dominance Test work	sheet:		
Tree Stratum (Plot size: 30 ft r  1. Elaeagnus angustifolia	% Cover 30			FACU	Number of Dominant S	•		
2. Populus deltoides	10			FAC	That Are OBL, FACW, (excluding FAC-):	1 or FAC		(A)
				ΑΟ				_ ` '
3. 4.	_				Total Number of Domir Species Across All Stra		ŀ	(B)
Sapling/Shrub Stratum (Plot size: 15 ft r	40	= Total	l Cove	r	Percent of Dominant S That Are OBL, FACW,		5.00	(A/B)
1					Prevalence Index wor	ksheet:		
2				_	Total % Cover of:		Multiply by:	:
3					'	x 1 =		
4					FACW species 0			
5		= Total	L Covo		FAC species 10			
Herb Stratum (Plot size: 5 ft r )		- TOtal	Cove	I	FACU species 90	x 4 =	360	
1. Elymus repens	60		<u> </u>	ACU	UPL species 26			
2. Bromus inermis	20		<u> </u>	JPL	Column Totals: 126	(A)	520	(B)
3. Convolvulus arvensis	3			JPL	Prevalence Index	D/A _ 4	.12	
4. Lepidium campestre	3		!	JPL	Hydrophytic Vegetation			
5					1 - Rapid Test for I			1
6					2 - Dominance Tes		vegetation	
7					3 - Prevalence Ind			
8					4 - Morphological /		(Provide s	supporting
9					data in Remark	s or on a sep	parate she	et)
10	~~	T-4-1			Problematic Hydro	phytic Veget	tation <sup>1</sup> (Exp	plain)
Woody Vine Stratum (Plot size: 30 ft r )  1		= Total			<sup>1</sup> Indicators of hydric so be present, unless dist			gy must
2.					Hydrophytic	<del></del>		
		= Total	l Cove		Vegetation		No V	
% Bare Ground in Herb Stratum 14					Present? Ye	es	NO	_
Remarks:								
Elaeagnus angustifolia and Populus delt dominant herb species at this data poin						-		

US Army Corps of Engineers B-37 Great Plains – Version 2.0

SOIL Sampling Point: DP05u

	Redox Features		
(inches) Color (moist) %	Color (moist) % Type <sup>1</sup> Lo	Texture .	Remarks
0 - 10 10YR 3/2 100		Loam	
<u> </u>			
-		<del></del>	
<u> </u>			
<sup>1</sup> Type: C=Concentration, D=Depletion, RM	=Reduced Matrix, CS=Covered or Coated Sa	nd Grains. <sup>2</sup> Locat	ion: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all	LRRs, unless otherwise noted.)		r Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Gleyed Matrix (S4)	1 cm Mu	ck (A9) ( <b>LRR I, J</b> )
Histic Epipedon (A2)	Sandy Redox (S5)		airie Redox (A16) ( <b>LRR F, G, H</b> )
Black Histic (A3)	Stripped Matrix (S6)		face (S7) (LRR G)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	-	ins Depressions (F16)
Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H)	<ul><li>Loamy Gleyed Matrix (F2)</li><li>Depleted Matrix (F3)</li></ul>	,	H outside of MLRA 72 & 73) Vertic (F18)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3) Redox Dark Surface (F6)		ent Material (TF2)
Thick Dark Surface (A12)	Depleted Dark Surface (F7)		allow Dark Surface (TF12)
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	Other (E	xplain in Remarks)
2.5 cm Mucky Peat or Peat (S2) (LRR (	<b>G, H</b> ) High Plains Depressions (F16)		hydrophytic vegetation and
5 cm Mucky Peat or Peat (S3) (LRR F)	(MLRA 72 & 73 of LRR H)		nydrology must be present,
Destriction Leaves (if accessed)		unless di	sturbed or problematic.
Restrictive Layer (if present):			
Type:	<u> </u>		
Depth (inches):  Remarks:		Hydric Soil P	resent? Yes No
no nyane son maleators ob		wasvation for	thorthon 10"
HYDROLOGY	served. Cobbles restricted e	excavation fur	ther than 10".
HYDROLOGY  Wetland Hydrology Indicators:			
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require	d; check all that apply)	Secondary	Indicators (minimum of two required)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)	d; check all that apply) Salt Crust (B11)	<u>Secondary</u> Surfac	Indicators (minimum of two required) te Soil Cracks (B6)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2)	d; check all that apply)  Salt Crust (B11)  Aquatic Invertebrates (B13)	<u>Secondary</u> Surfac Spars	Indicators (minimum of two required) the Soil Cracks (B6) the ly Vegetated Concave Surface (B8)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)	d; check all that apply)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)	Secondary Surfac Sparso Draina	Indicators (minimum of two required) te Soil Cracks (B6) tely Vegetated Concave Surface (B8) tige Patterns (B10)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)	d; check all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2)	Secondary Surfac Spars Draina Oxidiz	Indicators (minimum of two required) se Soil Cracks (B6) sely Vegetated Concave Surface (B8) sige Patterns (B10) ed Rhizospheres on Living Roots (C3)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)	d; check all that apply)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Dry-Season Water Table (C2)  Oxidized Rhizospheres on Living R	Secondary Surface Sparse Draina Oxidiz	Indicators (minimum of two required) be Soil Cracks (B6) ely Vegetated Concave Surface (B8) age Patterns (B10) ed Rhizospheres on Living Roots (C3) ere tilled)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required and a second and a seco	d; check all that apply)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Dry-Season Water Table (C2)  Oxidized Rhizospheres on Living R  (where not tilled)	Secondary Surface Sparse Draina Oxidize Coots (C3) Secondary	Indicators (minimum of two required) the Soil Cracks (B6) tely Vegetated Concave Surface (B8) tige Patterns (B10) ted Rhizospheres on Living Roots (C3) tere tilled) the Burrows (C8)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required and a second and a seco	d; check all that apply)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Dry-Season Water Table (C2)  Oxidized Rhizospheres on Living R	Secondary Surface Sparse Draina Oxidize Coots (C3) Crayfie Satura	Indicators (minimum of two required) the Soil Cracks (B6) tely Vegetated Concave Surface (B8) tige Patterns (B10) ted Rhizospheres on Living Roots (C3) tere tilled) the Burrows (C8) thicknown Visible on Aerial Imagery (C9)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required and sequence)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)	d; check all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living R (where not tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7)	Secondary	Indicators (minimum of two required) the Soil Cracks (B6) tely Vegetated Concave Surface (B8) tige Patterns (B10) ted Rhizospheres on Living Roots (C3) tere tilled) th Burrows (C8)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required and a surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)	d; check all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living R (where not tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7)	Secondary Surface Sparse Draina Oxidize Coots (C3) Satura Geom FAC-N	r Indicators (minimum of two required) the Soil Cracks (B6) thely Vegetated Concave Surface (B8) the Patterns (B10) the Rhizospheres on Living Roots (C3) there tilled) the Burrows (C8) thion Visible on Aerial Imagery (C9) to orphic Position (D2)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required and sequence)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Vis ble on Aerial Imagery (B	d; check all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living R (where not tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7)	Secondary Surface Sparse Draina Oxidize Coots (C3) Satura Geom FAC-N	r Indicators (minimum of two required) the Soil Cracks (B6) the Vegetated Concave Surface (B8) the Patterns (B10) the Rhizospheres on Living Roots (C3) there tilled) the Burrows (C8) thion Visible on Aerial Imagery (C9) torphic Position (D2) the Soil Cracks (B6) the Soil Cracks (B6
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required and surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Vis ble on Aerial Imagery (B Water-Stained Leaves (B9)  Field Observations:	d; check all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living R (where not tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7)	Secondary Surface Sparse Draina Oxidize Coots (C3) Satura Geom FAC-N	r Indicators (minimum of two required) the Soil Cracks (B6) the Vegetated Concave Surface (B8) the Patterns (B10) the Rhizospheres on Living Roots (C3) there tilled) the Burrows (C8) thion Visible on Aerial Imagery (C9) torphic Position (D2) the Soil Cracks (B6) the Soil Cracks (B6
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required and primary Indicators)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Vis ble on Aerial Imagery (B water-Stained Leaves (B9))  Field Observations:  Surface Water Present?  Yes	d; check all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living R (where not tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7) Other (Explain in Remarks)	Secondary Surface Sparse Draina Oxidize Coots (C3) Satura Geom FAC-N	r Indicators (minimum of two required) the Soil Cracks (B6) the Vegetated Concave Surface (B8) the Patterns (B10) the Rhizospheres on Living Roots (C3) there tilled) the Burrows (C8) thion Visible on Aerial Imagery (C9) torphic Position (D2) the Soil Cracks (B6) the Soil Cracks (B6
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required and surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Vis ble on Aerial Imagery (B water-Stained Leaves (B9)  Field Observations:  Surface Water Present? Yes  Water Table Present? Yes	d; check all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living R (where not tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches):  Depth (inches):	Secondary Surface Sparse Draina Oxidize Coots (C3) Satura Geom FAC-N Frost-	r Indicators (minimum of two required) the Soil Cracks (B6) the Vegetated Concave Surface (B8) the Patterns (B10) the Rhizospheres on Living Roots (C3) there tilled) the Burrows (C8) thion Visible on Aerial Imagery (C9) torphic Position (D2) the Soil Cracks (B6) the Soil Cracks (B6
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required of the primary Indicators)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Vis ble on Aerial Imagery (B water-Stained Leaves (B9)  Field Observations:  Surface Water Present? Yes  Water Table Present? Yes  Saturation Present? Yes  [includes capillary fringe)	d; check all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living R (where not tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches):  No Depth (inches):	Secondary Surface Surface Sparse Draina Oxidize Coots (C3) (who Crayfie Satura Geom FAC-N Frost-	r Indicators (minimum of two required) the Soil Cracks (B6) thely Vegetated Concave Surface (B8) the Patterns (B10) the Rhizospheres on Living Roots (C3) there tilled) the Burrows (C8) thion Visible on Aerial Imagery (C9) torphic Position (D2) the Leave Hummocks (D7) (LRR F)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required and surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Vis ble on Aerial Imagery (B Water-Stained Leaves (B9)  Field Observations:  Surface Water Present? Yes  Water Table Present? Yes  Saturation Present? Yes  [includes capillary fringe)	d; check all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living R	Secondary Surface Surface Sparse Draina Oxidize Coots (C3) (who Crayfie Satura Geom FAC-N Frost-	r Indicators (minimum of two required) the Soil Cracks (B6) thely Vegetated Concave Surface (B8) the Patterns (B10) the Rhizospheres on Living Roots (C3) there tilled) the Burrows (C8) thion Visible on Aerial Imagery (C9) torphic Position (D2) the Leave Hummocks (D7) (LRR F)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required and surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1)  Sediment Deposits (B2)  Drift Deposits (B3)  Algal Mat or Crust (B4)  Iron Deposits (B5)  Inundation Vis ble on Aerial Imagery (B water-Stained Leaves (B9)  Field Observations:  Surface Water Present? Yes  Water Table Present? Yes  Saturation Present? Yes  (includes capillary fringe)  Describe Recorded Data (stream gauge, model)	d; check all that apply)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living R	Secondary Surface Sparse Draina Oxidize Coots (C3) (whe Crayfie Satura Geom FAC-N Frost- Wetland Hydrology I	r Indicators (minimum of two required) the Soil Cracks (B6) thely Vegetated Concave Surface (B8) the Patterns (B10) the Rhizospheres on Living Roots (C3) there tilled) the Burrows (C8) thion Visible on Aerial Imagery (C9) torphic Position (D2) the Leave Hummocks (D7) (LRR F)

Project/Site: Kindsfater	(	City/Co	unty:	Yellows	tone County	Sampling [	Date: 2	2024-06-05
Applicant/Owner: MDT					State: Montana	Sampling F	oint: [	DP05w
Investigator(s): E Reynaud	;	Section	ı, Tov	vnship, Ra	nge: S06 T2S R25E			
Landform (hillslope, terrace, etc.): Toeslope		Local r	elief	(concave,	convex, none): Concave	е	_ Slop	e (%): 3
Subregion (LRR): G 58A	Lat: 45.	69413	363		Long: -108.6939254	1	Datum	n: NAD 83
Soil Map Unit Name: Wf - Wanetta clay loam, 0 to 1 p					-			
Are climatic / hydrologic conditions on the site typical for this	time of yea	ar? Yes	s_•	No	(If no, explain in R	emarks.)		
Are Vegetation, Soil, or Hydrologys					'Normal Circumstances" p		es 🗸	No
Are Vegetation, Soil, or Hydrologyn					eeded, explain any answe			
SUMMARY OF FINDINGS - Attach site map	showing	samp	oling	g point l	ocations, transects	, importa	nt fea	atures, etc.
	o			e Sampled n a Wetlar		No		
Wetland point located near boundary VEGETATION – Use scientific names of plant		tlanc	d ce	ell 12 o	n the verge of o	pen wa	ter.	
	Absolute	Domir	nant	Indicator	Dominance Test work	sheet:		
Tree Stratum (Plot size: 30 ft r	% Cover	Speci			Number of Dominant S			
1. Elaeagnus angustifolia	5	-		FACU	That Are OBL, FACW, (excluding FAC-):	or FAC 2	<u>.</u>	(A)
2. Populus deltoides	5			FAC		_		(^)
34.					Total Number of Domin Species Across All Stra	_	ļ	(B)
Sapling/Shrub Stratum (Plot size: 15 ft r )	10	= Total	Cov	er	Percent of Dominant Sp That Are OBL, FACW, o	pecies _	0.00	(A/B)
1					Prevalence Index wor			
2					Total % Cover of:		Multiply	hv:
3	· <del></del>					x 1 =		by.
4					FACW species 0			
5					FAC species 5			
Herb Stratum (Plot size: 5 ft r		= Total	Cov	er	FACU species 15			
1. Carex pellita	40	~		OBL	UPL species 0		= 0	
2. Elymus repens	10	~		FACU	Column Totals: 60		115	(B)
3					Prevalence Index	- p/A - 1	.91	
4	· <del></del>				Hydrophytic Vegetation			
5					1 - Rapid Test for H			tion
6					2 - Dominance Tes		3	
7					✓ 3 - Prevalence Inde	ex is ≤3.0 <sup>1</sup>		
8					4 - Morphological A	Ndaptations <sup>1</sup>	(Provid	de supporting
9					data in Remarks			
10		= Total	Cov		Problematic Hydro	ohytic Veget	tation' (	(Explain)
Woody Vine Stratum (Plot size: 30 ft r )  1					<sup>1</sup> Indicators of hydric soi be present, unless distu			
2.					Hydrophytic			
8. D. O. H. H. S. S. S. 50		= Total	Cov	er	Vegetation	s	No	
% Bare Ground in Herb Stratum 50  Remarks:					riesent: Te	<u> </u>		
50% litter at data point. Evidence of	hydron	hvtic	· \/	natati	on includes a pr	ovalone	o in	day lacc
than or equal to 3.0.	iyaiop	ייא נוכ	. v c	getati	στι πισιαάθο α μι	CVAIGIIC	,C 1110	GCA ICSS

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SOIL Sampling Point: DP05w

Profile Desc	ription: (Describe	to the depth ne	eded to docun	nent the in	ndicator o	or confirm	the absence of	f indicators.)
Depth	Matrix		Redox	K Features				
(inches)	Color (moist)		olor (moist)	<u></u> %	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0 - 10	10YR 3/1	100					Sandy Clay Loam	
		<del></del>						
<del></del>		· ——						
		· <del></del>						
		. <u> </u>						
-								
-								
1Type: C=Cc	oncentration, D=Dep	letion RM=Redu	iced Matrix, CS	=Covered	or Coate	d Sand Gr	rains <sup>2</sup> Locat	tion: PL=Pore Lining, M=Matrix.
	ndicators: (Applic					u Sanu Si		or Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy G					ck (A9) ( <b>LRR I, J</b> )
_	ipedon (A2)		Sandy F	-				rairie Redox (A16) ( <b>LRR F, G, H</b> )
Black His				Matrix (S				rface (S7) (LRR G)
<u>✓</u> Hydroge	n Sulfide (A4)		Loamy N	Aucky Min	eral (F1)		High Pla	ins Depressions (F16)
Stratified	Layers (A5) (LRR I	=)	Loamy (	Sleyed Ma	trix (F2)		(LRR	H outside of MLRA 72 & 73)
·	ck (A9) ( <b>LRR F, G, I</b>	,		d Matrix (F				Vertic (F18)
	Below Dark Surfac	e (A11)	_	ark Surfa	, ,		·	ent Material (TF2)
	rk Surface (A12) lucky Mineral (S1)			d Dark Sur Depression	, ,		-	allow Dark Surface (TF12) xplain in Remarks)
	lucky Milleral (31) lucky Peat or Peat (	S2) (I RR G H)		ins Depre	` ,	16)		f hydrophytic vegetation and
	cky Peat or Peat (S		_	RA 72 & 7				nydrology must be present,
	on, . out or . out (or	o, (=:::: ,	(			,		isturbed or problematic.
Restrictive L	ayer (if present):							·
Type:								
Depth (inches	s):						Hydric Soil P	resent? Yes 🗸 No
Remarks:								
Sulfidic	odor observe	ad Gravele	and rock	rofuc	al limi	tad av	cavation h	evand 10"
Sumuic	Judi observe	cu. Graveis	allu lucr	ricius	ai iiiiii	teu ex	cavation b	eyona io .
HYDROLO	C.V.							
-	drology Indicators:							
-	ators (minimum of o	ne required; che						/ Indicators (minimum of two required)
	Water (A1)		Salt Crust		(5.40)			ce Soil Cracks (B6)
_	ter Table (A2)		Aquatic Inv					ely Vegetated Concave Surface (B8)
<u>✓</u> Saturatio			✓ Hydrogen :					age Patterns (B10)
	arks (B1)		Dry-Seaso			D	· <u></u>	red Rhizospheres on Living Roots (C3)
·	t Deposits (B2)		Oxidized R		es on Livi	ng Roots (		ere tilled)
	osits (B3)			ot tilled)	d Iron (O.1	`		sh Burrows (C8) ation Visible on Aerial Imagery (C9)
_	t or Crust (B4)		Presence of			.)		
	osits (B5)	magan/ (D7)	Thin Muck					orphic Position (D2)
	on Vis ble on Aerial I tained Leaves (B9)	magery (B7)	Other (Exp	iain in Rei	marks)			Neutral Test (D5)
						1	F105t-1	Heave Hummocks (D7) (LRR F)
Field Observ		es No	/ Dan# /!	boc):				
Surface Water						-		
Water Table		es V No _				-   <u></u> .		D
Saturation Pr (includes cap		es <u>/</u> No	Depth (inc	thes): U		_   Wetla	and Hydrology I	Present? Yes No
	corded Data (stream	gauge, monitori	ng well, aerial p	hotos, pre	evious ins	pections),	if available:	
	•	- <del>-</del> · ·	- · '	7.		. ,,		
Remarks:								
	of wetland had	rology inclus	lee high wa	tar tahl	e culfic	اند مطمء	enil caturat	ion, and geomorphic
	oi weliana nya	rology includ	ies iligii wa	tei tabi	e, suiil	aic oddf	, sun saturat	ion, and geomorphic
position.								

Project/Site: Kindsfater		City/Co	ounty:	Yellows	tone County		Sampling D	ate: 202	4-06-04
Applicant/Owner: MDT					State: N	lontana	Sampling Po	oint: DP0	)6u
Investigator(s): J Trilling		Sectio	n, Tov	vnship, Ra	nge: S06 T2S	R25E			
Landform (hillslope, terrace, etc.): Hillslope		Local	relief	(concave,	convex, none):	Convex		Slope (	%): <u>10</u>
Subregion (LRR):	Lat: 45.	.6952	335		Long: -108.6	6960938		Datum: I	VAD 83
Soil Map Unit Name: Bm - Bew silty clay loam, 0 to 1									
Are climatic / hydrologic conditions on the site typical for this	time of ye	ar? Ye	es	No	(If no, ex	plain in Re	emarks.)		
Are Vegetation, Soil, or Hydrology signs of the sign of the s	gnificantly	disturb	ed?	Are '	'Normal Circum	stances" pr	esent? Yes	s <u> </u>	No
Are Vegetation, Soil, or Hydrology na	-				eded, explain a				
SUMMARY OF FINDINGS - Attach site map s	howing	sam	pling	g point l	ocations, tra	ansects,	importar	nt featu	res, etc.
Hydrophytic Vegetation Present? Yes No	, ,		la 4h	Complet	I Aron				
Hydric Soil Present? Yes No	· ·			Sampled		<b>Υ</b> Δς	No	~	
Wetland Hydrology Present? Yes No			Within	ii a weda					
Remarks:									
Upland sample point is located west	of DPC	)6w	and	wetla	nd cell 7.				
VEGETATION – Use scientific names of plant	s.								
Tree Stratum (Plot size: 30 ft r	Absolute				Dominance 1				
	% Cover				Number of Do That Are OBL				
1 2					(excluding FA		<u>0</u>		(A)
3					Total Number	of Domina	int		
4.					Species Acros		_		(B)
					Percent of Do	minant Sp	ecies		
Sapling/Shrub Stratum (Plot size: 15 ft r )	5	V	,	FACU	That Are OBL			.00	(A/B)
1. Elaeagnus angustifolia					Prevalence I	ndex work	sheet:		
2					Total % C	Cover of:	M	lultiply by:	<u>:</u>
3					OBL species	0	x 1 =	0	
5			_		FACW specie				
	5	= Tota	al Cov	er	FAC species	0	x 3 =	0	
Herb Stratum (Plot size: 5 ft r )			_	LIBI	FACU species				
1. Bromus inermis	65			UPL	UPL species			400	
2. Convolvulus arvensis 3. Poa pratensis	15 10			UPL	Column Total	s: <u>95</u>	(A)	460	(B)
		-		FACU	Prevale	nce Index	= B/A = <u>4</u> .	84	
4					Hydrophytic	Vegetatio	n Indicators	s:	
5 6					1 - Rapid	Test for H	ydrophytic V	egetation/	1
7.					2 - Domir				
8.					3 - Preva				
9.					4 - Morph	nological A	daptations¹ ( or on a sep	(Provide s	supporting
10					Problema		•		•
20.4.	90	= Tota	al Cov	er					
Woody Vine Stratum (Plot size: 30 ft r )  1					<sup>1</sup> Indicators of be present, u				y must
2.					Hydrophytic				
10		= Tota	al Cov	er	Vegetation Present?	Vaa	N	lo 🗸	
% Bare Ground in Herb Stratum 10					Fresent?	res		···	_
Remarks:									
Data point is dominated by the uplan	d gras	s sp	ecie	s Bron	nus inerm	is. No e	evidenc	e of	
hydrophytic vegetation observed.									

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SOIL Sampling Point: DP06u

Profile Desc	ription: (Describe	to the depth n	eeded to docur	nent the i	ndicator	or confirn	n the absence of in	dicators.)
Depth	Matrix			x Features				
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0 - 8	10YR 4/2	100					Clay Loam	
-								
-								
		<del></del>						
		<del></del>		·				
		<del></del>		·				_
		<del></del>		·				
	oncentration, D=Dep					d Sand Gi		: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applic	able to all LRR	s, unless othe	rwise note	ed.)		Indicators for F	Problematic Hydric Soils <sup>3</sup> :
Histosol	` '		Sandy (	-	. ,		1 cm Muck	
-	pipedon (A2)		-	Redox (S5)				e Redox (A16) ( <b>LRR F, G, H</b> )
Black His	` '			d Matrix (S	,			e (S7) ( <b>LRR G</b> )
	n Sulfide (A4)			Mucky Min	, ,		<del>_</del> ~	Depressions (F16)
	Layers (A5) (LRR I	•		Gleyed Ma			•	outside of MLRA 72 & 73)
	ck (A9) (LRR F, G,	,		d Matrix (F			Reduced Ve	` ,
	d Below Dark Surfac ark Surface (A12)	e (ATT)		Dark Surfa d Dark Su				Material (TF2) w Dark Surface (TF12)
	lucky Mineral (S1)			Dark Sur Depression	, ,			ain in Remarks)
	lucky Peat or Peat (	S2) (LRR G. H)		ains Depre	` '	16)		drophytic vegetation and
	cky Peat or Peat (S	, ,		RA 72 & 7			-	rology must be present,
_	,	, ,	•			,	-	rbed or problematic.
Restrictive L	ayer (if present):							
Type:								
Depth (inc	ches):		-				Hydric Soil Pres	ent? Yes No
Remarks:								
No hydri	ic soil indicat	ore obser	ved Cobl	ales re	etricte	d eyc	avation furth	er than 8"
140 Hyan			vca. cobi	310310	3111010	a cho	avacion rai ci	ior trium o .
HYDROLO	GY							
	drology Indicators:							
-	cators (minimum of c		eck all that anni	v)			Secondary Inc	dicators (minimum of two required)
-	Water (A1)	mic required, cir	Salt Crust				·	Soil Cracks (B6)
	ter Table (A2)		Aquatic In		e (B13)			Vegetated Concave Surface (B8)
Saturation	, ,		Hydrogen					Patterns (B10)
	arks (B1)		Dry-Seaso				•	Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized F			ing Poots		
	oosits (B3)			not tilled)	CS OII LIVI	ing i toots		Burrows (C8)
	it or Crust (B4)		Presence	,	d Iron (C4	1		n Visible on Aerial Imagery (C9)
_	osits (B5)		Thin Muck		•	')	<del></del>	hic Position (D2)
-	on Vis ble on Aerial I	magany (P7)	Other (Exp					tral Test (D5)
	tained Leaves (B9)	magery (br)	Other (EX	Dialit III ING	iliaiks)			ave Hummocks (D7) (LRR F)
Field Observ	· ,							ave riammeene (B7) (Entr.)
Surface Water		es No	Depth (in	ches):				
Water Table			Depth (in					
Saturation Pr			Depth (in				and Hydrology Pre	sent? Yes No
(includes cap	oillary fringe)							Joint: 165 NU
Describe Red	corded Data (stream	gauge, monito	ring well, aerial	photos, pre	evious ins	pections),	if available:	
Remarks:								
No evide	ence of wetla	and hydro	logy obse	rved				
5 7 140								

Project/Site: Kindsfater		City/County	/: Yellows	tone County	Sampling Date: 2024-06-04		
Applicant/Owner: MDT				State: Montana	Sampling Point: DP06w		
Investigator(s): E Reynaud							
					e Slope (%): 2		
Subregion (LRR): G 58A	_ Lat: 45.	6952573		Long: -108.696027	Datum: NAD 83		
Soil Map Unit Name: Bm - Bew silty clay loam, 0 to 1	percent s	slopes		NWI classific	ation: PEM1Fx		
Are climatic / hydrologic conditions on the site typical for this							
Are Vegetation, Soil, or Hydrologys	ignificantly	disturbed?	Are '	'Normal Circumstances" p	present? Yes No		
Are Vegetation, Soil, or Hydrology n	naturally pro	blematic?	(If ne	eded, explain any answe	rs in Remarks.)		
SUMMARY OF FINDINGS – Attach site map	showing	samplin	g point l	ocations, transects	, important features, etc.		
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?  Remarks:  Yes   N  N  N	o o		ne Sampled nin a Wetlar		No		
Wetland data point located within w		cell 7.					
VEGETATION – Use scientific names of plan							
<u>Tree Stratum</u> (Plot size: <u>30 ft r</u> ) 1 2	% Cover	-	Status	Dominance Test work  Number of Dominant SI That Are OBL, FACW, (excluding FAC-):	pecies		
3				Total Number of Domin Species Across All Stra			
Sapling/Shrub Stratum (Plot size: 15 ft r		= Total Co		Percent of Dominant Sp That Are OBL, FACW, o			
1 2				Prevalence Index wor	ksheet:		
3.				Total % Cover of:			
4.					x 1 = 12		
5.				FACW species 55			
		= Total Co	ver		x 3 = 0		
Herb Stratum (Plot size: 5 ft r )			E 4 O 14/		x 4 = 84		
1. Alopecurus arundinaceus	55		FACW	UPL species 5			
2. Poa pratensis	15		FACU	Column Totals: 93	(A) <u>231</u> (B)		
3. Typha latifolia 4 Elymus repens	- <del>12</del>		OBL FACU	Prevalence Index	= B/A = 2.48		
5. Bromus inermis	5		UPL	Hydrophytic Vegetation			
			<del></del>	✓ 1 - Rapid Test for H	Hydrophytic Vegetation		
6				✓ 2 - Dominance Tes	it is >50%		
7				✓ 3 - Prevalence Inde	ex is ≤3.0 <sup>1</sup>		
8				4 - Morphological A	Adaptations <sup>1</sup> (Provide supporting		
9					s or on a separate sheet)		
10.	00	= Total Co	ver	Problematic Hydrop	phytic Vegetation <sup>1</sup> (Explain)		
Woody Vine Stratum (Plot size: 30 ft r )  1				<sup>1</sup> Indicators of hydric soi be present, unless distu	l and wetland hydrology must urbed or problematic.		
2				Hydrophytic			
0/ Dave Creamed in Heath Chartery 7		= Total Co	ver	Vegetation Present? Yes	s No		
% Bare Ground in Herb Stratum 7  Remarks:				100			
Evidence of hydrophytic vegetation		-	sitive ra	pid test, a positi	ive dominance test,		

US Army Corps of Engineers

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SOIL Sampling Point: DP06w

Profile Descripti	on: (Describe	to the depth	needed to docun	nent the i	ndicator	or confirm	n the absence of	indicators.)			
Depth	Matrix			x Features	1						
	Color (moist)	<u>%</u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks			
0 - 14 10	YR 5/1	95 1	OYR 5/6	5	<u>C</u>	<u>M</u>	Clay Loam				
-											
-											
<u> </u>											
<sup>1</sup> Type: C=Concer						ed Sand Gr		on: PL=Pore Lining, M=Matrix.			
Hydric Soil Indic	ators: (Applica	able to all LR	Rs, unless other	wise note	ed.)		Indicators for	r Problematic Hydric Soils <sup>3</sup> :			
Histosol (A1)			Sandy C	-	. ,			ck (A9) (LRR I, J)			
Histic Epiped			Sandy F					eirie Redox (A16) (LRR F, G, H)			
Black Histic ( Hydrogen Su				l Matrix (S Mucky Min	,			face (S7) ( <b>LRR G</b> ) ns Depressions (F16)			
	rers (A5) ( <b>LRR F</b>	:)	-	Gleyed Ma			_	H outside of MLRA 72 & 73)			
	49) (LRR F, G, H	,	<u>✓</u> Deplete	-			·	Vertic (F18)			
	ow Dark Surface			ark Surfa				nt Material (TF2)			
Thick Dark S	urface (A12)		Deplete	d Dark Su	rface (F7)	)	Very Shal	llow Dark Surface (TF12)			
_ , ,	y Mineral (S1)			Depression	` '			plain in Remarks)			
	y Peat or Peat (			ins Depre				hydrophytic vegetation and			
5 cm Mucky I	Peat or Peat (S3	B) (LRR F)	(ML	RA 72 & 7	'3 of LRR	: <b>H</b> )	wetland hydrology must be present,				
Restrictive Laye	r (if present):						uniess ais	sturbed or problematic.			
_	i (ii preseiit).										
,. <u> </u>	):		<del>_</del>				Hydric Soil Pr	esent? Yes V No No			
Remarks:	)						Hydric 30ii Fi	esent: lesNo			
								Outstand and attended			
	-		ations commo	on throu	agnout	tne dep	ietea matrix.	Cobbles restricted			
excavation fu	irther than 1	4".									
HYDROLOGY											
Wetland Hydrolo	ogy Indicators:										
Primary Indicators	s (minimum of o	ne required; o	heck all that apply	/)			Secondary	Indicators (minimum of two required)			
Surface Wate	er (A1)		Salt Crust	(B11)			Surface	e Soil Cracks (B6)			
✓ High Water T	able (A2)		Aquatic Inv	ertebrate:	s (B13)		Sparse	ly Vegetated Concave Surface (B8)			
✓ Saturation (A	.3)		Hydrogen	Sulfide Od	dor (C1)		Drainag	ge Patterns (B10)			
Water Marks	(B1)		Dry-Seaso	n Water T	able (C2)		Oxidize	ed Rhizospheres on Living Roots (C3)			
Sediment De	posits (B2)		Oxidized R	hizosphei	res on Liv	ing Roots	(C3) (whe	re tilled)			
Drift Deposits	s (B3)		(where r	ot tilled)			Crayfis	h Burrows (C8)			
Algal Mat or 0	Crust (B4)		Presence	of Reduce	d Iron (C4	1)		tion Visible on Aerial Imagery (C9)			
Iron Deposits	s (B5)		Thin Muck	Surface (	C7)			orphic Position (D2)			
Inundation Vi	is ble on Aerial I	magery (B7)	Other (Exp	lain in Re	marks)		·	eutral Test (D5)			
Water-Staine	ed Leaves (B9)						Frost-H	leave Hummocks (D7) (LRR F)			
Field Observation											
Surface Water Pr			Depth (inc								
Water Table Pres			Depth (inc								
Saturation Preser		es 🖊 No	Depth (inc	ches): 0		Wetla	and Hydrology P	resent? Yes V No No			
(includes capillary Describe Recorde		nauge monit	oring well aerial r	hotos nr	avious ins	nections)	if available:				
2000100 11000100	ou Data (ottoatti	gaage, mom	g, acridi p	o.oo, pre		, couona),	avallable.				
Remarks:											
	uotlond bud		udoo o bisses	uotor 1 -	ble ==:	il octure	tion ======	obio position, and a masitima			
FAC-Neutral	_	ology incl	udes a nigh v	vater ta	ນເe, soi	ıı satura	uon, geomor	ohic position, and a positive			

Project/Site: Kindsfater	(	City/Co	unty:	Yellows	tone County	Sampling	Date:	2024-	06-04
		-			State: Montana				
Investigator(s): E Reynaud		Section	, Tov	vnship, Ra	nge: S06 T2S R25E				
Landform (hillslope, terrace, etc.): Hillslope							Slo	ope (%):	2
Subregion (LRR): G 58A	_ Lat: 45.	69481	179		Long: -108.694903	7	Datı	<sub>um:</sub> NA	D 83
Soil Map Unit Name: Wf - Wanetta clay loam, 0 to 1									
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ar? Yes	s_•	No	(If no, explain in R	emarks.)			
Are Vegetation, Soil, or Hydrologys	significantly	disturbe	ed?	Are "	'Normal Circumstances" p	resent?	Yes	V N	o
Are Vegetation, Soil, or Hydrology r	naturally pro	blemati	c?	(If ne	eded, explain any answe	rs in Rema	arks.)		
SUMMARY OF FINDINGS – Attach site map	showing	samp	oling	g point l	ocations, transects	, import	tant fe	eature	s, etc.
Hydrophytic Vegetation Present? Yes N Hydric Soil Present? Yes N Wetland Hydrology Present? Yes N Remarks:	o			e Sampled n a Wetlar		No	<u> </u>		
Upland point located near southwes		r of v	wet	land co	ell 9.				
VEGETATION – Use scientific names of plan					· · · · · ·				
<u>Tree Stratum</u> (Plot size: <u>30 ft r</u> ) 1 2		Specie	es?	Status	Number of Dominant S That Are OBL, FACW, (excluding FAC-):	pecies	0		(A)
3					Total Number of Domin Species Across All Stra		1		(B)
Sapling/Shrub Stratum (Plot size: 15 ft r )					Percent of Dominant Sp That Are OBL, FACW,		0.00		(A/B)
2.					Prevalence Index wor	ksheet:			
3.					Total % Cover of:				
4						x 1			
5					FACW species 0				
Little Control (Division 5 ft r		= Total	Cov	er	FAC species 0 0				_
Herb Stratum (Plot size: 5 ft r  1. Bromus inermis	80	/		UPL	UPL species 95	x 4		5	_
2. Bromus tectorum	8			UPL	Column Totals: 95				— (B)
3. Convolvulus arvensis	7			UPL					_ 、 ,
4					Prevalence Index				_
5					Hydrophytic Vegetation			4 - 4'	
6					1 - Rapid Test for H 2 - Dominance Tes		_	tation	
7					3 - Prevalence Inde				
8					4 - Morphological A			vide sun	norting
9					data in Remarks	or on a s	eparate	e sheet)	porting
10	^-				Problematic Hydro	ohytic Veg	etation	<sup>1</sup> (Explai	in)
Woody Vine Stratum (Plot size: 30 ft r )  1		= Total			<sup>1</sup> Indicators of hydric soi be present, unless distu				nust
2		= Total	Cov	 er	Hydrophytic Vegetation Present? Ye	s	No _	<u> </u>	
Remarks:  Data point is dominated by Bromis in									

SOIL Sampling Point: DP07u

Profile Desc	ription: (Describe	to the depth ne	eded to docur	nent the i	ndicator	or confirm	n the absence of i	ndicators.)
Depth Matrix Redox Features						_		
(inches)	Color (moist)		olor (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 11	10YR 4/2	100					Clay Loam	
	-	<u> </u>						
-								
-								
								·
		<del></del>		·				
		<del></del>		·				_
	-	<u>-</u>						
		<u> </u>						
	oncentration, D=Dep					d Sand Gr		n: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applic	able to all LRR	s, unless othe	rwise note	ed.)		Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histosol	` '		Sandy (	-	. ,			(A9) ( <b>LRR I, J</b> )
-	pipedon (A2)		-	Redox (S5)				rie Redox (A16) (LRR F, G, H)
Black His	` '			d Matrix (S	,			ce (S7) (LRR G)
	n Sulfide (A4)	<b>-</b> \		Mucky Min	, ,			s Depressions (F16)
	Layers (A5) (LRR I			Gleyed Ma			•	outside of MLRA 72 & 73)
	ick (A9) ( <b>LRR F, G</b> , l d Below Dark Surfac	•		d Matrix (F Dark Surfa			Reduced V	t Material (TF2)
	ark Surface (A12)	e (ATT)		d Dark Sulla				ow Dark Surface (TF12)
	lucky Mineral (S1)			Depression	, ,			lain in Remarks)
	lucky Peat or Peat (	S2) ( <b>LRR G. H</b> )			. ,	16)		ydrophytic vegetation and
2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H)								drology must be present,
	,	, ,	`			,	-	urbed or problematic.
Restrictive L	ayer (if present):							
Type:								
Depth (inc	ches):						Hydric Soil Pre	sent? Yes No
Remarks:								
No hydri	ic soil indicat	ore obser	ved Cobl	alas ra	etricte	d eve	avation furtl	her than 11"
ivo ilyan		.013 00361	ved. Cobi	316316	3111010	Ju CAC	avadon fuld	iei tilaii ii .
HYDROLO	GY							
	drology Indicators:							
_	cators (minimum of c		ack all that anal	w)			Socondon, Ir	adjectors (minimum of two required)
-	•	nie required, che					-	ndicators (minimum of two required)
	Water (A1)		Salt Crust Aquatic In		- (D12)			Soil Cracks (B6)
	ter Table (A2)							Vegetated Concave Surface (B8)
Saturatio			Hydrogen				<u> </u>	e Patterns (B10)
	arks (B1)		Dry-Seaso			D		d Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized F		es on Livi	ing Roots		e tilled)
	oosits (B3)		•	not tilled)	-1.1 (0.4	1.		Burrows (C8)
_	t or Crust (B4)		Presence		•	+)	· · · · · · · · · · · · · · · · · · ·	on Visible on Aerial Imagery (C9)
-	osits (B5)	(07)	Thin Muck					phic Position (D2)
	on Vis ble on Aerial I	magery (B7)	Other (Exp	olain in Re	marks)			utral Test (D5)
Field Observ	tained Leaves (B9)						Frost-He	eave Hummocks (D7) (LRR F)
		Yaa Nia	V Daniel (in	-1 > -				
Surface Wate		es No _						
Water Table		es No _						
Saturation Pr (includes cap		es No _	Depth (in	ches):		_ Wetl	and Hydrology Pr	esent? Yes No
	corded Data (stream	gauge, monitor	ing well, aerial i	photos, pre	evious ins	pections),	if available:	
	`	-	- '	•		,,		
Remarks:								
		التنامية	ا - ا - ا	m ra al				
No evide	ence of wetla	ana nydrol	ogy obse	rved.				

Project/Site: Kindsfater	(	City/Coun	ty: Yellows	tone County	Sampling Date: 2024-06-04
Applicant/Owner: MDT		•	•		Sampling Point: DP07w
Investigator(s): E Reynaud		Section, T	Township, Rai	nge: S06 T2S R25E	
Landform (hillslope, terrace, etc.): Depression		Local reli	ef (concave,	convex, none): Concave	Slope (%): 2
Subregion (LRR): G 58A	Lat: 45.	<b>6947</b> 55	1	Long: -108.6948222	Datum: NAD 83
Soil Map Unit Name: Wf - Wanetta clay loam, 0 to 1 p				=	
Are climatic / hydrologic conditions on the site typical for this	time of year	ar? Yes_	✓ No_	(If no, explain in Ro	emarks.)
Are Vegetation, Soil, or Hydrology si	gnificantly of	disturbed'	? Are "	Normal Circumstances" p	resent? Yes No
Are Vegetation, Soil, or Hydrology na				eded, explain any answei	
SUMMARY OF FINDINGS – Attach site map s	showing	sampli	ng point l	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?  Yes  V No  No  Remarks:			the Sampled thin a Wetlar		No
Wetland data point located near SW		wetla	and cell (	9.	
VEGETATION – Use scientific names of plant	s.				
<u>Tree Stratum</u> (Plot size: <u>30 ft r</u> ) 1 2		Species		Number of Dominant Sp That Are OBL, FACW, of (excluding FAC-):	pecies
3				Total Number of Domina Species Across All Stra	_
Sapling/Shrub Stratum (Plot size: 15 ft r )			over FACW	Percent of Dominant Sp That Are OBL, FACW, o	
1. Salix exigua 2.		-		Prevalence Index worl	ksheet:
3.					Multiply by:
4.					x 1 = 0
5					x 2 = 150
Li i di cara di Cara di Fiftir	20	= Total C	over	FAC species 0  FACU species 30	x 3 = 0
Herb Stratum (Plot size: 5 ft r  Juncus balticus	55	V	FACW	UPL species 0	
2 Elymus repens	15		FACU	Column Totals: 105	
3. Poa pratensis	15	-	FACU		
4				Prevalence Index	·
5				Hydrophytic Vegetation ✓ 1 - Rapid Test for H	
6				✓ 1 - Rapid Test for P	
7				✓ 3 - Prevalence Inde	
8					daptations <sup>1</sup> (Provide supporting
9					s or on a separate sheet)
10	^-			Problematic Hydrop	ohytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 30 ft r ) 1.		= Total C		<sup>1</sup> Indicators of hydric soil be present, unless distu	and wetland hydrology must irbed or problematic.
2.				Hydrophytic	
% Bare Ground in Herb Stratum 15		= Total C	over	Vegetation Present? Yes	s <u> </u>
Remarks:					
Evidence of hydrophytic vegetation i and a prevalence index of less than o		•		pid test, a positi	ive dominance test,

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SOIL Sampling Point: DP07w

Profile Desc	cription: (Describe	to the depth	needed to docum	nent the i	ndicator	or confir	m the absence of ind	icators.)
Depth	Depth Matrix Redox Features				. 2			
(inches)	Color (moist)		Color (moist)		Type'	_Loc <sup>2</sup>	<u>Texture</u>	Remarks
0 - 16	10YR 6/2	98 7	7.5YR 4/6	2	<u>C</u>	М	Clay Loam	
							·	
-								
-							·	
	-				-		·	
				· <del></del>				
				· <del></del>				
1-								
	oncentration, D=Deplicators: (Applic					ed Sand G		PL=Pore Lining, M=Matrix.  oblematic Hydric Soils <sup>3</sup> :
Histosol		Sable to all Li	Sandy C				1 cm Muck (A	•
	pipedon (A2)			Redox (S5				Redox (A16) ( <b>LRR F, G, H</b> )
	istic (A3)		-	l Matrix (S				(S7) (LRR G)
Hydroge	en Sulfide (A4)				neral (F1)			Depressions (F16)
	d Layers (A5) ( <b>LRR</b>			Gleyed Ma			,	utside of MLRA 72 & 73)
	uck (A9) (LRR F, G,		<u>✓</u> Deplete				Reduced Ver	• •
-	d Below Dark Surfac ark Surface (A12)	æ (ATT)		ark Surfa	ice (F6) irface (F7	١	Red Parent N	Dark Surface (TF12)
	Mucky Mineral (S1)			Depression	•	,		n in Remarks)
2.5 cm N	Mucky Peat or Peat	(S2) ( <b>LRR G</b> ,			essions (F	16)	3Indicators of hyd	rophytic vegetation and
5 cm Mu	ucky Peat or Peat (S	3) ( <b>LRR F</b> )	(ML	RA 72 & 7	73 of LRR	<b>H</b> )		plogy must be present,
Doctrictive	1 (:f						unless disturt	ped or problematic.
Type:	Layer (if present):							
Depth (in	ches):						Hydric Soil Prese	nt? Yes 🗸 No
Remarks:	, <u> </u>						Hydric 3011 Frese	iit: 165 NO
Promine	ent redoximo	rphic co	ncentration	s com	mon w	ithin (	depleted matr	ix.
HYDROLO								
_	drology Indicators							
	cators (minimum of	one required;					•	cators (minimum of two required)
	Water (A1)		Salt Crust		(0.40)		Surface So	
_	ater Table (A2)		Aquatic Inv					egetated Concave Surface (B8)
Saturation Water M	larks (B1)		Hydrogen : Dry-Seaso					Patterns (B10) thizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized R					
	posits (B3)		· · · · · · · · · · · · · · · · · · ·	not tilled)		ing receis	Crayfish B	•
	at or Crust (B4)		Presence	,		4)		Visible on Aerial Imagery (C9)
	posits (B5)		Thin Muck				✓ Geomorph	ic Position (D2)
Inundati	on Vis ble on Aerial	Imagery (B7)	Other (Exp	lain in Re	emarks)		FAC-Neutr	al Test (D5)
Water-S	tained Leaves (B9)						Frost-Heav	e Hummocks (D7) (LRR F)
Field Obser								
Surface Wat			Depth (inc					
Water Table			Depth (inc			_		
Saturation P		res No	Depth (inc	ches): 0		Wet	land Hydrology Pres	ent? Yes V No No
(includes cap Describe Re	corded Data (strean	n gauge, mon	itoring well, aerial r	ohotos, pr	evious ins	pections)	, if available:	
	(	5 5 7	,	, 1,,,		/		
Remarks:								
Fyidence	of wetland hyd	Irology inc	ludes soil sati	ıration	high w	ater tel	nle geomorphic	position, and a positive
FAC-Neut	-	ii ology IIIC	14463 3011 3dll	aration,	, ingii w	ater tal	oie, geomorpine	position, and a positive
1 AC-Neu	נומו נכטנ.							

Project/Site: Kindsfater	(	City/Co	ounty:	Yellows	tone County	Sampling	Date: 2	2024-06-0	)4
					State: Montana				
Investigator(s): J Trilling							_		
Landform (hillslope, terrace, etc.): Hillslope							Slop	e (%): 10	
Subregion (LRR): G 58A									
Soil Map Unit Name: Wf - Wanetta clay loam, 0 to 1									
Are climatic / hydrologic conditions on the site typical for this									
Are Vegetation, Soil, or Hydrologys	-				Normal Circumstances"		es 🗸	No	
Are Vegetation, Soil, or Hydrology n					eded, explain any answe				
SUMMARY OF FINDINGS – Attach site map								atures, et	C.
Hydrophytic Vegetation Present? Yes N	, <i>'</i>								
Hydric Soil Present? Yes N	o			e Sampled n a Wetlar		No _	~		
Wetland Hydrology Present? Yes N	o <u> </u>		WILIII	ii a vvetiai	iu: 165	NO_			
Remarks:									
Upland sample point located west of	DP08v	٧.							
VEGETATION – Use scientific names of plan	ts.								
Tree Stratum (Plot size: 30 ft r	Absolute % Cover				Dominance Test worl				
Elaeagnus angustifolia	% Cover			FACU	Number of Dominant S That Are OBL, FACW,	•			
2.					(excluding FAC+):	OI FAC	0	(A)	
3.					Total Number of Domii	nant			
4.					Species Across All Stra		2	(B)	
	5	= Tota	l Cov	er	Percent of Dominant S	necies			
Sapling/Shrub Stratum (Plot size: 15 ft r )					That Are OBL, FACW,		0.00	(A/B	)
1	-				Prevalence Index wo	rksheet:			
2					Total % Cover of:		Multiply	bv:	
3						x 1			
4					FACW species 3				
5		- Tota	L Cov		FAC species 1				
Herb Stratum (Plot size: 5 ft r		= Tota	II COV	еі	FACU species 84				
1. Elymus repens	75		<u>,</u>	FACU	UPL species 15	x 5	= 75		
2. Bromus inermis	15			UPL	Column Totals: 103	(A)	420	(B)	1
3. Cirsium arvense	4			FACU	Prevalence Index	. – D/A –	4.07		
4. Salix exigua	3			FACW	Hydrophytic Vegetati				
5. Rumex salicifolius				UPL	1 - Rapid Test for			tion	
6					2 - Dominance Te		, rogota		
7					3 - Prevalence Ind				
8					4 - Morphological	Adaptations	1 (Provid	de supportin	g
9					data in Remark	s or on a se	eparate	sheet)	•
10	~~	= Tota			Problematic Hydro	phytic Vege	etation <sup>1</sup>	(Explain)	
Woody Vine Stratum (Plot size: 30 ft r )					<sup>1</sup> Indicators of hydric so be present, unless dist				
1									_
2					Hydrophytic Vegetation				
% Bare Ground in Herb Stratum 2		- 10ta	ıı COV	El		es	No		
Remarks:					ı				
The upland grass species Elymus rep	nens is	dom	nina	nt at th	nis sample noin	t No ev	/iden	ce of	
hydrophytic vegetation observed	33 13	3011			campio poin			J J J I	

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SOIL Sampling Point: DP08u

Profile Desc	ription: (Describe	to the depth ne	eded to docur	nent the i	ndicator	or confirn	n the absence of in	adicators.)			
Depth Matrix Redox Features											
(inches)	Color (moist)		olor (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks			
0 - 14	10YR 4/2	100					Clay Loam				
<u> </u>											
		·		·				_			
		·									
		<del></del>									
	-										
-											
-		- <u></u>									
¹Type: C=Co	oncentration, D=Dep	letion RM=Red	uced Matrix CS	S=Covered	or Coate	d Sand G	rains <sup>2</sup> Location	n: PL=Pore Lining, M=Matrix.			
	ndicators: (Applic					u Garia Gi		Problematic Hydric Soils <sup>3</sup> :			
Histosol			Sandy (				1 cm Muck	•			
	pipedon (A2)			Redox (S5)	. ,			ie Redox (A16) ( <b>LRR F, G, H</b> )			
Black Hi			-	d Matrix (S				ce (S7) (LRR G)			
Hydroge	n Sulfide (A4)		Loamy	Mucky Min	eral (F1)		High Plains	Depressions (F16)			
Stratified	l Layers (A5) ( <b>LRR I</b>	=)		Gleyed Ma			(LRR H	outside of MLRA 72 & 73)			
	ck (A9) ( <b>LRR F, G,</b> l	,		d Matrix (F			Reduced V	,			
-	Below Dark Surfac	e (A11)		Dark Surfa			· · · · · · · · · · · · · · · · · · ·	Material (TF2)			
	ark Surface (A12) lucky Mineral (S1)			d Dark Sui Depressior	` ,			w Dark Surface (TF12) ain in Remarks)			
	lucky Milleral (31) /lucky Peat or Peat (	S2) (I RR G H)		ains Depre	. ,	16)		drophytic vegetation and			
	cky Peat or Peat (S		_	RA 72 & 7			-	Irology must be present,			
	(5)	-, (=,	(			,	-	urbed or problematic.			
Restrictive L	ayer (if present):							-			
Type:											
Depth (inche	s):						Hydric Soil Pres	sent? Yes No			
Remarks:											
No hydri	c soil indicat	ore obser	ved Cobl	alee re	etricte	ad eve	avation furth	per than 1/1"			
140 Hyan		.013 00301	vca. oobi	310310	3111010	o CAC	avacion rai ci	ici tilali 14 .			
HYDROLO	GY										
	drology Indicators:										
-			ack all that anal	· · ·			Socondan/In	diasters (minimum of two required)			
-	cators (minimum of c	nie required, crie					-	dicators (minimum of two required)			
	Water (A1)		Salt Crust Aquatic In		- (D40)			Soil Cracks (B6)			
	ter Table (A2)				. ,			Vegetated Concave Surface (B8) Patterns (B10)			
Saturatio	arks (B1)		Hydrogen Dry-Seaso				<u> </u>	Rhizospheres on Living Roots (C3)			
	at Deposits (B2)		Oxidized F			ina Poots					
	oosits (B3)			not tilled)	CO OII LIVI	y 1.0018		Burrows (C8)			
	it or Crust (B4)		Presence		d Iron (C4	1)	<del></del> ·	n Visible on Aerial Imagery (C9)			
_	osits (B5)		Thin Muck		,	')		phic Position (D2)			
-	on Vis ble on Aerial I	magery (B7)	Other (Exp					utral Test (D5)			
	tained Leaves (B9)	magery (Br)	Outer (EX		marko)			ave Hummocks (D7) (LRR F)			
Field Observ	· ,							2.7 (2.11.1)			
Surface Water		es No _	Penth (in	ches):							
Water Table		es No _									
Saturation Pr		es No _					and Hydrology Pre	esent? Yes No			
(includes cap	oillary fringe)							NO			
	corded Data (stream	gauge, monitor	ing well, aerial (	photos, pre	evious ins	pections),	if available:				
Remarks:											
No avido	ence of wetla	and hydrol	oay obso	rved							
INO EVIUE	SIICE OI WELIC	and nydroi	ogy obse	ı veu.							

Project/Site: Kindsfater		City/Cou	ınty: Yellows	tone County	Sampling Date: 2024-06-04		
Applicant/Owner: MDT				State: Montana	Sampling Point: DP08w		
Investigator(s): E Reynaud Section, Township, Range: S06 T2S R25E							
		e, convex, none): Concave Slope (%): 1					
					Datum: NAD 83		
Soil Map Unit Name: Wf - Wanetta clay loam, 0 to							
Are climatic / hydrologic conditions on the site typical for							
Are Vegetation, Soil, or Hydrology	-				resent? Yes No		
Are Vegetation, Soil, or Hydrology							
SUMMARY OF FINDINGS – Attach site ma							
Hydrophytic Vegetation Present? Yes	No						
Hydric Soil Present? Yes	No		s the Sampled vithin a Wetlar		No		
Wetland Hydrology Present? Yes	No	v	vitilili a vvetiai	id: Tes	NO		
Remarks:							
Wetland data point located within	wetland o	cell 1	3.				
P. C.							
VEGETATION Lies eciontific names of pla	nnte						
VEGETATION – Use scientific names of pla		D		I Danish and Tank and	-bd		
Tree Stratum (Plot size: 30 ft r	Absolute % Cover		ant Indicator	Dominance Test work			
1. Elaeagnus angustifolia	15		FACU	Number of Dominant Sp That Are OBL, FACW, of			
Populus deltoides	15	~	FAC	(excluding FAC-):	<u>3</u> (A)		
3.				Total Number of Domin	ant		
4				Species Across All Stra	_		
45.64	30	= Total	Cover	Percent of Dominant Sp	pecies		
Sapling/Shrub Stratum (Plot size: 15 ft r )	70	V	FACW	That Are OBL, FACW, o			
1. Salix exigua			FACV	Prevalence Index wor	ksheet:		
2		-		Total % Cover of:			
3				OBL species 0	x 1 = 0		
4				FACW species 105	x 2 = <u>210</u>		
5		= Total	Cover	FAC species 15	x 3 = 45		
Herb Stratum (Plot size: 5 ft r	70	- TOLAI	Covei	FACU species 40	x 4 = 160		
1. Juncus balticus	35		FACW	UPL species 10			
2. Poa pratensis	15		FACU	Column Totals: 170	(A) <u>465</u> (B)		
3. Bromus inermis	10		<u>UPL</u>	Prevalence Index	- D/A - 2.73		
4. Elymus repens	10		FACU	Hydrophytic Vegetation			
5				1 - Rapid Test for H			
6				✓ 2 - Dominance Tes			
7				✓ 3 - Prevalence Inde			
8				<del></del>	adaptations <sup>1</sup> (Provide supporting		
9				data in Remarks	s or on a separate sheet)		
10	70			Problematic Hydro	ohytic Vegetation <sup>1</sup> (Explain)		
Woody Vine Stratum (Plot size: 30 ft r )  1		= Total		<sup>1</sup> Indicators of hydric soi be present, unless distu	l and wetland hydrology must irbed or problematic.		
2				Hydrophytic			
			Cover	Vegetation	<b>v</b>		
% Bare Ground in Herb Stratum 30	<u>-</u>			Present? Yes	s No		
Remarks:							
The groundcover in this point was comprised of 30% water. Evidence of hydrophytic vegetation includes		_	-				

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SOIL Sampling Point: DP08w

Profile Desc	ription: (Describe	to the depth ne	eded to docur	nent the in	ndicator	or confirm	n the absence of ir	ndicators.)	
Depth Matrix Redox Features					<del></del>				
(inches)	Color (moist)		olor (moist)	<u></u> %	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks	
0 - 4	10YR 5/1	100					Clay Loam		
-									
-									
	-	<del></del>							
		<del></del>							
		· —— —							
		. <u></u>							
-									
¹Type: C=Co	oncentration, D=Dep	letion, RM=Red	uced Matrix, CS	S=Covered	or Coate	d Sand Gr	rains. <sup>2</sup> Location	n: PL=Pore Lining, M=Matrix.	
Hydric Soil I	ndicators: (Applic	able to all LRRs	s, unless other	wise note	ed.)		Indicators for I	Problematic Hydric Soils <sup>3</sup> :	
Histosol	(A1)		Sandy C	Sleyed Ma	trix (S4)		1 cm Muck	(A9) (LRR I, J)	
	pipedon (A2)		Sandy F	Redox (S5)	)			ie Redox (A16) (LRR F, G, H)	
Black His	` '		Stripped	•	,			ce (S7) (LRR G)	
	n Sulfide (A4)			Mucky Min			<del>-</del> -	Depressions (F16)	
	Layers (A5) (LRR I			Gleyed Ma			`	outside of MLRA 72 & 73)	
	ick (A9) ( <b>LRR F, G,</b> l d Below Dark Surfac		<u>✓</u> Deplete	o Matrix (F Dark Surfa	,		Reduced V	ertic (F18) : Material (TF2)	
	ark Surface (A12)	e (ATT)		d Dark Sui				w Dark Surface (TF12)	
	lucky Mineral (S1)			Depression	` ,			ain in Remarks)	
	Mucky Peat or Peat (	S2) ( <b>LRR G, H</b> )		ins Depre	` ,	16)		drophytic vegetation and	
5 cm Mu	cky Peat or Peat (S	3) ( <b>LRR F</b> )	(ML	RA 72 & 7	3 of LRR	<b>H</b> )	wetland hyd	Irology must be present,	
							unless dist	urbed or problematic.	
Restrictive L	_ayer (if present):								
Type:								_	
Depth (inc	ches):						Hydric Soil Pres	sent? Yes V No No	
Remarks:									
Cobbles	and gravel res	stricted exc	cavation be	eyond 4	1". Hyd	Iric soil	indicators in	clude depleted matrix.	
HYDROLO	GY								
Wetland Hyd	drology Indicators:								
-	cators (minimum of c		eck all that apply	<b>v</b> )			Secondary In	dicators (minimum of two required)	
-	Water (A1)		Salt Crust				•	Soil Cracks (B6)	
	ter Table (A2)		Aquatic Inv		s (B13)			Vegetated Concave Surface (B8)	
✓ Saturation			Hydrogen					e Patterns (B10)	
	arks (B1)		Dry-Seaso				_	Rhizospheres on Living Roots (C3)	
	nt Deposits (B2)		Oxidized F					e tilled)	
· <del></del>	oosits (B3)			not tilled)		Ü		Burrows (C8)	
	it or Crust (B4)		Presence		d Iron (C4	<b>!</b> )		on Visible on Aerial Imagery (C9)	
Iron Dep	osits (B5)		Thin Muck	Surface (0	27)		✓ Geomory	phic Position (D2)	
Inundation	on Vis ble on Aerial I	magery (B7)	Other (Exp	lain in Rei	marks)		FAC-Neu	utral Test (D5)	
Water-S	tained Leaves (B9)						Frost-He	ave Hummocks (D7) (LRR F)	
Field Observ	vations:								
Surface Water	er Present? Y	es No _	Depth (inc	ches):		_			
Water Table		es <u> </u>				_			
Saturation Pr	resent? Y	es <u>/</u> No _				Wetl	and Hydrology Pre	esent? Yes No	
(includes cap	oillary fringe)				wiere !==	nootion:	if available:		
Describe Rec	corded Data (stream	gauge, monitori	ng well, aerial p	niolos, pre	VIOUS INS	pections),	n avanable.		
Remarks:									
Evidence	of wetland h	ydrology in	cludes soi	l satura	ition, h	igh wa	ter table, and	geomorphic position.	

Project/Site: Kindsfater	(	City/Coun	ty: Yellows	tone County	Sampling Date: 2024-06-04
		-	-		Sampling Point: DP09u
Investigator(s): E Reynaud					
Landform (hillslope, terrace, etc.): Hillslope				=	Slone (%): 2
Subregion (LRR): G 58A					
Soil Map Unit Name: Wf - Wanetta clay loam, 0 to 1 p					
Are climatic / hydrologic conditions on the site typical for this					
Are Vegetation, Soil, or Hydrology si					oresent? Yes 🔽 No
Are Vegetation, Soil, or Hydrology no				eeded, explain any answe	
SUMMARY OF FINDINGS – Attach site map s	showing	sampli	ing point l	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Remarks:			the Sampled thin a Wetlar		No <u> </u>
Upland data point located near W bo		wetla	and cell 1	4.	_
VEGETATION – Use scientific names of plant		Danaina	at lasticates	B	ab and
<u>Tree Stratum</u> (Plot size: <u>30 ft r</u> )  1 2	% Cover	Species		Dominance Test work  Number of Dominant Sp That Are OBL, FACW, of (excluding FAC-):	pecies
3. 4.				Total Number of Domini Species Across All Stra	_
Sapling/Shrub Stratum (Plot size: 15 ft r				Percent of Dominant Sp That Are OBL, FACW, o	
1 2				Prevalence Index worl	ksheet:
3.					Multiply by:
4					x 1 = 0
5.					x 2 = 0
- 6		= Total C	over	FAC species 2	x 3 = 6
Herb Stratum (Plot size: 5 ft r )	40	~	UPL	FACU species 13 UPL species 67	
1. Bromus inermis 2 Bromus japonicus	20		UPL	Column Totals: 82	
Poa compressa	10		FACU	Column Totals. <u>32</u>	(A) (B)
4 Convolvulus arvensis	5		UPL	Prevalence Index	= B/A = <u>4.79</u>
5 Sporobolus cryptandrus	3		FACU	Hydrophytic Vegetation	
6. Lactuca serriola	2 2		FAC	1 - Rapid Test for H	• • •
7. Medicago sativa	2		UPL	2 - Dominance Tes	
8. Nassella viridula	1			3 - Prevalence Inde	
9				data in Remarks	Adaptations <sup>1</sup> (Provide supporting s or on a separate sheet)
10				Problematic Hydrop	phytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size: 30 ft r )  1		= Total C		<sup>1</sup> Indicators of hydric soil be present, unless distu	l and wetland hydrology must urbed or problematic.
2 % Bare Ground in Herb Stratum 17	-			Hydrophytic Vegetation Present? Yes	s No
Remarks:				•	
Data point is dominated by upland ve	egetation	on.			

SOIL Sampling Point: DP09u

Profile Desc	ription: (Describe	to the depth ne	eded to docur	nent the i	ndicator	or confirm	n the absence of in	ndicators.)
Depth	Matrix			x Features				
(inches)	Color (moist)		olor (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0 - 14	10YR 4/2	100					Clay Loam	
_								_
		· ——		·				_
		<del></del>						•
		<del></del>						
	-	<u> </u>						
-								
-								
¹Type: C=Co	oncentration, D=Dep	letion RM=Red	uced Matrix CS	S=Covered	or Coate	d Sand Gr	rains <sup>2</sup> l ocation	n: PL=Pore Lining, M=Matrix.
	ndicators: (Applic					u Sanu Gi		Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy (					(A9) (LRR I, J)
	pipedon (A2)			Redox (S5)	. ,			rie Redox (A16) ( <b>LRR F, G, H</b> )
Black His			-	d Matrix (S				ce (S7) (LRR G)
Hydroge	n Sulfide (A4)		Loamy	Mucky Min	eral (F1)		High Plains	s Depressions (F16)
Stratified	l Layers (A5) ( <b>LRR I</b>	=)		Gleyed Ma			(LRR H	outside of MLRA 72 & 73)
	ck (A9) ( <b>LRR F, G,</b> l	,		d Matrix (F			Reduced V	` '
	Below Dark Surfac	e (A11)		Dark Surfa				t Material (TF2)
	ark Surface (A12) lucky Mineral (S1)			d Dark Su Depressior				ow Dark Surface (TF12) lain in Remarks)
	lucky Milleral (31) /lucky Peat or Peat (	S2) (I RR G H)		ains Depre	. ,	16)		ydrophytic vegetation and
	cky Peat or Peat (S			RA 72 & 7				drology must be present,
	(0)	-, (=:::: ,	(			,	-	urbed or problematic.
Restrictive L	ayer (if present):							
Type:								
Depth (inc	ches):						Hydric Soil Pre	sent? Yes No
Remarks:								
No bydri	c soil indicat	ore obser	ved Cobl	oloc ro	ctricto	d ove	avation furth	her than 14"
NO HYUH	ic son maicai	iois obsei	veu. Cobi	)ies i e	Stricte	o exc	avation fulti	iei tilali 14 .
HYDROLO(	GV							
-	drology Indicators:			,			0	
-	cators (minimum of c	ne required; che					-	ndicators (minimum of two required)
	Water (A1)		Salt Crust		(5.46)			Soil Cracks (B6)
	ter Table (A2)		Aquatic In					Vegetated Concave Surface (B8)
Saturatio			Hydrogen				•	e Patterns (B10)
	arks (B1)		Dry-Seaso			D		d Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized F		es on Livi	ing Roots		e tilled)
	oosits (B3)		•	not tilled)	al lua ua (C.4	1)		Burrows (C8)
_	t or Crust (B4)		Presence		•	+)	<del></del>	on Visible on Aerial Imagery (C9)
-	osits (B5)	magany (DZ)	Thin Muck					phic Position (D2)
	on Vis ble on Aerial I	magery (b7)	Other (Exp	olain in Re	marks)			utral Test (D5)
Field Observ	tained Leaves (B9)						F105t-F16	eave Hummocks (D7) (LRR F)
		ra Na	✓ Dandh (in	-l\.				
Surface Water		es No _						
Water Table		es No _						
Saturation Pr (includes cap		es No _	Depth (in	ches):		Wetl	and Hydrology Pro	esent? Yes No
	corded Data (stream	gauge, monitor	ing well, aerial i	photos, pre	evious ins	pections),	if available:	
	,				- '	. "		
Remarks:								
		ا بندا امید						
No evide	ence of wetla	and hydrol	ogy obse	rved.				

Project/Site: Kindsfater	(	City/County	<sub>v:</sub> Yellows	tone County	Sampling Da	te: 2024-06-04
Applicant/Owner: MDT				State: Montana		
Investigator(s): E Reynaud		Section, To	ownship, Ra	nge: S06 T2S R25E		
Landform (hillslope, terrace, etc.): Hillslope				=	е	Slope (%): 2
Subregion (LRR): G 58A						
Soil Map Unit Name: Wf - Wanetta clay loam, 0 to 1				=		
Are climatic / hydrologic conditions on the site typical for this						
Are Vegetation, Soil, or Hydrologys	-			"Normal Circumstances" p		✓ No
Are Vegetation, Soil, or Hydrology r				eeded, explain any answe		
SUMMARY OF FINDINGS – Attach site map						
	o o o	with	ne Sampled nin a Wetlar	nd? Yes <u></u>	No	_
Wetland data point located within w VEGETATION – Use scientific names of plan		cell 14.				
VEGETATION – Ose scientific flames of plan	Absolute	Dominan	t Indicator	Dominance Test work	rshoot.	
Tree Stratum (Plot size: 30 ft r )		Species?		Number of Dominant S		
1. Populus deltoides	30			That Are OBL, FACW,		(4)
2. Elaeagnus angustifolia			FACU	(excluding FAC-):		(A)
3			·	Total Number of Domin Species Across All Stra		(B)
4			. ———	Species Across Air Stra	ila. <u>5</u>	(Б)
Sapling/Shrub Stratum (Plot size: 15 ft r )	33	= Total Co	ver	Percent of Dominant Sp That Are OBL, FACW,		0.00 (A/B)
1. Salix exigua	70		FACW			(/ 12/
2				Prevalence Index wor		Je b. b
3				Total % Cover of: OBL species 0	x 1 = _	ıltiply by:
4				FACW species 160		
5				FAC species 30		
Herb Stratum (Plot size: 5 ft r	<u>/0</u>	= Total Co	ver	FACU species 5		
1 Juncus balticus	80	<b>~</b>	FACW	UPL species 0		
2. Carex praegracilis	10		FACW	Column Totals: 195		430 (B)
3.				Prevalence Index	r = R/A = 2.2	.0
4				Hydrophytic Vegetation		
5				1 - Rapid Test for H		
6				✓ 2 - Dominance Tes		
7				✓ 3 - Prevalence Inde	ex is ≤3.0 <sup>1</sup>	
8				4 - Morphological A	Adaptations <sup>1</sup> (F	Provide supporting
9				data in Remarks	•	•
10.	~~	= Total Co	ver	Problematic Hydro	phytic Vegetat	ion (Explain)
Woody Vine Stratum (Plot size: 30 ft r )  1				<sup>1</sup> Indicators of hydric soi be present, unless distu		
2.				Hydrophytic		
		= Total Co	ver	Vegetation Present? Ye	s <u> </u>	o
% Bare Ground in Herb Stratum 10				i-resent! Te	- NO	<u>′—</u> —
Remarks:	•	•				
Salix exigua in the shrub strata is the do		•		-	-	
vegetation includes a positive dominand	ce test a	and a pr	evalenc	e index less than	or equal t	.0 3.0.

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SOIL Sampling Point: DP09w

Profile Desc	ription: (Describe	to the depth	needed to docum	nent the i	ndicator	or confirn	n the absence of in	dicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	<u> </u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0 - 13	10YR 5/1	95 1	0YR 5/6	5	<u>C</u>	PL / M	Clay Loam	
-								
-								
	_							_
	_							
	oncentration, D=Dep					ed Sand Gr		: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applic	able to all Li						Problematic Hydric Soils <sup>3</sup> :
Histosol	` '		Sandy G	-			1 cm Muck	
	ipedon (A2)		Sandy R					e Redox (A16) ( <b>LRR F, G, H</b> )
Black His	` '		Stripped					ce (S7) (LRR G)
	n Sulfide (A4) I Layers (A5) ( <b>LRR I</b>	E)		Mucky Mir Gleyed Ma			_	Depressions (F16) outside of MLRA 72 & 73)
	ck (A9) (LRR F, G,	•	<u>✓</u> Depleted				Reduced Ve	,
	Below Dark Surfac			ark Surfa	,			Material (TF2)
	rk Surface (A12)	( )			rface (F7)	)		w Dark Surface (TF12)
	lucky Mineral (S1)			Depressio				ain in Remarks)
2.5 cm M	lucky Peat or Peat (	(S2) ( <b>LRR G</b> ,	<b>H</b> ) High Pla	ins Depre	essions (F	16)	<sup>3</sup> Indicators of hy	drophytic vegetation and
5 cm Mu	cky Peat or Peat (S	3) ( <b>LRR F</b> )	(MLI	RA 72 & 7	73 of LRR	<b>H</b> )	wetland hyd	rology must be present,
							unless distu	rbed or problematic.
	ayer (if present):							
Type:			<u> </u>					
	ches):						Hydric Soil Pres	ent? Yes / No
Remarks:								
Prominent	redoximorphic	common	within the de	pleted	matrix.	Cobble	s restricted exc	cavation further than 13".
HYDROLO	GY							
Wetland Hyd	drology Indicators:							
_	ators (minimum of c		check all that apply	<b>/</b> )			Secondary In	dicators (minimum of two required)
✓ Surface	Water (A1)	•	Salt Crust	(B11)			Surface S	Soil Cracks (B6)
	ter Table (A2)		Aquatic Inv		s (B13)			Vegetated Concave Surface (B8)
✓ Saturation	on (A3)		Hydrogen S					Patterns (B10)
Water M	arks (B1)		Dry-Seaso	n Water T	able (C2)		Oxidized	Rhizospheres on Living Roots (C3)
	t Deposits (B2)		Oxidized R					
Drift Dep	osits (B3)		(where n	ot tilled)			Crayfish	Burrows (C8)
Algal Ma	t or Crust (B4)		Presence of	of Reduce	ed Iron (C4	1)	Saturatio	n Visible on Aerial Imagery (C9)
Iron Dep	osits (B5)		Thin Muck	Surface (	C7)		Geomorp	phic Position (D2)
Inundatio	on Vis ble on Aerial	Imagery (B7)	Other (Exp	lain in Re	marks)		FAC-Neu	itral Test (D5)
Water-St	tained Leaves (B9)						Frost-Hea	ave Hummocks (D7) (LRR F)
Field Observ	/ations:							
Surface Water	er Present? Y	es 🔽 No	Depth (inc	ches): 2				
Water Table	Present? Y	es 🔽 No	Depth (inc	ches): <u>6</u>				
Saturation Pr		es 🔽 No	Depth (inc	ches): 0		Wetl	and Hydrology Pre	sent? Yes No
(includes cap	oillary fringe) corded Data (stream	aguao moni	toring well aerial r	hotos pr	ovious ins	noctions	if available:	
Pescine Med	oraca Dala (Siledii)	i gauge, mom	toring well, actial p	πισισο, μι	CVIOUS IIIS	pcciio(15),	n avanabic.	
Remarks:								
	of wotload bid	rology in -	ludos ourfor-	wotor	high	atar tal	ام ممنا ممنات ت	on goomershie secities
	-		iuues surrace	water,	nign w	ater (ab	ie, soii saturati	on, geomorphic position,
and a pos	itive FAC-Neut	rai test.						

Project/Site: Kindsfater	(	City/Count	ty: Yellows	tone County	Sampling Date: 2024-06-05
		-		State: Montana	Sampling Point: DP10u
Investigator(s): E Reynaud	;	Section, T	ownship, Ra	nge: S06 T2S R25E	
Landform (hillslope, terrace, etc.): Plain		Local relie	ef (concave, o	convex, none): Linear	Slope (%): 1
Subregion (LRR): G 58A	_ Lat: 45.	694891	8	Long: -108.6899382	Datum: NAD 83
Soil Map Unit Name: LI - Larim gravelly loam, 15 to 3					
Are climatic / hydrologic conditions on the site typical for this	time of yea	ar? Yes_	<b>✓</b> No_	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrologys	ignificantly of	disturbed?	? Are "	'Normal Circumstances" p	resent? Yes No
Are Vegetation, Soil, or Hydrologyn	aturally pro	blematic?	(If ne	eded, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing	sampli	ng point l	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes No Remarks:	o <u> </u>		the Sampled		No <u> </u>
Upland data point on hillside north and upgr boundary of site.	adient o	f DP10v	v data poi	int. Upland data poi	nt located near eastern
VEGETATION – Use scientific names of plan	ts.				
<u>Tree Stratum</u> (Plot size: <u>30 ft r</u> ) 1 2	% Cover	Species'		Dominance Test work  Number of Dominant Sp That Are OBL, FACW, of (excluding FAC-):	pecies
3. 4.				Total Number of Domini Species Across All Stra	•
Sapling/Shrub Stratum (Plot size: 15 ft r )				Percent of Dominant Sp That Are OBL, FACW, o	
2				Prevalence Index world	
3					Multiply by:
4					x 1 = 0
5					x 2 = 0 x 3 = 0
Herb Stratum (Plot size: 5 ft r )		= Total Co	over		x 4 = 140
1. Bromus inermis	40	V	UPL	UPL species 40	
2. Elymus repens	35	~	FACU	Column Totals: 75	(A) 340 (B)
3.				Prevalence Index	= B/A = 4.53
4				Hydrophytic Vegetation	
5				1 - Rapid Test for H	
6				2 - Dominance Tes	t is >50%
8				3 - Prevalence Inde	ex is ≤3.0 <sup>1</sup>
9.				4 - Morphological A	Adaptations <sup>1</sup> (Provide supporting
10.					s or on a separate sheet)  bhytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 30 ft r	75	= Total Co			and wetland hydrology must
1		= Total Co	over	Hydrophytic Vegetation Present? Yes	s No
Remarks:  Data point is dominated by upland ve					

SOIL Sampling Point: DP10u

	cription: (Describe	to the depth ne				or confirn	n the absence of	indicators.)
Depth (inches)	Matrix	0/		x Features		Loc <sup>2</sup>	Touture	Domarka
(inches) 0 - 7	Color (moist)	<u> </u>	olor (moist)	%	Type <sup>1</sup>	LOC	Texture	Remarks
	10YR 3/2						Loam	
	_							
-								
-				· ·				
	-					-		
		· ——		-		·		
1T C-C		leties DM-Dedu	and Matrix CO					on. DI -Dono Lining, M-Matrix
	oncentration, D=Dep Indicators: (Applic					a Sana G		on: PL=Pore Lining, M=Matrix.  r Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy (					k (A9) (LRR I, J)
	pipedon (A2)			Redox (S5)				nirie Redox (A16) (LRR F, G, H)
	istic (A3)			d Matrix (S				ace (S7) (LRR G)
	en Sulfide (A4)		-	Mucky Min				ns Depressions (F16)
	d Layers (A5) (LRR I			Gleyed Ma			`	H outside of MLRA 72 & 73)
	uck (A9) ( <b>LRR F, G,</b> l d Below Dark Surfac			d Matrix (F Dark Surfa				Vertic (F18) nt Material (TF2)
-	ark Surface (A12)	C (ATT)	· · · · · · · · · · · · · · · · · · ·	d Dark Su	, ,			low Dark Surface (TF12)
	Mucky Mineral (S1)			Depression			-	plain in Remarks)
	Mucky Peat or Peat (			ains Depre	•	•		hydrophytic vegetation and
5 cm Mu	ucky Peat or Peat (S	3) ( <b>LRR F</b> )	(ML	RA 72 & 7	3 of LRR	<b>H</b> )		ydrology must be present,
Restrictive	Layer (if present):						uniess dis	sturbed or problematic.
Type:	Layer (ii present).							
, , <u> </u>	ches):						Hydric Soil Pro	esent? Yes No
Remarks:	,							
No bydr	io soil indicat	ore observ	and Cray	al and	aabbl	oc roc	etricted eve	avation further than 7".
ino riyur	ic son maicai	.013 00361	veu. Grav	ei aiiu	CODDI	C3 1 C3	stricted exc	avation further than 7.
HYDROLO	GY							
	drology Indicators:							
	cators (minimum of c		ck all that appl	v)			Secondary	Indicators (minimum of two required)
	Water (A1)		Salt Crust				-	e Soil Cracks (B6)
	ater Table (A2)		Aquatic In		s (B13)			ly Vegetated Concave Surface (B8)
Saturation			Hydrogen					ge Patterns (B10)
Water M	larks (B1)		Dry-Seaso	on Water T	able (C2)		Oxidize	ed Rhizospheres on Living Roots (C3)
Sedimer	nt Deposits (B2)		Oxidized F	Rhizospher	res on Livi	ing Roots	(C3) (whe	re tilled)
Drift Dep	posits (B3)		(where	not tilled)				h Burrows (C8)
	at or Crust (B4)	-	Presence		•	<b>!</b> )		ion Visible on Aerial Imagery (C9)
-	posits (B5)	(D=)	Thin Muck					orphic Position (D2)
·	on Vis ble on Aerial I	magery (B7)	Other (Exp	olain in Re	marks)		<del></del>	eutral Test (D5)
Field Obser	Stained Leaves (B9)						FIOSI-F	leave Hummocks (D7) (LRR F)
Surface Wat		es No	✓ Denth (in	chee).				
Water Table		es No						
Saturation P		es No					land Hydrology P	resent? Yes No
(includes cap	pillary fringe)							resent: res No
Describe Re	corded Data (stream	gauge, monitorii	ng well, aerial	photos, pre	evious ins	pections),	if available:	
Darried								
Remarks:								
No evide	ence of wetla	and hydrol	ogy obse	rved.				

Project/Site: Kindsfater		City/Co	ounty:	Yellowst	tone County	{	Sampling Da	<sub>ite:</sub> 2024	-06-05
Applicant/Owner: MDT	_	-	-		State: Mo				
					nge: S06 T2S I				
Landform (hillslope, terrace, etc.): Hillslope				•	-			Slope (%)	<sub>):</sub> 15
Subregion (LRR): G 58A	Lat: 45.	.6948	204	•	Long: -108.68	398624		atum: NA	AD 83
Soil Map Unit Name: LI - Larim gravelly loam, 15 to 3					-				
Are climatic / hydrologic conditions on the site typical for this	s time of ye	ar? Ye	es •	No	(If no, exp	lain in Rei	marks.)		
Are Vegetation, Soil, or Hydrologys	-				Normal Circumst			· ·	No
Are Vegetation, Soil, or Hydrology n					eded, explain an				
SUMMARY OF FINDINGS – Attach site map				g point lo	ocations, trai	nsects,	importan	t feature	es, etc.
Hydrophytic Vegetation Present? Yes N	0		le the	e Sampled	Aroa				
Hydric Soil Present? Yes N	0			n a Wetlan		es 🗸	No		
	0			a rronan					
Sample point is located within wetlan	nd cell	10.							
VEGETATION – Use scientific names of plan	ts.								
	Absolute			Indicator	Dominance Te	st works	heet:		
Tree Stratum (Plot size: 30 ft r	% Cover				Number of Don				
1 2					That Are OBL, (excluding FAC		1 1		(A)
3					Total Number of	of Domina			
4.					Species Across		_		_ (B)
Sapling/Shrub Stratum (Plot size: 15 ft r					Percent of Don That Are OBL,			0.00	_ (A/B)
1					Prevalence Inc	dex works	sheet:		
2					Total % Co	over of:	Mu	ultiply by:	
4					OBL species		x 1 =		
5.					FACW species				
		= Tota	l Cov	er	FAC species				
Herb Stratum (Plot size: 5 ft r )	00		,	FACW	FACU species				<del></del>
Phalaris arundinacea     Solanum dulcamara	90			FACU	UPL species Column Totals:	92			— (D)
	- =				Column Totals:	<u> </u>	(A)	100	(B)
3					Prevalend	ce Index =	= B/A = 2.0	)4	
4.         5.					Hydrophytic V	egetation	Indicators	:	
6.					<u>✔</u> 1 - Rapid 1	•		egetation	
7.					🔽 2 - Domina	nce Test	is >50%		
8.					✓ 3 - Prevale				
9.					4 - Morpho	logical Ad	laptations¹ (I or on a sepa	Provide su	pporting
10					Problemati				
	~~	= Tota	I Cov	er					
Woody Vine Stratum (Plot size: 30 ft r )					<sup>1</sup> Indicators of h be present, unl				must
1							- 12.23		
2					Hydrophytic Vegetation				
% Bare Ground in Herb Stratum 8		– 10ta		CI	Present?	Yes	N	·	
Remarks:									
Evidence of hydrophytic vegetation	include	s a p	ore	valence	index les	s than	or equa	l to 3.0	0, a

positive dominance test, and a positive rapid test.

SOIL Sampling Point: DP10w

Profile Desc	ription: (Describe	to the depth ne	eded to docun	nent the in	ndicator o	or confirm	the absence	of indicators.)
Depth	Matrix			x Features		. 2		
(inches)	Color (moist)		color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0 - 16	10YR 2/2	100					Peat	High OM content
-								
		·						
	-	<del></del>					<del></del>	
		<del></del>						
	·	<u> </u>						
-								
¹Type: C=Co	oncentration, D=Dep	letion, RM=Red	uced Matrix, CS	=Covered	or Coate	d Sand Gr	ains. <sup>2</sup> Loc	ation: PL=Pore Lining, M=Matrix.
	ndicators: (Applic							for Problematic Hydric Soils <sup>3</sup> :
<u>✓</u> Histosol	(A1)		Sandy G	Sleyed Ma	trix (S4)		1 cm M	luck (A9) ( <b>LRR I, J</b> )
Histic Ep	oipedon (A2)		Sandy F	Redox (S5)	)			Prairie Redox (A16) ( <b>LRR F, G, H</b> )
Black His	` '			Matrix (S				urface (S7) (LRR G)
	n Sulfide (A4)		-	Mucky Min			<u> </u>	lains Depressions (F16)
	Layers (A5) (LRR I	•		Gleyed Ma	, ,		`	R H outside of MLRA 72 & 73)
	ick (A9) ( <b>LRR F, G</b> , l d Below Dark Surfac			d Matrix (F Oark Surfa				ed Vertic (F18) arent Material (TF2)
-	ark Surface (A12)	C (ATT)		d Dark Sui				hallow Dark Surface (TF12)
	lucky Mineral (S1)			Depression	, ,			Explain in Remarks)
2.5 cm N	lucky Peat or Peat (	S2) ( <b>LRR G, H</b> )	High Pla	ins Depre	ssions (F	16)	<sup>3</sup> Indicators	of hydrophytic vegetation and
5 cm Mu	cky Peat or Peat (S	3) ( <b>LRR F</b> )	(MLI	RA 72 & 7	3 of LRR	H)	wetland	I hydrology must be present,
							unless	disturbed or problematic.
_	_ayer (if present):							
Type: Depth (inc	shoe).							
							Hydric Soil	Present? Yes No
Remarks:								
Soil is a	Histosol whi	ch is a prii	mary hydr	ic soil	indica	tor.		
HYDROLO	GY							
Wetland Hyd	drology Indicators:							
Primary Indic	ators (minimum of c	ne required; ch	eck all that apply	<b>/</b> )			Seconda	ry Indicators (minimum of two required)
Surface	Water (A1)		Salt Crust	(B11)			Surfa	ace Soil Cracks (B6)
High Wa	ter Table (A2)		Aquatic Inv	ertebrates	s (B13)		Spai	rsely Vegetated Concave Surface (B8)
✓ Saturation	on (A3)		Hydrogen	Sulfide Od	lor (C1)		Draii	nage Patterns (B10)
Water M	arks (B1)		Dry-Seaso	n Water T	able (C2)		Oxid	lized Rhizospheres on Living Roots (C3)
Sedimer	nt Deposits (B2)		Oxidized R	hizospher	es on Livi	ing Roots (	(C3) ( <b>w</b>	here tilled)
Drift Dep	oosits (B3)		(where r	ot tilled)			Cray	rfish Burrows (C8)
Algal Ma	it or Crust (B4)		Presence of	of Reduce	d Iron (C4	·)		ration Visible on Aerial Imagery (C9)
Iron Dep	osits (B5)		Thin Muck	Surface (0	C7)			morphic Position (D2)
Inundation	on Vis ble on Aerial I	magery (B7)	Other (Exp	lain in Rei	marks)			-Neutral Test (D5)
	tained Leaves (B9)						Fros	t-Heave Hummocks (D7) (LRR F)
Field Observ								
Surface Water			Depth (inc			l l		
Water Table			Depth (inc					
Saturation Pr		es V No _	Depth (inc	ches): 0		_ Wetla	and Hydrology	Present? Yes V No No
(includes cap Describe Red	oillary fringe) corded Data (stream	gauge, monitor	ing well aerial r	hotos pre	evious insi	pections)	if available:	
20001001100	Data (0110dill	,oor		, pro				
Remarks:								
	المناج المصالحين	rology is stee	doo oo!! +-	motic:	<b>800</b> = = =	robie :- :		a positivo FAC Navitral
	oi wetiana nya	rology inclu	ues son satt	uration,	geomo	huic bo	osition, and	a positive FAC-Neutral
test.								

Project/Site: Kindsfater	(	City/Co	ounty:	Yellows	tone County	Samplin	g Date: _2	2024-06-05
Applicant/Owner: MDT					State: Montana	Samplin	g Point: <u>I</u>	DP11u
Investigator(s): R Cutler, J Trilling, & E Reynaud	;	Section	n, Tov	wnship, Rai	nge: S06 T2S R25E			
Landform (hillslope, terrace, etc.): Toeslope						ve	Slop	oe (%): 5
Subregion (LRR): G 58A								
Soil Map Unit Name: LI - Larim gravelly loam, 15 to 35					-			
Are climatic / hydrologic conditions on the site typical for this					_			
Are Vegetation, Soil, or Hydrology signs of the state of the stat	-				Normal Circumstances			No 🗸
Are Vegetation, Soil, or Hydrology na					eded, explain any answ			110
SUMMARY OF FINDINGS – Attach site map s								atures, etc.
Hydrophytic Vegetation Present? Yes No	· ·				_			
	./			e Sampled		Na	~	
Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No  Remarks:			with	ın a wetiar	nd? Yes	NO		Ī
Remarks:								
Upland data point located at toe of sl	lope no	orth	we	st of we	etland point.			
<b>VEGETATION</b> – Use scientific names of plant	s.							
20 ft r	Absolute				Dominance Test wo	rksheet:		
	% Cover	Spec			Number of Dominant			
1. Populus deltoides	10			FAC	That Are OBL, FACW (excluding FAC-):	, or FAC	1	(A)
2 3					Total Number of Dom	inant		
4					Species Across All St		3	(B)
	10	= Tota	al Cov	er	Percent of Dominant	Snecies		
Sapling/Shrub Stratum (Plot size: 15 ft r )					That Are OBL, FACW	, or FAC:	33.33	(A/B)
1. Ribes aureum				FACU	Prevalence Index wo	orksheet:		
2					Total % Cover of		Multiply	/ bv·
3						x		-
4		-			FACW species 0			
5	7	= Tota	l Cov		FAC species 10			
Herb Stratum (Plot size: 5 ft r		- 1018	11 OOV	Ci .	FACU species 8			
1. Bromus inermis	90			UPL			5 = <u>460</u>	
2. Asperugo procumbens	2			UPL	Column Totals: 110	(A	522	(B)
3. Chenopodium album	1			FACU	Prevalence Inde	ex = B/A =	4.74	
4. Tragopogon dubius	1				Hydrophytic Vegeta			
5					1 - Rapid Test for			ation
6					2 - Dominance To	est is >50%	, D	
7 8					3 - Prevalence In	dex is ≤3.0	1	
9.					4 - Morphologica	Adaptation	ns¹ (Provi	de supporting
10.					data in Remai			
	$\overline{}$	= Tota	al Cov	er			_	
Woody Vine Stratum (Plot size: 30 ft r )  1					<sup>1</sup> Indicators of hydric s be present, unless dis			
2.					Hydrophytic			
			l Cov	er	Vegetation	<b>1</b>	,, ·	<b>/</b>
% Bare Ground in Herb Stratum 6					Present? Y	'es	NO	<u> </u>
Remarks:								
Bromus inermis is the dominant grass	s in this	s are	ea. I	No evic	lence of hydro	phytic	veget	ation
observed.								

US Army Corps of Engineers B-61 Great Plains – Version 2.0

SOIL Sampling Point: DP11u

Profile Desc	ription: (Describe	to the depth n			or confirn	n the absence of	f indicators.)
Depth	Matrix	0/		K Features	1.5.2	Tax-4	Downseles
(inches)	Color (moist)		Color (moist)	<u>%</u> Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0 - 16	10YR 3/2	100				Silty Clay Loam	
-							
-							
-							
1Typo: C=C	oncentration, D=Dep	olotion PM-Po	ducad Matrix, CS	=Covered or Cost	od Sand G	rains <sup>2</sup> l ocat	tion: PL=Pore Lining, M=Matrix.
•	Indicators: (Applic				eu Sanu Gi		or Problematic Hydric Soils <sup>3</sup> :
Histosol		abio to all Eith		Gleyed Matrix (S4)			ick (A9) (LRR I, J)
	oipedon (A2)			Redox (S5)			rairie Redox (A16) (LRR F, G, H)
Black Hi			-	Matrix (S6)			rface (S7) (LRR G)
	n Sulfide (A4)			Mucky Mineral (F1)	)	·	ins Depressions (F16)
	Layers (A5) (LRR	F)	-	Gleyed Matrix (F2)		-	H outside of MLRA 72 & 73)
1 cm Mu	ck (A9) ( <b>LRR F, G</b> ,	H)	Depleted	d Matrix (F3)		Reduced	d Vertic (F18)
	Below Dark Surfac	ce (A11)		ark Surface (F6)			ent Material (TF2)
	ark Surface (A12)			Dark Surface (F7	7)		allow Dark Surface (TF12)
-	lucky Mineral (S1)	(C2) (LBB C H	<del></del>	Depressions (F8)	T16)		xplain in Remarks)
	Mucky Peat or Peat ( cky Peat or Peat (S		-	iins Depressions (IRA 72 & 73 of LR			f hydrophytic vegetation and hydrology must be present,
3 CITI MU	icky real of real (S	(LKK F)	(IVILI	KA 12 & 13 01 EK	Ν П)		isturbed or problematic.
Restrictive I	_ayer (if present):					1	
	, , ,						
	ches):		<del>-</del> '			Hydric Soil P	resent? Yes No
Remarks:			_			,	- 100
No hydri	ic soil indica	tors obse	rved.				
HYDROLO	GY						
Wetland Hyd	drology Indicators:	:					
	cators (minimum of o		neck all that apply	<b>(</b> )		Secondary	/ Indicators (minimum of two required)
•	Water (A1)		Salt Crust (	-			ce Soil Cracks (B6)
	ter Table (A2)			vertebrates (B13)			ely Vegetated Concave Surface (B8)
Saturation	, ,			Sulfide Odor (C1)			age Patterns (B10)
	arks (B1)			n Water Table (C2	2)		zed Rhizospheres on Living Roots (C3)
	nt Deposits (B2)			hizospheres on Li		·	ere tilled)
	posits (B3)		· <del></del>	ot tilled)	9		sh Burrows (C8)
	it or Crust (B4)		,	of Reduced Iron (C	(4)		ation Visible on Aerial Imagery (C9)
	osits (B5)		' <u></u> '	Surface (C7)	,	· <del></del>	orphic Position (D2)
	on Vis ble on Aerial	Imagery (B7)	· <del></del>	lain in Remarks)			Neutral Test (D5)
	tained Leaves (B9)	0 , ( )	` ` '	,			Heave Hummocks (D7) (LRR F)
Field Observ	vations:					<u> </u>	. , , , , , , , , , , , , , , , , , , ,
Surface Wate	er Present?	res No	Depth (inc	ches):			
Water Table				ches):			
Saturation Pr				ches):		and Hydrology	Present? Yes No
(includes cap	oillary fringe)						
	corded Data (stream	n gauge, monito	ring well, aerial p	hotos, previous in	spections),	if available:	
Remarks:							
No ovida	anno of week	and budge	logy chas	rund			
ino evide	ence of wetla	ana nyara	nogy obser	vea.			

Project/Site: Kindsfater	(	City/County	Yellows	tone County	Sampling I	Date: 2024-	-06-05
Applicant/Owner: MDT				State: Montana	Sampling f	oint: DP11v	٧
Investigator(s): J Trilling		Section, To	wnship, Raı	nge: S06 T2S R25E			
				convex, none): Concave	<u> </u>	Slope (%):	5
Subregion (LRR): G 58A	Lat: 45.0	6938662		Long: -108.6903863	}	Datum: NA	D 83
Soil Map Unit Name: LI - Larim gravelly loam, 15 to 35	5 percent	slopes		NWI classifica	ation: Not	mapped	
Are climatic / hydrologic conditions on the site typical for this	time of year	ar? Yes	✓ No_	(If no, explain in Re	emarks.)		
Are Vegetation, Soil, or Hydrology si	gnificantly o	disturbed?	Are "	Normal Circumstances" p	resent? Y	es <u>    /                                </u>	o
Are Vegetation, Soil, or Hydrology na	aturally prob	olematic?	(If ne	eded, explain any answer	s in Remar	ks.)	
SUMMARY OF FINDINGS – Attach site map s			g point le	ocations, transects,	importa	ınt feature	s, etc.
Hydrophytic Vegetation Present?  Hydric Soil Present?  Wetland Hydrology Present?  Remarks:  Yes  No  No  No  No  No  No  No  No  No  N	)		e Sampled in a Wetlar		No		
Wetland sample point is located loca		kt to a	canal.				
VEGETATION – Use scientific names of plant		Danisant	la di a tan	D			
<u>Tree Stratum</u> (Plot size: <u>30 ft r</u> ) 1 2	% Cover		Status	Dominance Test works  Number of Dominant Sp That Are OBL, FACW, o (excluding FAC-):	ecies		(A)
3				Total Number of Domina Species Across All Strat			(B)
Sapling/Shrub Stratum (Plot size: 15 ft r )		= Total Cov		Percent of Dominant Sp That Are OBL, FACW, o		00.00	(A/B)
1 2				Prevalence Index work	sheet:		
3.				Total % Cover of:		Multiply by:	_
4.					x 1 =		_
5.				FACW species 90			_
F.4	:	= Total Cov	/er	FAC species 0			_
Herb Stratum (Plot size: 5 ft r )	90		FACW	· -	x 4 =	= <u>0</u> = 50	_
Phalaris arundinacea     Bromus inermis	10		UPL	UPL species 10 Column Totals: 100		230	— (B)
3	<del></del>		OFL	Column Totals. 100	(A)	200	_ (D)
4				Prevalence Index	$= B/A = _{2}$	2.30	_
5				Hydrophytic Vegetatio			
6.				✓ 1 - Rapid Test for H		Vegetation	
7.				2 - Dominance Test	is >50%		
8.				✓ 3 - Prevalence Inde			
9.				4 - Morphological A data in Remarks	daptations	(Provide sup	porting
10.				Problematic Hydrop			
Woody Vine Stratum (Plot size: 30 ft r )		= Total Cov		<sup>1</sup> Indicators of hydric soil be present, unless distu	and wetlar	nd hydrology i	
2.				Hydrophytic			
		= Total Cov		Vegetation	~		
% Bare Ground in Herb Stratum 0				Present? Yes	<u>.                                    </u>	No	
Remarks:							
Phalaris arundinacea is the dominant specie includes a positive rapid test, a positive dom			•	-		_	nc

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SOIL Sampling Point: DP11w

Profile Desc	ription: (Describe	to the dep	oth needed to docur	nent the	indicator	or confirr	n the absence	of indicators.)
Depth	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 4	10YR 4/2	100			_		Clay Loam	
4 - 10	10YR 5/1	98	10YR 8/1	2	С	М	Clay Loam	white deposits
10 - 18	10YR 5/1	96	7.5YR 4/6	4	С		Clay Loam	
-								
				-		-		
					-			
1Type: C=Cc	ncentration D=De	nletion RM	=Reduced Matrix, CS	S=Covere	ed or Coate	ed Sand G	rains <sup>2</sup> l oc	cation: PL=Pore Lining, M=Matrix.
			LRRs, unless other			sa Sana O		for Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy (					fluck (A9) (LRR I, J)
	pipedon (A2)		Sandy F	-				Prairie Redox (A16) ( <b>LRR F, G, H</b> )
Black His			-	l Matrix (				surface (S7) (LRR G)
Hydroge	n Sulfide (A4)		Loamy I	Mucky M	ineral (F1)		High P	lains Depressions (F16)
Stratified	Layers (A5) (LRR	F)	Loamy	Gleyed M	latrix (F2)		(LR	R H outside of MLRA 72 & 73)
	ck (A9) (LRR F, G,		✓ Deplete	d Matrix	(F3)			ed Vertic (F18)
	Below Dark Surfac	ce (A11)			ace (F6)			arent Material (TF2)
	ark Surface (A12)				urface (F7	)		hallow Dark Surface (TF12)
	lucky Mineral (S1)	(00) (LDD		Depression	. ,	:40)		(Explain in Remarks)
	lucky Peat or Peat cky Peat or Peat (S				ressions (F <b>73 of LRF</b>			of hydrophytic vegetation and d hydrology must be present,
5 CIII WIU	cky real of real (S	55) (LKK F)	(IVIL	KA 12 &	73 01 LKF	ι п)		disturbed or problematic.
Restrictive L	ayer (if present):							
Type:								
Depth (inc	ches):						Hydric Soil	Present? Yes No
Remarks:							I	
Evidence	of hydric soil ir	ncludes	prominent redox	kimorp	hic cond	centration	ons with the	e depleted matrix. White
	-		oe salt deposits.	•				·
HYDROLO	GY							
	drology Indicators							
-			ed; check all that appl	v)			Seconda	ary Indicators (minimum of two required)
	Water (A1)		Salt Crust					ace Soil Cracks (B6)
	ter Table (A2)		Aquatic In		es (B13)			rsely Vegetated Concave Surface (B8)
Saturatio	on (A3)		Hydrogen	Sulfide C	Odor (C1)			nage Patterns (B10)
Water M	arks (B1)		Dry-Seaso	n Water	Table (C2)	)	Oxio	dized Rhizospheres on Living Roots (C3)
Sedimen	t Deposits (B2)		Oxidized F				(C3) (w	here tilled)
Drift Dep	osits (B3)		(where i	not tilled	)		Cray	rfish Burrows (C8)
Algal Ma	t or Crust (B4)		Presence	of Reduc	ed Iron (C	4)	Satu	ration Visible on Aerial Imagery (C9)
Iron Dep	osits (B5)		Thin Muck	Surface	(C7)		<u></u> ✓ Geo	morphic Position (D2)
Inundatio	on Vis ble on Aerial	Imagery (E	37) Other (Exp	lain in R	emarks)		FAC	-Neutral Test (D5)
Water-St	tained Leaves (B9)						Fros	st-Heave Hummocks (D7) (LRR F)
Field Observ	vations:							
Surface Water	er Present?	Yes	No Depth (in	ches):				
Water Table			No Depth (in					
Saturation Pr			No Depth (in				land Hydrolog	y Present? Yes <u> </u>
(includes cap		2 201120 m	onitoring well, aerial ¡	ahotoo n	rovious in	nootiona)	if available:	
Pesoine Ket	Solucu Dala (Siledii	ıı gauge, III	ormorning well, aerial j	σποιόδ, μ	revious ilis	ρουισίο),	, ii avaliabic.	
Remarks:								
	of wetland by	irology i	ncludes avidiza	d rhiza	enhero	s along l	living roots	geomorphic position, and a
	AC-Neutral tes		nciuues uxiuize	u 111120	apriere:	aiuiiy i	iiviiig 100ts,	geomorphic position, and a
1 -								

Project/Site: Kindsfater	(	City/County	: Yellows	tone County	Sampling Date: 2024-06-05
				State: Montana	Sampling Point: DP12u
Investigator(s): E Reynaud	;	Section, To	wnship, Ra	nge: S06 T2S R25E	
Landform (hillslope, terrace, etc.): Hillslope		Local relief	f (concave,	convex, none): Linear	Slope (%): 4
Subregion (LRR): G 58A	Lat: 45.	6903688	3	Long: -108.698669	Datum: NAD 83
Soil Map Unit Name: LI - Larim gravelly loam, 15 to 3					
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ar? Yes	✓ No _	(If no, explain in Ro	emarks.)
Are Vegetation, Soil, or Hydrologys	ignificantly	disturbed?	Are "	'Normal Circumstances" p	oresent? Yes No
Are Vegetation, Soil, or Hydrologyn	aturally pro	blematic?	(If ne	eeded, explain any answer	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing	samplin	g point l	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes No. Hydric Soil Present? Yes No. Wetland Hydrology Present? Yes No. Remarks:	o <u> </u>		ne Sampled nin a Wetlar		No
Upland data point located near SW o	corner o	of site.			
VEGETATION – Use scientific names of plan	ts.				
Tree Stratum (Plot size: 30 ft r	Absolute % Cover	Dominant Species?		Dominance Test works	
1. Populus deltoides	50	<u> </u>		Number of Dominant Sp That Are OBL, FACW, of	or FAC
2				(excluding FAC-):	<u>1</u> (A)
3				Total Number of Domina	
4				Species Across All Strat	ta: <u>3</u> (B)
Sapling/Shrub Stratum (Plot size: 15 ft r )	50	= Total Co	ver	Percent of Dominant Sp That Are OBL, FACW, of	
1. Prunus virginiana	10		FACU		
2				Prevalence Index work	ksheet: Multiply by:
3					x 1 = 0
4					x 2 = 0
5					x 3 = 153
Herb Stratum (Plot size: 5 ft r	10	= Total Co	ver		x 4 = 80
1. Bromus inermis	60	~	UPL	UPL species 64	
2. Elymus repens	10		FACU	Column Totals: 135	(A) <u>553</u> (B)
3. Convolvulus arvensis	4		UPL	Danielana a la dani	D/A 4.09
4. Euphorbia esula			FAC	Prevalence Index  Hydrophytic Vegetation	
5				1 - Rapid Test for H	
6				2 - Dominance Test	• • •
7				3 - Prevalence Inde	
8					Adaptations <sup>1</sup> (Provide supporting
9				data in Remarks	s or on a separate sheet)
10	7-			Problematic Hydrop	phytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 30 ft r )  1		= Total Co		<sup>1</sup> Indicators of hydric soil be present, unless distu	l and wetland hydrology must urbed or problematic.
2	<del>-</del>	= Total Co		Hydrophytic Vegetation	🗸
% Bare Ground in Herb Stratum 15				Present? Yes	s No
Remarks:					
Data point is dominated by upland ve	egetatio	on.			

SOIL Sampling Point: DP12u

Profile Desc	ription: (Describe	to the depth ne	eded to docur	nent the i	ndicator	or confirn	n the absence of i	ndicators.)
Depth	Matrix			x Features			_	
(inches)	Color (moist)		olor (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0 - 7	10YR 3/2	100					Clay Loam	
	-	<u> </u>						
-								
-								
		<del></del>						
		<del></del>						_
	-	<del>.</del>						
		<u> </u>						
	oncentration, D=Dep					d Sand Gi		n: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applic	able to all LRR	s, unless othe	wise note	ed.)		Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histosol	` '		Sandy (	-	. ,			(A9) ( <b>LRR I, J</b> )
-	pipedon (A2)		-	Redox (S5)				rie Redox (A16) (LRR F, G, H)
Black His	` '			d Matrix (S	,			ce (S7) (LRR G)
	n Sulfide (A4)			Mucky Min	, ,		<b>—</b> ·	s Depressions (F16)
	Layers (A5) (LRR I			Gleyed Ma			•	outside of MLRA 72 & 73)
	ck (A9) (LRR F, G,	•		d Matrix (F			Reduced V	` '
	d Below Dark Surfac ark Surface (A12)	e (ATT)		Dark Surfa d Dark Sui				t Material (TF2) ow Dark Surface (TF12)
	lucky Mineral (S1)			Dark Sui Depression	, ,			ow bark Surface (11 12)  Ilain in Remarks)
	lucky Peat or Peat (	S2) (I RR G. H)		ains Depre	` '	16)		ydrophytic vegetation and
	cky Peat or Peat (S			RA 72 & 7				drology must be present,
_	, , , , , , , , , , , , , , , , , , , ,	-,( ,	•			,		urbed or problematic.
Restrictive L	ayer (if present):							
Type:								
Depth (inc	ches):						Hydric Soil Pre	sent? Yes No
Remarks:								
No hydri	ic soil indicat	ore obser	ved Cobl	oloc ro	ctricto	d ove	avation furt	her than 7"
NO HYUH		.013 00361	veu. cobi	16316	Stricte	d exc	avation fulti	ner than 7.
HYDROLO	GY							
-	drology Indicators:						Casandanil	- di t (i-i t d)
-	cators (minimum of c	nie required, che						ndicators (minimum of two required)
	Water (A1)		Salt Crust		(D40)			Soil Cracks (B6)
	iter Table (A2)		Aquatic In					y Vegetated Concave Surface (B8)
Saturatio			Hydrogen				<u> </u>	e Patterns (B10)
	arks (B1)		Dry-Seaso					d Rhizospheres on Living Roots (C3)
	nt Deposits (B2)		Oxidized F		es on Livi	ng Roots		e tilled)
	oosits (B3)		•	not tilled)				Burrows (C8)
_	it or Crust (B4)		Presence		•	·)	·	on Visible on Aerial Imagery (C9)
-	osits (B5)	(5-)	Thin Muck					phic Position (D2)
	on Vis ble on Aerial I	magery (B7)	Other (Exp	olain in Rei	marks)			utral Test (D5)
	tained Leaves (B9)						Frost-He	eave Hummocks (D7) (LRR F)
Field Observ			<b>V</b> 5 " "					
Surface Water		es No _						
Water Table		es No _						٠.
Saturation Pr		es No _	Depth (in	ches):		Wetl	and Hydrology Pr	esent? Yes No
(includes cap Describe Red	corded Data (stream	gauge, monitor	ing well. aerial i	ohotos, pre	evious ins	pections).	if available:	
	(	5 5-,	J - ,	· , p- · ·		, ,		
Remarks:								
No evide	ence of wetla	and hydrol	ogy obse	rved.				

Project/Site: Kindsfater		City/Count	y: Yellows	tone County	Sampling Date: 2024-06-05
Applicant/Owner: MDT				State: Montana	Sampling Point: DP12w
••				nge: S06 T2S R25E	
Landform (hillslope, terrace, etc.): Hillslope					Slone (%): 20
Subregion (LRR): G 58A					
				=	
Soil Map Unit Name: LI - Larim gravelly loam, 15 to 3					
Are climatic / hydrologic conditions on the site typical for thi	-				
Are Vegetation, Soil, or Hydrologys				'Normal Circumstances" p	resent? Yes No
Are Vegetation, Soil, or Hydrology r	naturally pro	blematic?	(If ne	eeded, explain any answer	s in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	samplii	ng point l	ocations, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes N	lo				
Hydric Soil Present? Yes N	lo		he Sampled		No
Wetland Hydrology Present? Yes N	lo	Wit	hin a Wetlar	id? fes	NO
Remarks:		I			
Wetland sample point is located near a		oils are	very sha	illow with gravel r	estricted layer.
VEGETATION – Use scientific names of plan	nts.				
Tree Stratum (Plot size: 30 ft r	Absolute % Cover		nt Indicator	Dominance Test works	
				Number of Dominant Sp That Are OBL, FACW, or	
1 2				(excluding FAC-):	<u>2</u> (A)
3.				Total Number of Domina	ant
4				Species Across All Strat	_
		= Total Co	over	Dereant of Deminant Co	anina
Sapling/Shrub Stratum (Plot size: 15 ft r )		10101 00	3 7 01	Percent of Dominant Sp That Are OBL, FACW, o	
1. Prunus virginiana	_ 5		FACU		
2				Prevalence Index work	
3				Total % Cover of:	Multiply by: x 1 = <u>15</u>
4					$x = \frac{13}{2}$
5				FACW species 45  FAC species 5	
Herb Stratum (Plot size: 5 ft r	5	= Total Co	over	FACU species 5	
1. Carex praegracilis	45	~	FACW	UPL species 5	
2. Nasturtium officinale	15		OBL	Column Totals: 75	
3. Bromus inermis	5		UPL		
4 Rumex crispus	5		FAC	Prevalence Index	= B/A = 2.20
5				Hydrophytic Vegetatio	
6.				1 - Rapid Test for H	• • •
7.				✓ 2 - Dominance Test	
8.				✓ 3 - Prevalence Inde	
9.				4 - Morphological A	daptations <sup>1</sup> (Provide supporting or on a separate sheet)
10.					ohytic Vegetation <sup>1</sup> (Explain)
	70	= Total Co	over	<u> </u>	,
Woody Vine Stratum (Plot size: 30 ft r				<sup>1</sup> Indicators of hydric soil be present, unless distu	and wetland hydrology must
1			<del></del>	be present, unless dista	——————————————————————————————————————
2				Hydrophytic	
% Bare Ground in Herb Stratum 30		= Total Co	over	Vegetation   Present? Yes	s No
Remarks:				<u> </u>	
Carex praegracilis is the dominant spec			-		•

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SOIL Sampling Point: DP12w

Profile Desc	ription: (Describe to	o the depth nee	eded to docun	nent the in	ndicator o	or confirm	the absence	of indicators.)
Depth	Matrix			x Features				
(inches)	Color (moist)	<u> </u>	olor (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0 - 10	10YR 5/1						Sandy Loam	Cobbly/Gravelly
-								
-					-			
<del></del>	·						-	
-								
¹Type: C=Co	ncentration, D=Deple	etion, RM=Redu	ced Matrix, CS	=Covered	or Coate	d Sand Gr	ains. <sup>2</sup> Loc	eation: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applica	ble to all LRRs	, unless other	wise note	ed.)			for Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Sandy G	Sleyed Ma	trix (S4)		1 cm M	luck (A9) ( <b>LRR I, J</b> )
-	ipedon (A2)		Sandy F	Redox (S5)	)			Prairie Redox (A16) ( <b>LRR F, G, H</b> )
Black His	` '		Stripped				·	urface (S7) (LRR G)
	n Sulfide (A4)			Mucky Min				lains Depressions (F16)
	Layers (A5) (LRR F)			Gleyed Ma			`	R H outside of MLRA 72 & 73)
	ck (A9) ( <b>LRR F, G, H</b> I Below Dark Surface		<u>✓</u> Depleted	a Matrix (F Dark Surfa			_	ed Vertic (F18) arent Material (TF2)
	rk Surface (A12)	(ATT)		d Dark Sui				hallow Dark Surface (TF12)
	ucky Mineral (S1)			Depression	, ,			Explain in Remarks)
	lucky Peat or Peat (S	2) (LRR G, H)		ins Depre	. ,	16)		of hydrophytic vegetation and
5 cm Mu	cky Peat or Peat (S3)	(LRR F)	(MLI	RA 72 & 7	3 of LRR	H)	wetland	hydrology must be present,
							unless	disturbed or problematic.
Restrictive L	.ayer (if present):							
Type:								
Depth (inc	ches):						Hydric Soil	Present? Yes No
Remarks:								
Depleted	d matrix obse	rved. Cob	bles at 10	)" rest	ricted	furthe	r excavat	tion.
HYDROLO	GY							
	Irology Indicators:							
_	ators (minimum of on	e required: che	ck all that apply	<b>/</b> )			Seconda	ary Indicators (minimum of two required)
	Water (A1)		Salt Crust					ace Soil Cracks (B6)
	ter Table (A2)	-	Oalt Ordst		s (B13)			rsely Vegetated Concave Surface (B8)
<u>✓</u> Saturatio		-	Hydrogen					nage Patterns (B10)
	arks (B1)	-	Dry-Seaso					lized Rhizospheres on Living Roots (C3)
	t Deposits (B2)	-	Oxidized R			na Roots (		here tilled)
	osits (B3)	<del>-</del>		ot tilled)			. ,	rfish Burrows (C8)
	t or Crust (B4)		Presence of		d Iron (C4	.)		ration Visible on Aerial Imagery (C9)
_	osits (B5)	_	Thin Muck			•		morphic Position (D2)
Inundatio	on Vis ble on Aerial In	nagery (B7)	Other (Exp					-Neutral Test (D5)
Water-St	ained Leaves (B9)						Fros	t-Heave Hummocks (D7) (LRR F)
Field Observ	ations:							
Surface Water	er Present? Ye	s No	Depth (inc	ches):				
Water Table		s / No _				_ [		
Saturation Pr		s No				Wetla	and Hydrology	y Present? Yes <u>✓</u> No
(includes cap	illary fringe)					_		
Describe Red	corded Data (stream o	gauge, monitorir	ng well, aerial p	onotos, pre	evious ins	pections),	ır available:	
Dawrent								
Remarks:								
Evidence	of wetland hy	drology inc	cludes hig	h wate	r table,	, soil sa	aturation, a	and geomorphic position.

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

Kindsfater - Created Wetlands 2. MDT Project #: 5034 1. Project Name: STPX 56 (56) Control #:

3. Evaluation Date: 06/04/2024 4. Evaluator(s): E Reynaud 5. Wetlands/Site #(s): Kindsfater - Created

Wetlands

6. Wetland Location(s): i. Legal: T2S,R25E,6 Latitude/Longitude:

45.694719, -108.694721: Central area of ii. Approx. Stationing or Mileposts:

creation wetlands in the mitigation site

Watershed Name, County: Upper Yellowstone, Yellowstone

7. a. Evaluating Agency: CCI for MDT

13

b. Purpose of Evaluation:

Wetlands potentially affected by MDT project

Mitigation wetlands; pre-construction

3. X Mitigation wetlands; post-construction

Other:

iii. Watershed:

8. Wetland size: 6.500 acres (measured)

9. Assessment area (AA): 6.500 acres (measured)

#### 10. Classification of Wetland and Aquatic Habitats in AA

HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% of AA
D	AB	Е	SI	5.00
D	EM	Е	SI	50.00
D	SS	E	SI	45.00

Abbreviations: (see manual for definitions)

HGM Classes: Riverine (R), Depressional (D), Slope (S), Mineral Soil Flats (MSF), Organic Soil Flats (OSF), Lacustrine Fringe (LF);

Cowardin Classes: Rock Bottom (RB), Unconsolidated bottom (UB), Aquatic Bed (AB), Unconsolidated Shore (US), Moss-lichen Wetland (ML), Emergent Wetland (EM), Scrub-Shrub Wetland (SS), Forested

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

Water Regimes: Permanent / Perennial (PP), Seasonal / Intermittent (SI), Temporary / Ephemeral (TE)

11. Estimated relative abundance: (of similarly classified sites within the same Major Montana Watershed Basin, see definitions)

COMMON

#### 12. General condition of AA:

i. Disturbance: (use matrix below to determine [circle] appropriate response - see instructions for Montana-listed noxious weed and aquatic nuisance vegetation species (ANVS) list)

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

Comments: (types of disturbance, intensity, season, etc.): The site is managed in a natural state and contains less than 5% noxious weeds. The AA consists of excavated depressional wetland cells within a historic gravel pit/wetland site. "Created Wetlands" are those that were not classified preserved, enhanced, re-established, or rehabilitated wetlands. Construction at the wetland mitigation site was completed in 2013. ii. Prominent noxious, aquatic nuisance, & other exotic vegetation species: Euphorbia esula, Cirsium arvense, Bromus tectorum

iii. Provide brief descriptive summary of AA and surrounding land use/habitat: Land use surrounding the AA includes commercial developments, a gravel pit, agriculture (grazing and feed lot), transportation (railroads and interstate), and a shooting range within the site.

13. Structural Diversity: (based on number of "Cowardin" vegetated classes present [do not include unvegetated classes], see #10 above)

Existing # of "Cowardin" Vegetated Classes in AA		Is current management existence of additiona		Modified Rating
>= 3 (or 2 if 1 is forested) classes	Н	NA	NA	NA
2 (or 1 if forested) classes	М	NA	NA	NA
1 class, but not a monoculture	М	< NO	YES>	L
1 class, monoculture (1 species comprises >= 90% of total cover)	Ĺ	NA	NA	NA

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Comments: Palustrine emergent vegetation, aquatic bed, and young palustrine scrub-shrub communities developing.

#### **SECTION PERTAINING to FUNCTIONS & VALUES ASSESSMENT**

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

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

Primary or critical habitat (list species)

Secondary habitat (list species)

Incidental habitat (list species)

Danaus plexippus(S)

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

Highest Habitat Level	doc/primary	sus/primary	doc/secondary	sus/secondary	doc/incidental	sus/incidental	None
Functional Points and Rating	1H	.9H	.8M	.7M	.3L	.1L	0L

Sources for documented use (e.g. observations, records, etc): The monarch butterfly (Danaus plexippus) was listed in the site area as a candidate species (USFWS 2024).

14B. Habitat for plant or animals rated S1, S2, or S3 by the Montana Natural Heritage Program: (not including species listed in14A above)

i. AA is Documented (D) or Suspected (S) to contain (circle one based on definitions contained in instructions): No usable habitat

Primary or critical habitat (list species) Secondary habitat (list species) Incidental habitat (list species)

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

Highest Habitat Level	doc/primary	sus/primary	doc/secondary	sus/secondary	doc/incidental	sus/incidental	None
S1 Species: Functional Points and Rating	1H	.8H	.7M	.6M	.2L	.1L	0L
S2 and S3 Species: Functional Points and Rating	.9H	.7M	.6M	.5M	.2L	.1L	0L

Sources for documented use (e.g. observations, records, etc): No SOC have been recently reported at the site (MTNHP 2024).

#### 14C. General Wildlife Habitat Rating:

i. Evidence of overall wildlife use in the AA (circle substantial, moderate, or low based on supporting evidence):

Substantial (based on any of the following [check]):  observations of abundant wildlife #s or high species diversity (during any period)  abundant wildlife sign such as scat, tracks, nest structures, game trails, etc.  presence of extremely limiting habitat features not available in the surrounding area interviews with local biologists with knowledge of the AA	Minimal (based on any of the following [check]):  few or no wildlife observations during peak use periods little to no wildlife sign sparse adjacent upland food sources interviews with local biologists with knowledge of the AA
Moderate (based on any of the following [check]):  X observations of scattered wildlife groups or individuals or relatively few species during  X common occurrence of wildlife sign such as scat, tracks, nest structures, game trails, on the second structures and the second se	•

**ii. Wildlife habitat features** (Working from top to bottom, circle appropriate AA attributes in matrix to arrive at rating. Structural diversity is from #13. For class cover to be considered evenly distributed, the most and least prevalent vegetated classes must be within 20% of each other interms of their percent composition of the AA (see #10). Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; T/E = temporary/ephemeral; and A = absent [see instructions for further definitions of these terms])

Structural diversity (see #13)		High						Moderate						Low						
Class cover distribution (all vegetated classes)		E۱	en/en			Une	even			Ev	en			Une	even			Ev	en	
Duration of surface water in >=10% of AA	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	А	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α
Low disturbance at AA (see #12i)	E	Е	Е	Н	Е	Е	Н	Н	Е	Н	Н	М	Е	Н	М	М	Е	Н	М	М
Moderate disturbance at AA (see #12i)	Н	Н	Н	Н	Н	Н	Н	М	Н	Н	М	М	Н	М	М	L	Н	М	L	L
High disturbance at AA (see #12i)	М	М	М	L	М	М	L	L	М	М	L	L	М	L	L	L	L	L	L	L

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

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

Comments: The site includes upland cottonwood galleries, scrub-shrub and emergent wetland, and open water habitat which provides structurally diverse wildlife habitat.

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**14D. General Fish Habitat Rating:** (Assess this function if the AA is used by fish or the existing situation is "correctable" such that the AA could be used by fish [i.e., fish use is precluded by perched culvert or other barrier, etc.]. If the AA is not used by fish, fish use is not restorable due to habitat constraints, or is not desired from a management perspective [such as fish entrapped in a canal], then mark **X NA** and proceed to 14E.)

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

i. Habitat Quality and Known / Suspected Fish Species in AA (use matrix to arrive at [circle] the functional points and rating)

Duration of surface water in AA		Permanent / Perennial						Seasonal / Intermittent						Temporary / Ephemeral				
Aquatic hiding / resting / escape cover	Opt	Optimal		Adequate		Poor		Optimal		Adequate		Poor		imal	Adequate		Poor	
Thermal cover optimal / suboptimal	0	S	0	S	0	S	0	S	0	S	0	S	0	S	0	S	0	S
FWP Tier I fish species	1E	.9H	.8H	.7M	.6M	.5M	.9H	.8H	.7M	.6M	.5M	.4M	.7M	.6M	.5M	.4M	.3L	.2L
FWP Tier II or Native Game fish species	.9H	.8H	.7M	.6M	.5M	.5M	.8H	.7M	.6M	.5M	.4M	.4M	.6M	.5M	.4M	.3L	.2L	.2L
FWP Tier III or Introduced Game fish	.8H	.7M	.6M	.5M	.5M	.4M	.7M	.6M	.5M	.4M	.4M	.3L	.5M	.4M	.3L	.2L	.2L	.1L
FWP Non-Game Tier IV or No fish species	.5M	.5M	.5M	.4M	.4M	.3L	.4M	.4M	.4M	.3L	.3L	.2L	.2L	.2L	.2L	.1L	.1L	.1L

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

ii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1)

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

If yes, reduce score in i above by 0.1.

b) Does the AA contain a documented spawning area or other critical habitat feature (i.e., sanctuary pool, upwelling area, etc.- specify in comments) for native fish or introduced game fish? If yes, add 0.1 to the adjusted score in i or iia.

iii. Final Score and Rating: NA

Comments: AA is not used by fish, fish use is not restorable due to habitat constraints, or is not desired from a management perspective.

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

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

Estimated or Calculated Entrenchment (Rosgen 1994, 1996)	, ,	entrenche stream typ			ely entrend stream type		Entrenched-A, F, G stream types		
% of flooded wetland classified as forested and/or scrub/shrub	75%	25-75%	<25%	75%	25-75%	<25%	75%	25-75%	<25%
AA contains no outlet or restricted outlet	1H	.9H	.6M	.8H	.7M	.5M	.4M	.3L	.2L
AA contains unrestricted outlet	.9H	.8H	.5M	.7M	.6M	.4M	.3L	.2L	.1L

Entrenchment ratio (ER) estimation – see User's Manual for additional guidance. Entrenchment ratio = (flood-prone width)/(bankfull width) Flood-prone width = estimated horizontal projection of where 2 x maximum bankfull depth elevation intersects the floodplain on each side of the stream.

1	=		***************************************	A Partie
Flood-prone	Bankfull	Entrenchment ratio	2 x Bankfull Derth	Flood-prone Width Bankfull Width
width	width	(ER)	Bankfull Depth	

SI	ightly Entrenche ER = >2.2	d	Moderately Entrenched ER = 1.41 – 2.2	Entrenched ER = 1.0 – 1.4						
C stream type	D stream type	E stream type	B stream type	A stream type	F stream type	G stream type				

ii. Are ≥10 acres of wetland in the AA subject to flooding **AND** are man-made features which may be significantly damaged by floods located within 0.5 mile downstream of the AA (circle)? **Comments:** Wetlands not flooded from in-channel or overbank flow.

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- **14F. Short and Long Term Surface Water Storage:** (Applies to wetlands that flood or pond from overbank or in-channel flow, precipitation, upland surface flow, or groundwater flow. If no wetlands in the AA are subject to flooding or ponding, **NA** and proceed to 14G.)
- i. Rating (Working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating. Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; and T/E = temporary/ephemeral [see instructions for further definitions of these terms].)

Estimated maximum acre feet of water contained in wetlands within the AA that are subject to periodic flooding or ponding	>:	5 acre fe	et	1.11	to 5 acre	feet	<=1 acre foot		
Duration of surface water at wetlands within the AA	P/P	S/I	T/E	P/P	S/I	T/E	P/P	S/I	T/E
Wetlands in AA flood or pond >= 5 out of 10 years	1H	.9H	.8H	.8H	.6M	.5M	.4M	.3L	.2L
Wetlands in AA flood or pond < 5 out of 10 years	.9H	.8H	.7M	.7M	.5M	.4M	.3L	.2L	.1L

Comments: Estimated that AA ponds greater than 5 out of 10 years with approximately 5.3 acres inundated to approximately 0.5 feet (5.3\*0.5=2.65 acre feet).

**14G. Sediment/Nutrient/Toxicant Retention and Removal:** (Applies to wetlands with potential to receive sediments, nutrients, or toxicants through influx of surface or ground water or direct input. If no wetlands in the AA are subject to such input,

NA and proceed to 14H.)

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating [H=high, M=moderate, or L=low])

Sediment, nutrient, and toxicant input levels within AA	potential to or compour are n sedimentat	deliver levels nds at levels ot substantia ion, sources	unding land of sof sediment such that oth lly impaired. of nutrients contication pres	s, nutrients, er functions Minor or toxicants,	developmen nutrients, or t use with po nutrients, o substantially	t for "probable of coxicants or AA of tential to deliver of r compounds so of impaired. Major	waterbodies in reauses" related receives or sure high levels of uch that other for sedimentations of eutrophical	to sediment, rounding land sediments, unctions are n, sources of
% cover of wetland vegetation in AA	>= 7	70%	< 7	0%	>= 7	70%	< 7	0%
Evidence of flooding / ponding in AA	Yes	No	Yes	No	Yes	No	Yes	No
AA contains no or restricted outlet	1H	<b>1H</b> .8H		.5M	.5M	.4M	.3L	.2L
AA contains unrestricted outlet	.9H	.7M	.6M	.4M	.4M	.3L	.2L	.1L

Comments: Isolated depressional wetland cells do not have outlets. Percent cover of wetland vegetation in the AA is greater than 70%.

**14H Sediment/Shoreline Stabilization:** (Applies only if AA occurs on or within the banks or a river, stream, or other natural or man-made drainage, or on the shoreline of a standing water body which is subject to wave action. If 14H does not apply, **NA** and proceed to 14I.)

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

% Cover of <u>wetland</u> streambank or	Duration of surface water adjacent to rooted vegetation								
shoreline by species with stability ratings of >=6 (see <b>Appendix F</b> ).	Permanent / Perennial	Seasonal / Intermittent	Temporary / Ephemeral						
>= 65%	1H	.9H	.7M						
35-64%	.7M	.6M	.5M						
35%	.3L	.2L	.1L						

**Comments:** Seasonal open water exists within excavated wetland cells. Most of the shorelines are dominated by deep rooted plants such as reed canarygrass or creeping meadow-foxtail, but some cells in the northern portion of the site have shorelines vegetated with shallow rooted annuals such as cheatgrass.

#### 14l. Production Export/Food Chain Support:

i. Level of Biological Activity (synthesis of wildlife and fish habitat ratings [circle])

General Fish Habitat	General V	General Wildlife Habitat Rating (14C.iii.)								
Rating (14D.iii.)	E/H	M	L							
E/H	Н	Н	M							
M	Н	M	M							
L	M	M	L							
N/A	Н	M	L							

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

Α	Vegetated component >5 acres					Vegetated component 1-5 acres							Vegetated component < 1 acre					
В	Hi	gh	Mode	erate	Lo	)W	Hi	gh	Mod	erate	Lo	w	Hi	gh	Mode	erate	Lo	w
С	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
P/P	1H	.7M	.8H	.5M	.6M	.4M	.9H	.6M	.7M	.4M	.5M	.3L	.8H	.6M	.6M	.4M	.3L	.2L
S/I	.9H	.6M	.7M	.4M	.5M	.3L	.8H	.5M	.6M	.3L	.4M	.2L	.7M	.5M	.5M	.3L	.3L	.2L
T/E/A	.8H	.5M	.6M	.3L	.4M	.2L	.7M	.4M	.5M	.2L	.3L	.1L	.6M	.4M	.4M	.2L	.2L	.1L

iii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1.) Vegetated Upland Buffer (VUB): Area with >= 30% plant cover, = 15% noxious weed or ANVS cover, and that is not subjected to periodic mechanical mowing or clearing (unless for weed control).

a) Is there an average >= 50 foot-wide vegetated upland buffer around >= 75% of the AA circumference?

X If yes, add 0.1 to the score in ii

iv. Final Score and Rating: 0.80H

**Comments:** The upland buffer around the AA has greater than 30% plant cover. Greater than 5 acres of wetland in the AA are vegetated.

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14J. Groundwater Discharge/Recha	rge: (check	the appropria	te indicators	in i & ii belo	w)				
i. Discharge Indicators  The AA is a slope wetland Springs or seeps are known Vegetation growing during do				X	Wetland conta	ibstrate prese ains inlet but	no outlet	inderlying imp	
Wetland occurs at the toe of AA permanently flooded duri Wetland contains an outlet, by Shallow water table and the statement of the statement	a natural slo ng drought p out no inlet	ppe periods	face		Other:	lown looning	ou carri, dioc	marge volume	decircusco
Other:									
iii. Rating (use the information from i	and ii above	Duration	of saturation	on at AA We	] the functiona etlands <u>FROI</u> R THAT IS RI TER SYSTEN	M GROUNDV ECHARGING	VATER		
Criteria		P/P		S/I	T		None	1	
Groundwater Discharge or Rechar	rge	1H		.7M	.4M		.1L	1	
Insufficient Data/Information			•	N	/A	-		7	
14K. Uniqueness: i. Rating (working from top to bottom,	use the mat	rix below to a	rrive at [circle	r e	onal points an		Ι		
Replacement potential	or matur wetland <b>o</b> i	ns fen, bog, we (>80 yr-old or plant associes of the MT) with the MT) is far as for the MT) as for the MT) are far as for the MT).	) forested ation listed	rare types (#13) is	s <b>and</b> structur high <b>or</b> conta ion listed as " MTNHP	ral diversity ains plant	rare typ	viously cited tions <b>and</b> 13) is low-	
Estimated relative abundance (#11)	rare	common	abundant	rare	common	abundant	rare	common	abundant
Low disturbance at AA (#12i)	1H	.9H	.8H	.8H	.6M	.5M	.5M	.4M	.3L
Moderate disturbance at AA (#12i)	.9H	.8H	.7M	.7M	.5M	.4M	.4M	.3L	.2L
High disturbance at AA (#12i)  Comments: This wetland type is con	.8H	.7M	.6M	.6M	.4M	.3L	.3L	.2L	.1L
14L. Recreation/Education Potentia i. Is the AA a known or potential rec overall summary and rating pa ii. Check categories that apply to the	l: (affords "b :./ed. site: (d age) ne AA: X	onus" points circle) X	if AA provide f 'Yes' contin	ue with the		'No' then mai		and proceed to	o the
Known or Potential Recreation or Ed	lucation Area	а					Known	Potential	
Public ownership or public easem					required)		.2H	.15H	_
Private ownership with general pu		•		•			.15H	.1M	4
Private or public ownership witho Comments: Access is permitted with							.1M ange.	.05L	
General Site Notes									
The site remains a Category III wetla	nd. No subs	stantial chang	es were mad	e from 2023	3 to 2024.				

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## FUNCTION & VALUE SUMMARY & OVERALL RATING FOR WETLAND/SITE #(S): Kindsfater - Created Wetlands

Function & Value Variables	Rating	Actual Functional Points	Possible Functional Points	Functional Units: (Actual Points x Wetland Acreage)	Indicate the four most prominent functions with an asterisk (*)
A. Listed/Proposed T&E Species Habitat	L	0.10	1	0.65	
B. MT Natural Heritage Program Species Habitat	L	0.00	1	0.00	
C. General Wildlife Habitat	М	0.70	1	4.55	*
D. General Fish Habitat	NA				
E. Flood Attenuation	NA				
F. Short and Long Term Surface Water Storage	М	0.60	1	3.90	
G. Sediment/Nutrient/Toxicant Removal	Н	1.00	1	6.50	*
H. Sediment/Shoreline Stabilization	М	0.60	1	3.90	
I. Production Export/Food Chain Support	Н	0.80	1	5.20	*
J. Groundwater Discharge/Recharge	М	0.70	1	4.55	*
K. Uniqueness	М	0.50	1	3.25	
L. Recreation/Education Potential (bonus points)	Н	0.20	1	1.30	
Totals: Percent of Possible Score		5.20	9.00 58%	33.80	

Category I Wetland: (must satisfy one of the following criteria; otherwise go to Category II)  Score of 1 functional point for Listed/Proposed Threatened or Endangered Species; or  Score of 1 functional point for Uniqueness; or  Score of 1 functional point for Flood Attenuation and answer to Question 14E.ii is "yes"; or  Percent of possible score > 80% (round to nearest whole #).
Category II Wetland: (Criteria for Category I not satisfied and meets any one of the following criteria; otherwise go to Category IV)  Score of 1 functional point for MT Natural Heritage Program Species Habitat; or  Score of .9 or 1 functional point for General Wildlife Habitat; or  Score of .9 or 1 functional point for General Fish Habitat; or  "High" to "Exceptional" ratings for both General Wildlife Habitat and General Fish/Aquatic Habitat; or  Score of .9 functional point for Uniqueness; or  Percent of possible score > 65% (round to nearest whole #).
Category III Wetland: (Criteria for Categories I, II, or IV not satisfied)
Category IV Wetland: (Criteria for Categories I or II are not satisfied and all of the following criteria are met; otherwise go to Category III) "Low" rating for Uniqueness; andVegetated wetland component 1 acre (do not include upland vegetated buffer); andPercent of possible score 35% (round to nearest whole #).

## OVERALL ANALYSIS AREA RATING: III

Summary Comments: Created wetland acreage increased in 2024 by 0.68-acre.

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

1. Project Name: Kindsfater - Existing Wetlands 2. MDT Project #: STPX 56 (56) Control #:

3. Evaluation Date: 06/04/2024 4. Evaluator(s): E Reynaud 5. Wetlands/Site #(s): Kindsfater - Existing

Wetlands 6. Wetland Location(s): i. Legal: T2S,R25E,6 Latitude/Longitude:

45.693343, -108.696369: Central area of preii. Approx. Stationing or Mileposts:

existing wetlands at the mitigation site

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Watershed Name, County: Upper Yellowstone, Yellowstone

7. a. Evaluating Agency: CCI for MDT

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b. Purpose of Evaluation:

Wetlands potentially affected by MDT project

Mitigation wetlands; pre-construction

3. X Mitigation wetlands; post-construction

Other:

iii. Watershed:

8. Wetland size: 30.730 acres (measured)

9. Assessment area (AA): 30.730 acres (measured)

#### 10. Classification of Wetland and Aquatic Habitats in AA

HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% of AA
S	EM	PD	SI	80.00
S	SS	PD	SI	20.00

Abbreviations: (see manual for definitions)

HGM Classes: Riverine (R), Depressional (D), Slope (S), Mineral Soil Flats (MSF), Organic Soil Flats (OSF), Lacustrine Fringe (LF);

Cowardin Classes: Rock Bottom (RB), Unconsolidated bottom (UB), Aquatic Bed (AB), Unconsolidated Shore (US), Moss-lichen Wetland (ML), Emergent Wetland (EM), Scrub-Shrub Wetland (SS), Forested

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

Water Regimes: Permanent / Perennial (PP), Seasonal / Intermittent (SI), Temporary / Ephemeral (TE)

11. Estimated relative abundance: (of similarly classified sites within the same Major Montana Watershed Basin, see definitions)

#### 12. General condition of AA:

i. Disturbance: (use matrix below to determine [circle] appropriate response - see instructions for Montana-listed noxious weed and aquatic nuisance vegetation species (ANVS) list)

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

Comments: (types of disturbance, intensity, season, etc.): The mitigation site is managed in a natural state and contains less than 5% noxious weeds. The AA is a historic gravel pit/wetland and includes pre-existing slope/depressional wetland areas. Wetland mitigation construction was completed in early spring of 2013.

ii. Prominent noxious, aquatic nuisance, & other exotic vegetation species: Euphorbia esula, Cirsium arvense, Convolvulus arvensis, Cynoglossum officinale, Bromus tectorum

iii. Provide brief descriptive summary of AA and surrounding land use/habitat: Land use surrounding the AA includes commercial development, agriculture (grazing and feed lot), transportation (railroad and interstate). A shooting range is included within the site.

13. Structural Diversity: (based on number of "Cowardin" vegetated classes present [do not include unvegetated classes], see #10 above)

Existing # of "Cowardin" Vegetated Classes in AA	Initial Rating	Is current management existence of additional		Modified Rating
>= 3 (or 2 if 1 is forested) classes	Н	NA	NA	NA
2 (or 1 if forested) classes	М	NA	NA	NA
1 class, but not a monoculture	М	< NO	YES>	L
1 class, monoculture (1 species comprises >= 90% of total cover)	L	NA	NA	NA

Comments: Cowardin classes present within the mitigation site includes emergent and scrub-shrub. Woody vegetation in the wetlands provides important structural and habitat diversity for wildlife.

1

#### **SECTION PERTAINING to FUNCTIONS & VALUES ASSESSMENT**

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

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

Primary or critical habitat (list species)

Secondary habitat (list species)

Incidental habitat (list species)

Danaus plexippus(S)

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

Highest Habitat Level	doc/primary	sus/primary	doc/secondary	sus/secondary	doc/incidental	sus/incidental	None
Functional Points and Rating	1H	.9H	.8M	.7M	.3L	.1L	0L

Sources for documented use (e.g. observations, records, etc): The monarch butterfly (Danaus plexippus) was listed at the site as a candidate species (USFWS 2024).

14B. Habitat for plant or animals rated S1, S2, or S3 by the Montana Natural Heritage Program: (not including species listed in14A above)

i. AA is Documented (D) or Suspected (S) to contain (circle one based on definitions contained in instructions): No usable habitat

Primary or critical habitat (list species) Secondary habitat (list species) Incidental habitat (list species)

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

Highest Habitat Level	doc/primary	sus/primary	doc/secondary	sus/secondary	doc/incidental	sus/incidental	None
S1 Species: Functional Points and Rating	1H	.8H	.7M	.6M	.2L	.1L	0L
S2 and S3 Species: Functional Points and Rating	.9H	.7M	.6M	.5M	.2L	.1L	0L

Sources for documented use (e.g. observations, records, etc): No SOC have been recently reported at the site (MTNHP 2024).

#### 14C. General Wildlife Habitat Rating:

. Evidence of overall wildlife use in the AA (circle substantial, moderate, or low based on supporting evidence):

Substantial (based on any of the following [check]):         observations of abundant wildlife #s or high species diversity (during any period)         abundant wildlife sign such as scat, tracks, nest structures, game trails, etc.         presence of extremely limiting habitat features not available in the surrounding area interviews with local biologists with knowledge of the AA	Minimal (based on any of the following [check]):  few or no wildlife observations during peak use periods little to no wildlife sign sparse adjacent upland food sources interviews with local biologists with knowledge of the AA
Moderate (based on any of the following [check]):  X observations of scattered wildlife groups or individuals or relatively few species during common occurrence of wildlife sign such as scat, tracks, nest structures, game trails, and adequate adjacent upland food sources interviews with local biologists with knowledge of the AA	·

**ii. Wildlife habitat features** (Working from top to bottom, circle appropriate AA attributes in matrix to arrive at rating. Structural diversity is from #13. For class cover to be considered evenly distributed, the most and least prevalent vegetated classes must be within 20% of each other interms of their percent composition of the AA (see #10). Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; T/E = temporary/ephemeral; and A = absent [see instructions for further definitions of these terms])

Structural diversity (see #13)				Hi	gh							Mod	erate					Lo	W	
Class cover distribution (all vegetated classes)		Even			Uneven		Even			Uneven				Even						
Duration of surface water in >=10% of AA	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α
Low disturbance at AA (see #12i)	Е	Е	Е	Н	Е	Е	Н	Н	Е	Н	Н	М	Е	Ι	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	M	М	L	Н	М	L	L
<b>High</b> disturbance at AA (see #12i)	М	М	М	L	М	М	L	L	М	М	L	L	М	L	Г	L	L	L	L	L

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

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

Comments: The site includes upland cottonwood galleries, scrub-shrub and emergent wetland, and open water habitat which provides structurally diverse wildlife habitat.

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**14D. General Fish Habitat Rating:** (Assess this function if the AA is used by fish or the existing situation is "correctable" such that the AA could be used by fish [i.e., fish use is precluded by perched culvert or other barrier, etc.]. If the AA is not used by fish, fish use is not restorable due to habitat constraints, or is not desired from a management perspective [such as fish entrapped in a canal], then mark **X NA** and proceed to 14E.)

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

i. Habitat Quality and Known / Suspected Fish Species in AA (use matrix to arrive at [circle] the functional points and rating)

Duration of surface water in AA		Perr	manent	/ Perer	nnial		Seasonal / Intermittent					Temporary / Ephemeral						
Aquatic hiding / resting / escape cover	Opt	imal	Adeo	luate	Po	or	Opt	imal	Adec	quate	Po	or	Opt	imal	Adec	luate	Po	oor
Thermal cover optimal / suboptimal	0	S	0	S	0	Ø	0	S	0	S	0	S	0	S	0	S	0	S
FWP Tier I fish species	1E	.9H	.8H	.7M	.6M	.5M	.9H	.8H	.7M	.6M	.5M	.4M	.7M	.6M	.5M	.4M	.3L	.2L
FWP Tier II or Native Game fish species	.9H	.8H	.7M	.6M	.5M	.5M	.8H	.7M	.6M	.5M	.4M	.4M	.6M	.5M	.4M	.3L	.2L	.2L
FWP Tier III or Introduced Game fish	.8H	.7M	.6M	.5M	.5M	.4M	.7M	.6M	.5M	.4M	.4M	.3L	.5M	.4M	.3L	.2L	.2L	.1L
FWP Non-Game Tier IV or No fish species	.5M	.5M	.5M	.4M	.4M	.3L	.4M	.4M	.4M	.3L	.3L	.2L	.2L	.2L	.2L	.1L	.1L	.1L

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

ii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1)

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

If yes, reduce score in i above by 0.1.

b) Does the AA contain a documented spawning area or other critical habitat feature (i.e., sanctuary pool, upwelling area, etc.- specify in comments) for native fish or introduced game fish? If yes, add 0.1 to the adjusted score in i or iia.

iii. Final Score and Rating: NA

Comments: AA is not used by fish, fish use is not restorable due to habitat constraints, or is not desired from a management perspective.

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

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

Estimated or Calculated Entrenchment (Rosgen 1994, 1996)	, ,	entrenche stream typ	, ,		ely entrend stream type		Entrenched-A, F, G stream types		
% of flooded wetland classified as forested and/or scrub/shrub	75%	25-75%	<25%	75%	25-75%	<25%	75%	25-75%	<25%
AA contains no outlet or restricted outlet	1H	.9H	.6M	.8H	.7M	.5M	.4M	.3L	.2L
AA contains unrestricted outlet	.9H	.8H	.5M	.7M	.6M	.4M	.3L	.2L	.1L

Entrenchment ratio (ER) estimation – see User's Manual for additional guidance. Entrenchment ratio = (flood-prone width)/(bankfull width) Flood-prone width = estimated horizontal projection of where 2 x maximum bankfull depth elevation intersects the floodplain on each side of the stream.

1	=		***************************************	A Partie
Flood-prone	Bankfull	Entrenchment ratio	2 x Bankfull Derth	Flood-prone Width Bankfull Width
width	width	(ER)	Bankfull Depth	

SI	ightly Entrenche ER = >2.2	d	Moderately Entrenched ER = 1.41 – 2.2		Entrenched ER = 1.0 - 1.4	
C stream type	D stream type	E stream type	B stream type	A stream type	F stream type	G stream type

ii. Are ≥10 acres of wetland in the AA subject to flooding **AND** are man-made features which may be significantly damaged by floods located within 0.5 mile downstream of the AA (circle)? **Comments:** Wetlands not flooded from in-channel or overbank flow.

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- **14F. Short and Long Term Surface Water Storage:** (Applies to wetlands that flood or pond from overbank or in-channel flow, precipitation, upland surface flow, or groundwater flow. If no wetlands in the AA are subject to flooding or ponding, **NA** and proceed to 14G.)
- i. Rating (Working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating. Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; and T/E = temporary/ephemeral [see instructions for further definitions of these terms].)

Estimated maximum acre feet of water contained in wetlands within the AA that are subject to periodic flooding or ponding	I Shacre teet I		1.1 to 5 acre feet			<=1 acre foot			
Duration of surface water at wetlands within the AA	P/P	S/I	T/E	P/P	S/I	T/E	P/P	S/I	T/E
Wetlands in AA flood or pond >= 5 out of 10 years	1H	.9H	.8H	.8H	.6M	.5M	.4M	.3L	.2L
Wetlands in AA flood or pond < 5 out of 10 years	.9H	.8H	.7M	.7M	.5M	.4M	.3L	.2L	.1L

Comments: Wetlands in the AA flood from precipitation and groundwater. It is estimated that the AA ponds greater than 5 out of 10 years (approximately 27 acres inundated roughly 0.5 feet).

**14G. Sediment/Nutrient/Toxicant Retention and Removal:** (Applies to wetlands with potential to receive sediments, nutrients, or toxicants through influx of surface or ground water or direct input. If no wetlands in the AA are subject to such input, **NA** and proceed to 14H.)

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating [H=high, M=moderate, or L=low])

Sediment, nutrient, and toxicant input levels within AA	AA receives or surrounding land use with potential to deliver levels of sediments, nutrients, or compounds at levels such that other functions are not substantially impaired. Minor sedimentation, sources of nutrients or toxicants, or signs of eutrophication present.		developmen nutrients, or t use with po nutrients, o substantially	t for "probable of toxicants or AA of tential to delive of compounds so of impaired. Majo	waterbodies in reauses" related receives or surrer high levels of such that other fur sedimentations of eutrophica	to sediment, rounding land sediments, unctions are n, sources of		
% cover of wetland vegetation in AA	>= 7	70%	< 7	0%	>= 7	70%	< 7	0%
Evidence of flooding / ponding in AA	Yes No Yes No		Yes	No	Yes	No		
AA contains no or restricted outlet	1H .8H .7M .5M		.5M	.4M	.3L	.2L		
AA contains unrestricted outlet	.9H	.7M	.6M	.4M	.4M	.3L	.2L	.1L

Comments: Unrestricted drainage from slope wetlands on the upper terrace to the depressional wetlands on the lower terrace.

**14H Sediment/Shoreline Stabilization:** (Applies only if AA occurs on or within the banks or a river, stream, or other natural or man-made drainage, or on the shoreline of a standing water body which is subject to wave action. If 14H does not apply, **NA** and proceed to 14I.)

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

% Cover of <u>wetland</u> streambank or	Duration of surface water adjacent to rooted vegetation							
shoreline by species with stability ratings of >=6 (see <b>Appendix F</b> ).	Permanent / Perennial	Seasonal / Intermittent	Temporary / Ephemeral					
>= 65%	1H	.9Н	.7M					
35-64%	.7M	.6M	.5M					
35%	.3L	.2L	.1L					

Comments: Seasonal open water exists within excavated wetland cells. Most of the shorelines are dominated by deep rooted plants such as reed canary grass, broadleaf cattail, and Russian olive.

#### 14I. Production Export/Food Chain Support:

 $\underline{\textbf{i. Level of Biological Activity}} \ (\textbf{synthesis of wildlife and fish habitat ratings [circle]}) \\$ 

			•				
	General Fish Habitat	General Wildlife Habitat Rating (14C.iii.)					
	Rating (14D.iii.)	E/H	M	L			
	E/H	Н	Н	M			
ĺ	М	Н	M	M			
	L	M	M	L			
	N/A	Н	M	L			

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

Α		Vegetat	ed comp	onent >	5 acres		Vegetated component 1-5 acres					Vegetated component < 1 acre						
В	Hi	gh	Mode	erate	Lo	w	Hi	gh	Mode	erate	Lo	w	Hi	gh	Mode	erate	Lo	w
С	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
P/P	1H	.7M	.8H	.5M	.6M	.4M	.9H	.6M	.7M	.4M	.5M	.3L	.8H	.6M	.6M	.4M	.3L	.2L
S/I	.9H	.6M	.7M	.4M	.5M	.3L	.8H	.5M	.6M	.3L	.4M	.2L	.7M	.5M	.5M	.3L	.3L	.2L
T/E/A	.8H	.5M	.6M	.3L	.4M	.2L	.7M	.4M	.5M	.2L	.3L	.1L	.6M	.4M	.4M	.2L	.2L	.1L

iii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1.) Vegetated Upland Buffer (VUB): Area with >= 30% plant cover, = 15% noxious weed or ANVS cover, and that is not subjected to periodic mechanical mowing or clearing (unless for weed control).

a) Is there an average >= 50 foot-wide vegetated upland buffer around >= 75% of the AA circumference?

X If yes, add 0.1 to the score in ii above.

iv. Final Score and Rating: 0.80H Comments: The upland buffer around the AA has greater than 30% vegetation cover.

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14J. Groundwater Discharge/Recharge: (check the appropriate indicators in i & ii below)									
i. Discharge Indicators  X The AA is a slope wetland Springs or seeps are known or observed Vegetation growing during dormant season/drought X Wetland occurs at the toe of a natural slope AA permanently flooded during drought periods X Wetland contains an outlet, but no inlet Shallow water table and the site is saturated to the surface						bstrate prese ains inlet but	no outlet		
Other:	ite is satura	ted to the sur	тасе						
iii. Rating (use the information from i a	and ii above				the functiona			1	
		<u>DISCH.</u>			THAT IS RE ER SYSTEM		THE		
Criteria		P/P		S/I	Т		None	1	
Groundwater Discharge or Recharge	qe	1H		.7M	.4M		.1L	1	
Insufficient Data/Information			•	N//	4	•		1	
Comments: PEM/PSS wetland at the	toe of slope	e; receives gr	oundwater fr	om slope we	tlands on ter	race above.		_	
14K. Uniqueness: i. Rating (working from top to bottom, to	use the mati	rix below to a	rrive at [circle	T	-				
Replacement potential	AA contains fen, bog, warm springs or mature (>80 yr-old) forested wetland <b>or</b> plant association listed as "S1" by the MTNHP  AA does not contain previously cite rare types <b>and</b> structural diversity (#13) is high <b>or</b> contains plant association listed as "S2" by the MTNHP			al diversity ins plant	AA does not contain previously cited rare types or associations <b>and</b> structural diversity (#13) is low-moderate				
Estimated relative abundance (#11)	rare	common	abundant	rare	common	abundant	rare	common	abundant
Low disturbance at AA (#12i)	1H	.9H	.8H	.8H	.6M	.5M	.5M	.4M	.3L
Moderate disturbance at AA (#12i)	.9H	.8H	.7M	.7M	.5M	.4M	.4M	.3L	.2L
High disturbance at AA (#12i)	.8H	.7M	.6M	.6M	.4M	.3L	.3L	.2L	.1L
Comments: Site is not unique for this	area.								
14L. Recreation/Education Potential i. Is the AA a known or potential rec. overall summary and rating pa ii. Check categories that apply to the	./ed. site: (c ige) e AA: X	ircle) X (i	f 'Yes' contin	ue with the e	evaluation; if '	No' then mar		nd proceed to	o the
iii. Rating:									
Known or Potential Recreation or Edu	ucation Area	)				Ī	Known	Potential	7
Public ownership or public easeme			access (no i	permission i	required)		.2H	.15H	
Private ownership with general pul							.15H	.1M	
Private or public ownership withou	ıt general p	ublic access	s, or requirir	ng permissio	n for public	access	.1M	.05L	7
Comments: Access is permitted without permission with the exception of the Montana Highway Patrol shooting range, to which access is prohibited.									
General Site Notes									
The site remains a Category III wetland. No substantial changes were made from 2023 to 2024.									
The site femalise a category in wettand. No substantial changes were made from 2020 to 2024.									

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## FUNCTION & VALUE SUMMARY & OVERALL RATING FOR WETLAND/SITE #(S): Kindsfater - Existing Wetlands

Function & Value Variables	Rating	Actual Functional Points	Possible Functional Points	Functional Units: (Actual Points x Wetland Acreage)	Indicate the four most prominent functions with an asterisk (*)
A. Listed/Proposed T&E Species Habitat	L	0.10	1	3.07	
B. MT Natural Heritage Program Species Habitat	L	0.00	1	0.00	
C. General Wildlife Habitat	М	0.50	1	15.37	
D. General Fish Habitat	NA				
E. Flood Attenuation	NA				
F. Short and Long Term Surface Water Storage	Н	0.90	1	27.66	*
G. Sediment/Nutrient/Toxicant Removal	Н	0.90	1	27.66	*
H. Sediment/Shoreline Stabilization	Н	0.90	1	27.66	*
I. Production Export/Food Chain Support	Н	0.80	1	24.58	*
J. Groundwater Discharge/Recharge	М	0.70	1	21.51	
K. Uniqueness	L	0.30	1	9.22	
L. Recreation/Education Potential (bonus points)	Н	0.20	1	6.15	
Totals:		5.30	9.00	162.88	
Percent of Possible Score			59%		

Category I Wetland: (must satisfy one of the following criteria; otherwise go to Category II)  Score of 1 functional point for Listed/Proposed Threatened or Endangered Species; or  Score of 1 functional point for Uniqueness; or  Score of 1 functional point for Flood Attenuation and answer to Question 14E.ii is "yes"; or  Percent of possible score > 80% (round to nearest whole #).
Category II Wetland: (Criteria for Category I not satisfied and meets any one of the following criteria; otherwise go to Category IV)  Score of 1 functional point for MT Natural Heritage Program Species Habitat; or  Score of .9 or 1 functional point for General Wildlife Habitat; or  Score of .9 or 1 functional point for General Fish Habitat; or  "High" to "Exceptional" ratings for both General Wildlife Habitat and General Fish/Aquatic Habitat; or  Score of .9 functional point for Uniqueness; or  Percent of possible score > 65% (round to nearest whole #).
Category III Wetland: (Criteria for Categories I, II, or IV not satisfied)
Category IV Wetland: (Criteria for Categories I or II are not satisfied and all of the following criteria are met; otherwise go to Category III)  X "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: III

Summary Comments: Existing wetland acreage decreased by 1.63 acres in 2024.

Scientific Names	Common Names	GP Indicator Status <sup>(a)</sup>
Achillea millefolium	Common Yarrow	FACU
Agropyron cristatum	Crested Wheatgrass	UPL
Agrostis stolonifera	Spreading Bent	FACW
Alopecurus arundinaceus	Creeping Meadow-Foxtail	FACW
Alyssum alyssoides	Pale or Yellow Alyssum	UPL
Alyssum desertorum	Dwarf Alyssum	UPL
Amaranthus retroflexus	Red-Root	FACU
Arctium minus	Lesser Burdock	FACU
Artemisia absinthium	Common Sagewort	UPL
Artemisia dracunculus	Wild Tarragon	UPL
Artemisia frigida	Fringed Sage	UPL
Artemisia michauxiana	Michaux Sagewort	FAC
Apocynum cannabinum	Indianhemp	FAC
Asclepias speciosa	Showy Milkweed	FAC
Asperugo procumbens	German-Madwort	UPL
Atriplex suckleyi	Suckley's Saltbush	UPL
Bassia scoparia (Kochia scoparia)	Mexican-Fireweed	FACU
Berteroa incana	Hoary False Alyssum	UPL
Brassica nigra	Black Mustard	UPL
Bromus arvensis	Field Brome	FACU
Bromus inermis	Smooth Brome	UPL
Bromus japonicus	Japanese Brome	UPL
Bromus tectorum	Cheatgrass	UPL
Calamagrostis canadensis	Bluejoint	FACW
Carduus nutans	Musk Thistle	UPL
Carex aquatilis	Leafy Tussock Sedge	OBL
Carex aurea	Golden-Fruit Sedge	OBL
Carex nebrascensis	Nebraska Sedge	OBL
Carex pellita	Wooly Sedge	OBL
Carex praegracilis	Clustered Field Sedge	FACW
Carex utriculata	Northwest Territory Sedge	OBL
Centaurea stoebe	Spotted Knapweed	UPL
Centaurium exaltatum	Centaury	UPL
Ceratophyllum demersum	Coon's-Tail	OBL
Chenopodium album	Lamb's-Quarters	FACU
Chenopodium sp.	Goosefoot	NA
Cirsium arvense	Canadian Thistle	FACU
Cirsium vulgare	Bull Thistle	UPL
Conium maculatum	Poison-Hemlock	FACW
Convolvulus arvensis	Field Bindweed	UPL
Cornus alba	Red Osier	FACW

Scientific Names	Common Names	GP Indicator Status <sup>(a)</sup>
Crepis atribarba	Hawksbeard	UPL
Cynoglossum officinale	Gypsy-Flower	FACU
Dactylis glomerata	Orchard Grass	FACU
Deschampsia caespitosa	Tufted Hair Grass	FACW
Descurainia sophia	Flixweed Tansymustard	UPL
Elaeagnus angustifolia	Russian-Olive	FACU
Elaeagnus commutata	American Silver-Berry	UPL
Eleocharis palustris	Common Spike-Rush	OBL
Elymus canadensis	Nodding Wild Rye	FACU
Elymus lanceolatus	Streamside Wild Rye	FACU
Elymus repens	Creeping Wild Rye	FACU
Elymus trachycaulus	Slender Wild Rye	FACU
Epilobium ciliatum	Fringed Willowherb	FACW
Equisetum hyemale	Tall Scouring-Rush	FACW
Equisetum laevigatum	Smooth Scouring Rush	FACW
Erigeron caespitosus	Tufted Fleabane	UPL
Erigeron canadensis	Canada Horseweed	FACU
Erodium cicutarium	Stork's bill	UPL
Euphorbia esula	Leafy Spurge	UPL
Filago arvensis	Field Fluffweed	UPL
Fraxinus pennsylvanica	Green Ash	FAC
Fumaria vaillantii	Fumitory	UPL
Galium aparine	Sticky-Willy	FACU
Gaura parviflora	Butterfly Weed	UPL
Glycyrrhiza lepidota	American Licorice	FACU
Grindelia squarrosa	Curly-Cup Gumweed	FACU
Helianthus annuus	Common Sunflower	FACU
Hesperostipa comata	Needle-and-Thread	UPL
Heterotheca villosa	Golden-Aster	UPL
Hordeum jubatum	Fox-Tail Barley	FACW
Hyoscyamus niger	Black Henbane	UPL
Juncus articulatus	Joint-Leaf Rush	OBL
Juncus balticus	Baltic Rush	FACW
Juncus compressus	Round-Fruit Rush	FACW
Juncus ensifolius	Dagger-Leaf Rush	FACW
Juncus gerardii	Saltmarsh Rush	FACW
Juncus longistylis	Long-style Rush	FACW
Juncus torreyi	Torrey's Rush	FACW
Juniperus scopulorum	Rocky Mountain Juniper	UPL
Koeleria macrantha	Prairie Junegrass	UPL
Lactuca serriola	Prickly Lettuce	FAC

Scientific Names	Common Names	GP Indicator Status <sup>(a)</sup>
Lemna minor	Common Duckweed	OBL
Lepidium campestre	Field Pepperweed	UPL
Lepidium perfoliatum	Clasping Pepperwort	FACU
Logfia arvensis	Fluffweed	UPL
Lycopus asper	Rough Water-Horehound	OBL
Marrubium vulgare	White Horehound	FACU
Medicago lupulina	Black Medick	FACU
Medicago sativa	Alfalfa	UPL
Melilotus albus	White Sweetclover	FACU
Melilotus officinalis	Yellow Sweet-Clover	FACU
Mentha arvensis	American Wild Mint	FACW
Muhlenbergia asperiflora	Alkali Muhly	FACW
Nassella viridula	Green Needlegrass	UPL
Nasturium officinale	Water Cress	OBL
Nepeta cataria	Catnip	FACU
Oenothera villosa	Hairly Evening-Primrose	FACU
Onopordum acanthium	Scotch Thistle	UPL
Opuntia polyacantha	Plains Pricklypear	UPL
Panicum capillare	Common Panic Grass	FAC
Pascopyrum smithii	Western-Wheat Grass	FACU
Persicaria amphibia	Water Smartweed	OBL
Persicaria lapathifolia	Dock-Leaf Smartweed	OBL
Phalaris arundinacea	Reed Canary Grass	FACW
Physalis longifolia	Long-leaf Ground Cherry	UPL
Poa compressa	Flat-Stem Blue Grass	FACU
Poa palustris	Fowl Blue Grass	FACW
Poa pratensis	Kentucky Blue Grass	FACU
Polygonum aviculare	Yard Knotweed	FACU
Polypogon monspeliensis	Annual Rabbit's-Foot Grass	FACW
Populus angustifolia	Narrow-Leaf Cottonwood	FACW
Populus deltoides	Eastern Cottonwood	FAC
Potentilla pensylvanica	Pennsylvania Cinquefoil	FACU
Prunus virginiana	Choke Cherry	FACU
Ranunculus gmelinii	Lesser Yellow Water Buttercup	FACW
Ratibida columnifera	Prairie Coneflower	UPL
Rhamnus cathartica	Common Buckthorn	FACU
Ribes aureum	Golden Currant	FACU
Rosa woodsii	Wood's Rose	FACU
Rumex crispus	Curly Dock	FAC
Rumex salicifolius	Willow Dock	FACW
Salix exigua	Narrow-Leaf Willow	FACW
Salix lutea (S. eriocephala)	Yellow Willow	FACW

Scientific Names	Common Names	GP Indicator Status <sup>(a)</sup>
Salix sp.	Willow	NA
Salsola tragus	Prickly Russian-Thistle	FACU
Schedonorus arundinaceus	Tall False Rye Grass	FAC
Schedonorus pratensis	False Meadow Rye	FACU
Schoenocrambe linifolia	Flax-leaf Plains Mustard	UPL
Schoenoplectus acutus	Hard-Stem Club-Rush	OBL
Schoenoplectus pungens	Three-Square	OBL
Shepherdia argentea	Silver Buffalo-Berry	UPL
Scirpus microcarpus	Red-Tinge Bulrush	OBL
Silene latifolia	White Cockle	UPL
Sisymbrium altissimum	Tall Hedge-Mustard	FACU
Sisymbrium loeselii	Smallpod Tumble Mustard	UPL
Solanum dulcamara	Climbing Nightshade	FACU
Solidago canadensis	Canadian Goldenrod	FACU
Sonchus arvensis	Field Sow-Thistle	FAC
Sphaeralcea coccinea	Scarlet Globemallow	UPL
Sporobolus cryptandrus	Sand Dropseed	FACU
Tanacetum vulgare	Common Tansy	FACU
Taraxacum officinale	Common Dandelion	FACU
Thlaspi arvense	Field Pennycress	FACU
Tragopogon dubius	Meadow Goat's-beard	UPL
Typha angustifolia	Narrow-Leaf Cat-Tail	OBL
Typha latifolia	Broad-Leaf Cat-Tail	OBL
Ulmus americana	American Elm	FAC
Verbascum thapsus	Great Mullein	UPL
Verbena bracteata	Carpet Vervain	FACU
Veronica anagallis-aquatica	Blue Water Speedwell	OBL
Veronica peregrina	Neckweed	FACW
Vicia americana	American Purple Vetch	FACU
Vicia sativa	Garden Vetch	FACU
Xanthium strumarium	Rough Cockleburr	FAC
Zeltnera exaltata	Desert Mountain-pink	FACW

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

New species identified in 2024 are **bolded**.

# APPENDIX C PROJECT AREA PHOTOGRAPHS

MDT Wetland Mitigation Monitoring Kindsfater Yellowstone County, Montana



Photo Point: 1. View of eastern edge of Cell 14 looking W Bearing: 280 degrees Year: 2013



Photo Point: 1. View of eastern edge of Cell 14 looking W Bearing: 280 degrees Year: 2024



Photo Point: 2. View of western side of Cell 13 looking SW Bearing: 280 degrees Year: 2013



Photo Point: 2. View of western side of Cell 13 looking SW Bearing: 280 degrees Year: 2024



Photo Point: 3. View of southern edge of Cell 9 looking NE Bearing: 0 degrees Year: 2013



Photo Point: 3. View of southern edge of Cell 9 looking NE Bearing: 0 degrees Year: 2024



Photo Point: 4. View of Cell 12 looking S Bearing: 200 degrees Year: 2013



Photo Point: 4. View of Cell 12 looking S Bearing: 200 degrees Year: 2024



Photo Point: 5. View of Cell 11 looking SW Bearing: 10 degrees Year: 2013



Photo Point: 5. View of Cell 11 looking SW Bearing: 10 degrees Year: 2024



Photo Point: 6. View of western side of Cell 10 looking SW Bearing: 150 degrees Year: 2013



Photo Point: 6. View of western side of Cell 10 looking SW Bearing: 150 degrees Year: 2024



Photo Point: 7. View of western side of Cell 5 looking east Bearing: 90 degrees Year: 2013



Photo Point: 7. View of western side of Cell 5 looking east Bearing: 90 degrees Year: 2024



Photo Point: 8. View of western edge of Cell 2 looking NW Bearing: 315 degrees Year: 2013



Photo Point: 8. View of western edge of Cell 2 looking NW Bearing: 315 degrees Year: 2024



Photo Point: 9. View of Cell 1 looking N Bearing: 90 degrees Year: 2013



Photo Point: 9. View of Cell 1 looking N Bearing: 90 degrees Year: 2024



Photo Point: 10. View of northern portion of Cell 3 looking SE Bearing: 140 degrees Year: 2013



Photo Point: 10. View of northern portion of Cell 3 looking SE Bearing: 140 degrees Year: 2024



Photo Point: 11. View of Cell 7 looking SE Bearing: 150 degrees Year: 2013



Photo Point: 11. View of Cell 7 looking SE Bearing: 150 degrees Year: 2024



Photo Point: 12. View of Cell 6 looking W Bearing: 230 degrees Year: 2013



Photo Point: 12. View of Cell 6 looking W Bearing: 230 degrees Year: 2024

# Kindsfater: Transect Photographs



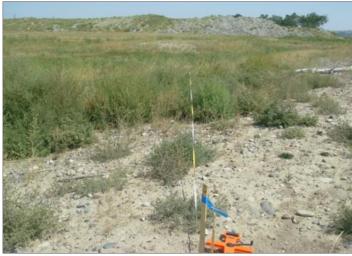
Transect 1: Start Bearing: 240 degrees

Location: Wetland Cell 14 Year: 2013



Transect 1: Start Bearing: 240 degrees

Location: Wetland Cell 14 Year: 2024



Transect 1: End Bearing: 50 degrees

Location: Wetland Cell 14 Year: 2013



Transect 1: End Bearing: 50 degrees

Location: Wetland Cell 14 Year: 2024



Transect 2: Start Bearing: 225 degrees

Location: Wetland Cell 8 Year: 2013



Transect 2: Start Bearing: 225 degrees

Location: Wetland Cell 8 Year: 2024

# Kindsfater: Transect Photographs



Transect 2: End Bearing: 40 degrees

Location: Wetland Cell 8 Year: 2013



Transect 2: End Bearing: 40 degrees

Location: Wetland Cell 8 Year: 2024



Transect 3: Start Bearing: 290 degrees

Location: Wetland Cell 4 Year: 2013



Transect 3: Start Bearing: 290 degrees

Location: Wetland Cell 4 Year: 2024



Transect 3: End Bearing: 110 degrees

Location: Wetland Cell 4 Year: 2013



Transect 3: End Bearing: 110 degrees

Location: Wetland Cell 4 Year: 2024



Data Point: DP01w Year: 2024



Data Point: DP01u Year: 2024

Location: Veg Community 4/18



Data Point: DP02w Year: 2024



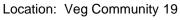


Data Point: DP02u Year: 2024

Location: Veg Community 4/18



Data Point: DP03w Year: 2024





Data Point: DP03u Year: 2024

Location: Veg Community 4/18

C-7



Data Point: DP04w Year: 2024



Data Point: DP04u

Location: Veg Community 4/18



Data Point: DP05w Year: 2024



Location: Veg Community 19



Data Point: DP05u Year: 2024

Location: Veg Community 4/18



Data Point: DP06w Year: 2024





Data Point: DP06u Year: 2024

Location: Veg Community 14



Data Point: DP07w Year: 2024

Location: Veg Community 9



Data Point: DP07u Year: 2024

Location: Veg Community 4/18



Data Point: DP08w Year: 2024

Location: Veg Community 8



Data Point: DP08u Year: 2024

Location: Veg Community 4/18



Data Point: DP09w Year: 2023

Location: Veg Community 8



Data Point: DP09u Year: 2024

Location: Veg Community 14



Data Point: DP10w Year: 2024



Location: Veg Community 11



Data Point: DP10u Year: 2024





Data Point: DP11w Year: 2024



Location: Veg Community 19



Data Point: DP11u Year: 2024

Location: Veg Community 17



Data Point: DP12w Year: 2024





Data Point: DP12u Year: 2024

Location: Veg Community 4/18