Montana Department of Transportation Wetland Mitigation Monitoring Report

SCHRIEBER LAKE MITIGATION SITE

Project Overview

MDT Project Number: NH 27 (029) UPN # 1027007 Watershed: Watershed #1 – Kootenai River Basin

Monitoring Year: 2023

Years Monitored: 9th year of monitoring

Corps Permit Number: NWO-2013-00874-MTM

Stream Protection Act (SPA) Authorization Number: MDT-R1-40-2013

Monitoring Conducted By: Confluence Consulting Inc. Dates Monitoring Was Conducted: July 10, 2023

Purpose of the Approved Project:

The site was constructed by the Montana Department of Transportation (MDT) from 2014 to 2015 to provide 13.4 acres of compensatory wetland mitigation credits and 36,741.85 stream mitigation credits for wetland and stream impacts associated with the US Highway 2 Swamp Creek – East project and highway impacts associated with future transportation project-related wetland and stream impacts in Watershed #1 – Kootenai River Basin. The project was designed to create new wetlands, restore degraded wetlands, and provide upland buffers around all wetlands. The project restored 1,398 linear feet of the Coyote Creek channel and 2,987 linear feet of the Schrieber Creek channel.

Site Location:

Latitude: 48.106833 Longitude: -115.409964 County: Lincoln Nearest Town: Libby, MT Map Included: See Figure 1, page 11

Mitigation Site Construction Started: Summer/2014 Construction Ended: Spring/2015 Dates of Any Recent Corrective or Maintenance Activities (since previous report):

Activity: Weed Spraying Date: June 28 - July 1, 2021. No weed spraying was conducted in 2022-2023.

Specific recommendations for any additional corrective actions: The MDT's weed-control program will conduct weed treatments in the Spring of 2024.

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Anticipated Wetland Credit Acres: 13.40

Wetland Credit Acres Generated to Date: 14.94

Anticipated Stream Credits: 36,741.87

Stream Credits Generated to Date: 34,349.67

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

mitigation.aspx

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

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

Performance Standards: A summary of performance standards, associated success criteria, and 2023 achievement status for the Schrieber Lake site is provided in Table 1.

Table 1. Summary of Performance Standards

	Wetland Perfor	mance Stand	dards			
Performance Standards	Success Criteria	Criteria Achieved Y/N	Discussion			
Wetland Characteristics	The three parameter criteria are met for hydrology, vegetation, and soils as outlined in the 1987 Wetland Manual and 2010 Regional Supplement.	Y	Areas that were identified as wetland habitat within the mitigation site meet the three paramete criteria.			
Wetland Hydrology	Wetland Hydrology Success will be achieved where wetland hydrology is present as per the technical guidelines for Wetland Hydrology Indicator procedures established within the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (WMVC) (Version 2.0). Soil saturation will be determined based upon Primary and Secondary hydrology indicators as provided in Table 12 of Chapter 3 of the WMVC. The presence of Primary indicators observed during field work will be utilized to make a formal determination as to Hydrologic success within the restored wetland.	Y	Areas that were identified as wetlands met the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (WMVC) (Version 2.0) definition for wetland hydrology.			
	Hydric soil conditions are present or appear to be forming.	Υ	Hydric soil characteristics have developed throughout all constructed wetlands.			
Hydric Soil	Soil is sufficiently stable to prevent erosion.	Υ	Disturbed soil is stable and does not exhibit signs of erosion.			
	Soil is able to support plant cover.	Υ	Plant cover is well established across disturbed soils.			
Hydrophytic	Combined areal cover of facultative or wetter species is 70 percent or greater.	Υ	Areas identified as wetland habitat within the mitigation site support a prevalence of hydrophytic vegetation (OBL, FACW, and FAC) with combined areal cover greater than 70 percent.			
Vegetation	State-listed noxious weeds do not exceed 5 percent absolute cover.	Υ	State-listed noxious weeds were less than 5 percent absolute cover within wetland areas in 2023.			
	Woody plants exceed 50 percent survival after 5 years.	N	Woody plant survival remains very low and is not expected to meet this success criteria.			
Open Water	The project is intended to provide open water during the spring and early summer within excavated depressions. Open water with emergent, submerged, and/or floating vegetation will, therefore, be considered successful and creditable.	Υ	Excavated depressions throughout the entire mitigation area support perennial inundation with an established aquatic macrophyte community.			
	Noxious weeds do not exceed 5 percent cover within upland buffer area.	Υ	Noxious weed cover within the upland buffer areas adjacent to Schrieber and Coyote Creek was estimated at 4 percent and 3 percent, respectively.			
Upland Buffer	Any area that was disturbed within creditable buffer zone must have at least 50 percent aerial cover of non-weed species by end of monitoring period.	Υ	Disturbed areas have established greater than 50 percent cover by non-weed species. Predominately non-native grass species dominated the upland buffer area. Total aerial cover of vegetation was estimated to be between 80 and 85 percent.			

Weed Control	Weed control will be based on annual site monitoring to determine weed species and the degree of infestation within the site. Control measures based on the monitoring results will be implemented by Montana Department of Transportation (MDT) to minimize and/or eliminate the intrusion of state-listed noxious weed species within the site.	Υ	State-listed noxious weed species have been identified and mapped during the 2023 monitoring event for weed control efforts in 2024. MDT's weed-control contractor is scheduled to treat this site in the Spring of 2024 as part of an ongoing weed control program.
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	Stream Perform	nance	Standa	ards
Performance Standards	Success Criteria		eria eved /N	Discussion
		SC ^(a)	CC(p)	
Bank Restoration Success	Ratings for the streambank will be based on the Proper Functioning Condition (PFC) rating that determines if the area supports a healthy, stable bank area adjacent to the stream: i) Functioning – The streambank supports a healthy and stable bank area adjacent to the river. ii) Functioning at Risk – one or more functions of the streambank are adjusting to changes in the design within the reach area, and more monitoring is needed. iii) Not Functioning – Measurements of the functions indicate that the site is not achieving functional goals and is not.	N/Y	Υ	A PFC assessment was performed during the 2020 monitoring year within three areas of the site (the stream reaches are shown in Figure A-2 in Appendix A). Reach SC1 was rated as Functional – At Risk due to the slower vegetation establishment and areas of bare soil along the bank. See the Stream Monitoring section of this report for additional details and the 2020 PFC assessment in Appendix B of the 2020 monitoring report.
	Creditable buffer areas must have at least 50 percent areal cover of non- weed species by the end of the monitoring period.	Υ	Y	All riparian vegetation transects exhibited 50 percent or greater areal cover of non-weed species along both Schrieber and Coyote Creeks.
Disasis a Duffer	Combined areal cover of riparian and streambank vegetation communities is 70 percent or greater.	Y	Y	Combined areal cover of riparian and streambank vegetation along Coyote Creek and Schrieber Creek was estimated at 90 percent.
Riparian Buffer Success	Noxious weeds do not exceed 5 percent cover within the riparian buffer areas.	Y	Y	Noxious weed cover within riparian buffer areas adjacent to Schrieber and Coyote Creeks was estimated at 3 percent and less than 1 percent, respectively.
	Planted trees and shrubs will be considered successful where they exhibit 50 percent survival after 5 years.	N	N	Planted trees and shrubs along Schrieber Creek and Coyote Creek exhibited less than 1 percent survival in 2023.

Coyote and Schrieber Creek Channel Restoration Success	Success will be evaluated in terms of revegetation success. For the purpose of identification, bank areas extend three to five feet (5 ft.) from the Ordinary High Water (OHW) mark up the bank and is dependent upon whether it is on banks of Coyote (3 ft) or Schrieber Creek (5 ft). a. Re-vegetation along the new Coyote and Schrieber Creek channel corridor will be considered successful when the bank area becomes vegetated with a majority of deeprooting riparian plant species having root stability indexes ≥ 6 (subject to 4.a and 4.b below). This includes the development of a plant list of the species occurring along the bank areas, which will be compared with the plant stability rating tables from Winward, A. 2000, "Monitoring the Vegetation Resources in Riparian Areas"; and Pick, T. et.al. 2004, Riparian Assessment: Using the NRCS Riparian Assessment Method (See Appendix D). b. New stream channels will be allowed to naturally migrate within the established floodplain/riparian areas and to give it enough room to move and stabilize itself within the site.	Y/N	Y	Reach 1 of Schrieber Creek has yet to fully meet the performance criteria established for the development of deep-rooted vegetation within the riparian corridor. The ephemeral nature of this reach results in slower vegetation growth. As a result, Reach 1 of Schrieber Creek has not met all success criteria and is, therefore, generating half of the anticipated credits. Reaches 2A, 2B, 3, and 7 of Schrieber Creek and Reaches 1A and 1B of Coyote Creek currently meet all success criteria and have generated the predicted credits outlined in the monitoring plan.
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- (a) SC = Schrieber Creek.
- (b) CC = Coyote Creek.

Summary Data

Wetland Delineation — The total jurisdictional wetland and aquatic habitat, which includes wetlands, open water, and streams at the Schrieber Lake mitigation site in 2023, was 55.65 acres, an increase of 0.12 acres since 2022 (Table 2; see maps in Appendix A). Total delineated wetlands, which includes MDT wetlands, USFS wetlands, and riparian buffers decreased by 0.25 acre to 42.08 acres in 2023 (Table 2; see maps in Appendix A). In 2020, the USACE (N. Green, personal communication, May 6, 2020) provided guidance on open water, defining it as "areas of open water of any depth with less than 5% rooted emergent vegetation, no vegetation, submerged non-rooted vegetation, and/or submerged vegetation rooted in the substrate that does not extend above the water surface." Open water accounted for 12.57 acres of the site, including areas within Cells 1-10 and the preservation area northwest of Schrieber Lake (4.62 acres), Schrieber Lake (7.58 acres), and Schrieber Lake located on USFS property (0.37 acre).

The extensive wetland development at this site results from excavating wetland cells, constructing channel plugs, and restoring meanders and bed elevations for the Schrieber and Coyote Creek channels. Beaver activity, noted for the first time in 2019, is contributing to a shift in wetland development at the site. The beaver dam constructed at the outlet of Schrieber Lake has created perennial inundation across the site and changed the site's hydrologic regime, resulting in an expansion of perennial deepwater inundation observed within wetland vegetation communities. Initially, the beaver dam increased open water within the site, accounting for 14.24 acres in 2020. However, native floating and emergent vegetation has begun to establish within the open water areas, especially within cells 1-10, reducing open water to 12.57 acres in 2023.

Table 2. Upland, Wetland, & Aquatic Habitat Acreage Delineated From 2015 and 2019-2023

Habitat Type	2015 Acres	2019 Acres	2020 Acres	2021 Acres	2022 Acres	2023 Acres
Uplands	52.6	52.6	49.47	49.12	49.17	49.05
Wetlands						
USFS wetlands (no credit)	1.25	1.25	1.66	1.66	1.66	1.63
MDT wetlands	37.65	37.65	34.43	35.43	36.77	36.55
Riparian Buffer (no wetland credit)	3.90	3.90	3.90	3.90	3.90	3.90
Total Delineated Wetlands	42.84	42.84	39.99	40.9	42.33	42.08
Open Water						
Schrieber Lake* (no credit)	8.26	8.26	8.00	8.00	8.00	7.58
Schrieber Lake on USFS property* (no credit)						0.37
Open Water* (Cells 1-10 & Preservation Area northwest of Schrieber Lake)	N/A	N/A	6.24	5.68	4.20	4.62
Total Open Water	8.26	8.26	14.24	13.68	12.20	12.57
Streams						
Schrieber & Coyote Creeks (no wetland credit)	1.00	1.00	1.00	1.00	1.00	1.00
Total Wetland and Aquatic Habitat	52.1	52.1	55.23	55.58	55.53	55.65
Project Area	104.70	104.70	104.70	104.70	104.70	104.70

^{*}Schrieber Lake and other 'Open Water' areas all meet the USACE definition of open water and are shown as Open Water in Figures A-3 and A-5 in Appendix A.

Vegetation – A total of 120 plant species have been identified at the site from 2015 through 2023, with one new wetland species identified during the 2023 monitoring event. Four wetland, five upland, and one open water community type were identified and mapped at the mitigation site in 2023 (Figure A-3, Appendix A). Dominant plant species observed within each community are listed on the Wetland Mitigation Site Monitoring form (Appendix B). Wetland Types (WT) 4 – *Carex simulata/Persicaria amphibia* was absorbed into WT 8 – *Carex* spp. due to the species composition of both WTs converging in species composition. In addition, WT 6 - *Salix bebbiana/Phalaris arundinacea* was also absorbed into WT 8 because *Salix bebbiana* in WT 6 has been drowned out due to the recent high-water levels, and the species composition in this area is now dominated by *Carex* spp. Finally, Wetland Type 2 - *Betula pumila/Rhamnus alnifolia* was converted into WT 15 - *Betula pumila/Salix* spp. because Rhamnus *alnifolia* has been downed out and no longer occurs in the community. The vegetation community types, including one open water community type, identified on the site in 2023 include the following:

- Upland Type 1 *Elymus repens/Bromus inermis*
- Upland Type 5 Pseudotsuga menziesii/Larix occidentalis
- Upland Type 9 Crataegus douglasii/Symphoricarpos albus
- Upland Type 13 Alopecurus spp./Phalaris arundinacea
- Upland Type 14 *Alopecurus pratensis*
- Wetland Type 3 *Phalaris arundinacea/Carex* spp.
- Wetland Type 8 Carex spp.
- Wetland Type 10 Typha latifolia
- Wetland Type 15 Betula pumila/Salix spp.

 Open Water Type 11 – Open Water/Aquatic macrophytes (considered open water, not classified as an emergent vegetation community type)

A notable shift in species cover and dominance due to the active beaver dam impounding surface water continued in 2023. Inundation levels within the wetlands averaged 1.5-2.5 feet, slightly lower than observed in 2022. The increase in inundated acreage since the creation of the beaver dam has reduced the overall coverage of reed canary grass (RCG) and broken up the former monoculture, which has allowed for the increase in native herbaceous species such as *Carex* spp. and water smartweed (*Persicaria amphibia*). Because of this transition, much of WT 3 - *Phalaris arundinacea/Carex* spp. was supplanted by WT 8 – *Carex* spp. Extended periods of flooding have been shown to reduce non-native RCG cover, germination, and rhizome production effectively (Jenkins et al. 2008; WRCGM 2009; Waggy 2010), which supports a greater diversity of native vegetation. However, the increase in inundation has reduced the cover of native shrubs, especially in the Wetland Type 2 - fen-carr shrubland and WT 6 - *Salix bebbiana/Phalaris arundinacea*, which are no longer present.

Vegetation cover was measured along three belt transects (T-1, T-2, and T-3) in 2023 (Figure A-2, Appendix A). Photographs of the transect endpoints are provided in Appendix C. In 2023, a reduction in RCG, an increase in *Carex* spp., and an increase in perennial surface water were observed within the wetland communities, continuing the same trend observed since the beaver dam was created. Although open water expanded slightly from 12.20 to 12.57 acres in 2023, open water acreage is significantly less than when the beaver dam was first constructed. Surface water levels amongst the other vegetation communities were slightly lower during the 2023 monitoring event than in 2022.

Perennial surface water observed within the wetland vegetation communities along all three transects (i.e., Wetland Types 3 and 8) that exhibited greater than 5% emergent vegetation and were too small (i.e., less than 0.1-acre in size) were classified as a hydrophytic vegetation community and not as open water. In Tables 3 through 5, the "% transect length comprising open water" summarizes the length of the transect occupied by Open Water Type 11 and does not include perennial surface water observed within wetland plant communities along the transects. Instead, because 0.5-3 feet of surface water covered all unvegetated areas along the transects at the Schrieber Lake site, the "estimated % unvegetated Surface Water" value is analogous to perennial surface water within the wetland communities found along the transects, which is not to be confused with open water.

Table 3 summarizes the data for T-1 from 2016 through 2023. T-1 is 284 feet long and intersects WT 3 and 10. Much of this transect used to traverse WT 3, but in 2023, a species composition shift replaced WT3 with WT 10- *Typha latifolia*. Hydrophytic vegetation cover accounted for 60 percent of the transect in 2023, the same as in 2022. Unvegetated surface water, 0.5-2.5 feet deep, accounted for the remaining 40 percent of the transect in 2023.

Table 4 summarizes the data for T-2 from 2016 through 2023. T-2 is 280 feet long and traversed WT 8. In 2022, this transect intercepted both WT 3 and 6, but a reduction in RCG and *Salix bebbiana* caused this area to transition to WT 8 – *Carex* spp. Hydrophytic vegetation communities accounted for 100 percent of the transect in 2023. Hydrophytic vegetation cover accounted for 80 percent of the transect in 2023, the same as in 2022. Unvegetated surface water, 2-2.5 feet deep, accounted for the remaining 20 percent of the transect in 2023.

Table 3. Data Summary for T-1 From 2016 Through 2023 at the Schrieber Lake Site

Monitoring Year	2016	2017	2018	2019	2020	2021	2022	2023
Transect Length (feet)	284	284	284	284	284	284	284	284
Vegetation Community Transitions Along Transect	3	3	3	3	2	2	2	2
Vegetation Communities Along Transect	3	3	3	3	1	1	1	2
Hydrophytic Vegetation Communities Along Transect	3	3	3	3	1	1	1	2
Total Vegetative Species	9	10	9	7	7	6	7	8
Total Hydrophytic Species	8	9	9	7	7	6	6	8
Total Upland Species	1	1	0	0	0	0	0	0
Estimated % Total Vegetative Cover	100	100	100	100	97	75	60	60
Estimated % Unvegetated Surface Water	0	0	0	0	3	25	40	40
% Transect Length Comprising Hydrophytic Vegetation Communities	100	100	100	100	97.2	97.2	97.2	100
% Transect Length Comprising Upland Vegetation Communities	0	0	0	0	0	0	0	0
% Transect Length Comprising Open Water	0	0	0	0	2.8	2.8	2.8	0
% Transect Length Comprising Mudflat	0	0	0	0	0	0	0	0

Table 4. Data Summary for T-2 From 2016 Through 2023 at the Schrieber Lake Site

Monitoring Year	2016	2017	2018	2019	2020	2021	2022	2023
Transect Length (feet)	280	280	280	280	280	280	280	280
Vegetation Community Transitions Along Transect	1	1	1	1	1	1	1	1
Vegetation Communities Along Transect	2	2	2	2	2	2	2	1
Hydrophytic Vegetation Communities Along Transect	2	2	2	2	2	2	2	1
Total Vegetative Species	5	6	6	6	6	6	7	5
Total Hydrophytic Species	5	6	6	6	6	6	7	5
Total Upland Species	0	0	0	0	0	0	0	0
Estimated % Total Vegetative Cover	100	100	100	100	95	85	80	80
Estimated % Unvegetated Surface Water	0	0	0	0	5	15	20	20
% Transect Length Comprising Hydrophytic Vegetation Communities	100	100	100	100	100	100	100	100
% Transect Length Comprising Upland Vegetation Communities	0	0	0	0	0	0	0	0
% Transect Length Comprising Open Water	0	0	0	0	0	0	0	0
% Transect Length Comprising Mudflat	0	0	0	0	0	0	0	0

Table 5 summarizes the data for T-3 from 2016 through 2023. T-3 is 584 feet long and intersects WTs 3 and 8. Hydrophytic vegetation communities accounted for 100 percent of the transect in 2023. Hydrophytic vegetation cover decreased from 85 to 80 percent of the transect in 2023 due to the perennial inundation present along the transect. Unvegetated surface water, 0.5-2 feet deep, accounted for the remaining 20 percent of the transect in 2023.

Table 5. Data Summary for T-3 From 2016 Through 2023 at the Schrieber Lake Site

Monitoring Year	2016	2017	2018	2019	2020	2021	2022	2023
Transect Length (feet)	584	584	584	584	584	584	584	584
Vegetation Community Transitions Along Transect	2	2	2	2	1	1	1	1
Vegetation Communities Along Transect	3	3	3	3	2	2	2	2
Hydrophytic Vegetation Communities Along Transect	2	2	2	2	2	2	2	2
Total Vegetative Species	11	10	12	9	6	6	6	6
Total Hydrophytic Species	10	8	10	7	6	6	6	6
Total Upland Species	1	2	2	2	0	0	0	0
Estimated % Total Vegetative Cover	100	100	100	100	95	90	85	80
Estimated % Unvegetated Surface Water	0	0	0	0	5	10	15	20
% Transect Length Comprising Hydrophytic Vegetation Communities	94	94	94	97	100	100	100	100
% Transect Length Comprising Upland Vegetation Communities	6	6	6	3	0	0	0	0
% Transect Length Comprising Open Water	0	0	0	0	0	0	0	0
% Transect Length Comprising Mudflat	0	0	0	0	0	0	0	0

One Priority 2A noxious weed species, orange hawkweed (*Hieracium aurantiacum*), was found during the site visit. Priority 2B noxious weeds identified and mapped within the Schrieber Lake mitigation site included spotted knapweed (*Centaurea stoebe*), Canada thistle (*Cirsium arvense*), butter-and-eggs (*Linaria vulgaris*), orange hawkweed (*Hieracium aurantiacum*), ox-eye daisy (*Leucanthemum* vulgare), St. Johnswort (*Hypericum perforatum*), and field bindweed (*Convolvulus arvensis*). The most common noxious weed species observed on site was Canada thistle (Figure A-3, Appendix A). MDT's last weed control efforts at this site were in June/July 2021 and will continue in the Spring of 2024.

MDT planted 1,500 woody plants in the riparian buffer along Schrieber Creek, Coyote Creek, and around some excavated wetland cells. Based on observations at the parallel and perpendicular belt transects, woody planting survival was estimated well below the required 50 percent survival. Woody survival is inhibited by competition with herbaceous vegetation, perennial inundation or extremely saturated soil conditions, herbivory by ungulates and rodents, and previous herbicide applications on adjacent noxious weed infestations. No natural recruitment of woody plants has been observed within the site's wetlands due to inundation. However, some natural recruitment of willows has occurred within Schrieber Creek, where willow coverage within the channel is less than 5 percent.

Hydrology – During the 2023 investigation, the average surface water depth across the entire site was estimated at 1.5 feet, with a range of depths from 0.1 to 5 feet. The deepest standing water is located within the excavated cells, creek channels and Schrieber Lake. Approximately 85 percent of the wetlands were inundated during the 2023 site visit. The surface-water depth at the emergent vegetation and open-water boundary was estimated at 2.0 feet. In 2023, the beaver dam initially documented in 2019 at the outlet of Schrieber Lake was still present and impounding water. However, in 2023, there were no signs of fresh beaver activity such as chewed sticks, freshly placed mud, or beaver tracks, leading the investigators to believe the beaver dam is no longer being maintained by an active beaver colony. Schrieber Lake represented 7.95 acres of open water while the wetland cells represented 4.62 acres of open water habitat during the 2023 monitoring event. These areas are depicted as Open Water Type 11 in Figure A-3 in Appendix A.

Most wetlands exhibited standing surface water in 2023 as in 2022. The average water depths across the site decreased slightly from 2022, as evidenced by the surface water elevations collected during the stream cross-section survey (Appendix D). The distinct topographic break between upland and wetland habitat at the site has primarily resulted in an increase in inundation depths within existing wetlands

rather than an expansion of surface area inundation and newly created wetland habitat. The changes in plant community composition and wetland/open water habitat observed in 2023 are directly correlated to the perennial surface water present across the site. Continued shifts in vegetation and an increase in wetland/open water habitat are expected if the beaver dam persists and water levels remain high.

Soils – Soil test pits were excavated at 19 locations to evaluate the extent of hydric soil development across the site in 2023 (Appendices A and B). Wetland test pits were characterized by soil textures ranging from loamy sand to peat. Soil textures within upland test pits ranged from sandy loam to clay loam. No hydric soil indicators were observed in the upland test pits. Additional field observations for the 19 data points are provided in the wetland determination data forms in Appendix B.

Functional Assessment – The 2008 Montana Wetland Assessment Method (MWAM) was used to evaluate the site in 2023 (Appendix B). The Assessment Area (AA) includes all delineated wetlands, including the creditable wetlands (36.55 acres), wetlands within the riparian buffers of Schrieber and Coyote Creeks (3.90 acres), Schrieber Lake and remaining open water areas (12.57 acres), portions of Schrieber and Coyote Creeks that flow through the wetland areas (1.00 acres), and the wetlands on US Forest Service (USFS) lands (1.63 acres). The wetlands in the AA received a Category I rating with 93% of the total possible points in 2023. They were rated as exceptional for General Wildlife Habitat and Production Export/Food Chain Support and high for all other functions and values except General Fish/Aquatic Habitat and Flood Attenuation, which were rated as moderate (Table 6).

Table 6. Montana Wetland Assessment Method Summary for Schrieber Lake

Function and Value Parameters From the 2008 Montana Wetland Assessment Method	2015 Entire Site	2023 Entire Site
Listed/Proposed Threatened & Endangered (T&E) Species Habitat	High (0.8)	High (0.8)
Montana Natural Heritage Program Species (MTNHP) Habitat	Mod (0.6)	High (0.9)
General Wildlife Habitat	Exc (1.0)	Exc (1.0)
General Fish/Aquatic Habitat	Mod (0.7)	Mod (0.7)
Flood Attenuation	Mod (0.6)	Mod (0.6)
Short- and Long-Term, Surface-Water Storage	High (1.0)	High (1.0)
Sediment/Nutrient/Toxicant Removal	High (1.0)	High (1.0)
Sediment/Shoreline Stabilization	High (1.0)	High (1.0)
Production Export/Food Chain Support	High (1.0)	High (1.0)
Groundwater Discharge/Recharge	High (1.0)	High (1.0)
Uniqueness	High (0.9)	High (1.0)
Recreation/Education Potential (bonus points)	Mod (0.1)	High (0.2)
Actual Points/Possible Points	9.7/11	10.2/11
% of Possible Score Achieved	88.2%	93%
Overall Category	I	I

Wildlife – Twenty-one bird species were identified in 2023 at the Schrieber Lake site. In addition to the 21 bird species, 6 northern Columbia spotted frogs, 4 white-tailed deer, 2 Richardson's ground squirrels, and one elk carcass with possible wolf scat adjacent to the carcass were observed (Appendix B).

Photographs – Ten photo points were initially established in the project area in 2015. Photographs were taken at all ten photo point locations during the 2023 site visit. In addition to established photo points, photographs were taken at each surveyed stream cross-section, sampled data points, and vegetation transect endpoints. These photographs' locations are illustrated in Figure A-2 (Appendix A) and the photographs in Appendix C. Previous years' site photographs associated with annual Schrieber Lake

Wetland Mitigation monitoring reports can be found at this website: (https://www.mdt.mt.gov/publications/brochures/wetland-mitigation.aspx).

Stream Monitoring – The survey results for 11 permanent cross sections that were established along the constructed Coyote and Schrieber Creeks (Figure A-2, Appendix A) are shown in Appendix D. The 2023 data were evaluated against the previous surveys to assess stream channel stability. In 2023, the banks of the constructed channels exhibited stable conditions and were generally well-vegetated with deep-rooted plant species, except for Schrieber Creek Reach 1 (SC1). The stream monitoring survey indicates that little to no significant channel morphological changes occurred between 2022 and 2023. The nine cross-sections within the 2023 wetland boundary exhibited surface water elevations lower than or equal to those surveyed in 2022. Surface water elevations across the rest of the transects decreased by 0.2 to 0.7 feet.

The 2020 PFC assessment rated all stream reaches at the site as *Functioning*, with the exception of Schrieber Creek Reach 1 (SC1), which was rated as *Functional – At Risk* due to slower vegetation establishment, a dominance of shallow-rooted species, and areas of bare soil observed along the banks. In 2023, some willows were observed establishing within the stream channel, although their cover totaled less than 5 percent. Vegetation cover was otherwise consistent with 2022 observations, which included a dominance by shallow-rooted spreading bent (*Agrostis stolonifera*) and (*Elymus repens*) creeping wild rye and minimal cover from deep-rooted species such as RCG. This reach has an upward trend, with the surrounding vegetation community transitioning to a more mesic species composition that includes the deep-rooted RCG, willows, and increased vegetation cover observed in 2023 and expected to continue over time.

Credit Summary - Stream Credits

The goal of the stream mitigation component of the Schrieber Lake project includes the restoration of approximately 2,130 linear feet of Schrieber Creek, 1,397 feet of Coyote Creek, and 978 feet of Schrieber Creek below the new Schrieber/Coyote Creek confluence. When combined with the establishment of a riparian buffer of varying widths on both sides of the restored channels, the project is expected to generate a total of 36,741.87 stream and riparian credits, as shown in Table 7.

Data collected during the 2023 monitoring event revealed continued development of vegetation cover along the stream reaches. Reach 1 of Schrieber Creek has yet to fully meet the performance criteria established for the development of deep-rooted vegetation within the riparian corridor. The ephemeral nature of this reach results in slower vegetation growth. As a result, Reach 1 of Schrieber Creek has not met all success criteria and is, therefore, generating half of the anticipated credits. Reaches 2A, 2B, 3, and 7 of Schrieber Creek and Reaches 1A and 1B of Coyote Creek meet all success criteria and have generated the predicted credits outlined in the monitoring plan. Future monitoring will continue to assess the vegetation establishment within Reach 1 of Schrieber Creek and its status in meeting the success criteria and generating the anticipated stream mitigation credits. The site has generated 34,349.67 stream credits, which is 2,392.20 credits less than the original projection.

Table 7. 2023 Riparian and Stream Mitigation Credits for the Schrieber Lake Site

Channel Segment	Reach	Side	Predicted Credits	2023 Credits
	1.0	Α	4,141.63	4,141.63
Causta Casali	1A	В	4,141.63	4,141.63
Coyote Creek	4.0	Α	1,586.25	1,586.25
	1B	В	1,692.00	1,692.00
		Α	2,392.20	1,196.1
	1	В	2,392.20	1,196.1
	2A	А	2,722.50	2,722.50
		В	2,722.50	2,722.50
Call dalla a Caral	25	А	576.65	576.65
Schrieber Creek	2B	В	576.65	576.65
	3	А	3,964.83	3,964.83
	3	В	3,964.83	3,964.83
		А	2,934.00	2,934.00
	7	В	2,934.00	2,934.00
Tota	l		36,741.87	34,349.67

Credit Summary – Wetland Credits

MDT anticipates generating 13.4 wetland credit acres from the Schrieber Lake project. Proposed mitigation credits from the 2014 Schrieber Lake Mitigation Plan included establishing 3.06 wetland acres, re-establishing 2.53 wetland acres, enhancing 4.53 acres of the fen-carr shrubland expansion, preserving 25.6 acres of existing Fen-Carr *Carex* areas, and creating a 50-foot upland buffer (3.81 acres) around newly established wetlands in the center of the site. Table 8 summarizes the estimated wetland credits based on the pending USACE-approved credit ratios and the wetland delineation completed in July 2023. The 2023 wetland delineation identified 36.55 acres of creditable wetlands and 4.62 acres of creditable 'open water' within the mitigation site.

Creditable wetland acreage included 5.72 acres of established wetlands, 1.27 acres of re-established wetlands, 4.77 acres of enhanced wetlands, and 24.79 acres of preserved wetlands, with 3.01 acres of upland buffer around the perimeter of the delineated wetland. Following the USACE-approved performance standard for this site, open water areas with submerged and/or floating vegetation will be considered successful and creditable. The open water areas at the site are considered successful and creditable as they exhibited less than 5% emergent vegetation and a diversity of submerged and floating aquatic macrophytes. Creditable open water acreage included 2.24 acres of created open water, 1.15 acres of restored open water, and 1.23 acres of preserved open water. Schrieber Lake has never received mitigation credit at this site and is therefore excluded from Table 8. This site's 2023 estimated credit acres have exceeded the proposed credit acres. To date, 14.94 credit acres have been developed at this site. Figure A-4 (Appendix A) shows the location of wetlands based on credit type.

Table 8. Summary of Wetland Mitigation Credits at the Schrieber Lake Site in 2015 and 2021 through 2023

Mitigation Type	Total Proposed Acreage	Ratio	Proposed Credit Acres	2015 Delineated Acreage	2015 Credit Acres	2021 Delineated Acreage	2021 Credit Acres	2022 Delineated Acreage	2022 Credit Acres	2023 Delineated Acres	2023 Credit Acres
Establishment (Creation)	3.06	1:1	3.06	4.80	4.80	5.06	5.06	5.60	5.60	5.72	5.72
Establishment (Creation) 'Open Water'(b)		TBD				2.54	TBD	2.30	TBD	2.24	TBD
Restoration (Re- establishment)	2.53	1.5:1	1.69	2.42	1.62	1.14	0.76	1.10	0.73	1.27	0.85
Restoration 'Open Water' (b)		TBD				1.28	TBD	1.32	TBD	1.15	TBD
Enhancement areas- Carr Shrubland expansion	4.53	3:1	1.51	4.77	1.59	4.69	1.56	4.69	1.56	4.77	1.59
Enhancement 'Open Water' (b)		TBD				0.08	TBD				
Preservation- Existing Fen- Carr-Carex Areas	25.60	4:1	6.40	25.66	6.42	24.46	6.12	25.38	6.35	24.79	6.20
Preservation 'Open Water' (b)		TBD				1.61	TBD	0.58	TBD	1.23	TBD
Upland Buffer (50 feet) ^(a)	3.81	5:1	0.76	8.42	1.68	3.81	0.76	2.94	0.59	3.01	0.60
Permanent Project Impacts	0.02	None	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Total Mitigation Acreage	39.51		13.40	46.05	16.09	44.65	14.24	43.89	14.81	44.16	14.94

⁽a) Acreage includes 50-foot buffer around a portion of the perimeter of delineated wetlands within MDT property and outside of the riparian buffer according to the wetland mitigation plan.

Functional Unit Credits Summary – The 2023 functional unit credits summary is summarized in Table 9. A total of 145.25 functional unit credits were generated at the Schrieber Lake site after applying the appropriate mitigation ratios to the 2023 wetland acreage and multiplying that value by the points generated from the 2023 MWAM Assessment.

Table 9. Functional Unit Credits Summary for Schrieber Lake

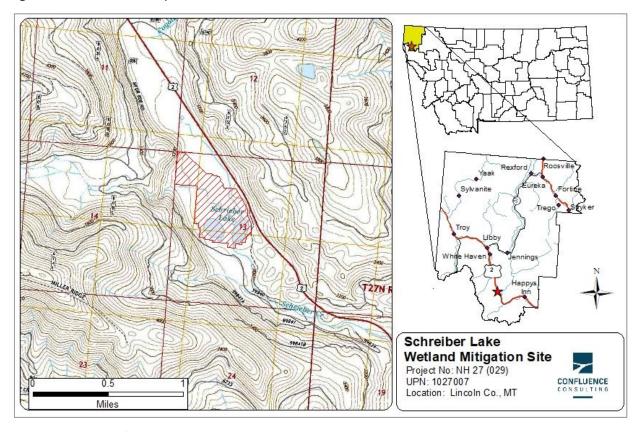
Mitigation Type	2023 Delineated Acreage	Ratio	2023 Mitigation Credit Acres	MWAM Actual Points ^a	Functional Unit Credits
Establishment (Creation)	5.72	1:1	5.72	10.20	58.34
Establishment (Creation) 'Open Water'	2.24	TBD	TBD	10.20	TBD
Restoration (Re-establishment)	1.27	1.5:1	0.73	10.20	7.45
Restoration 'Open Water'	1.15	TBD	TBD	10.20	TBD
Enhancement areas- Carr Shrubland expansion	4.77	3:1	1.59	10.20	16.22
Preservation-Existing Fen-Carr- Carex Areas	24.79	4:1	6.20	10.20	63.24
Preservation 'Open Water'	1.23	TBD	TBD	10.20	TBD
Functional Unit Credits (Mitigation Credit Acres × Actual Points)					145.25

^aMontana Wetland Assessment Method (MWAM) forms can be found in Appendix B

⁽b) Creditable Open Water acreage is separated into Creation, Restoration, and Preservation Open Water Mitigation Area Types. Mitigation ratios and crediting for Open Water are To Be Determined (TBD) – see USACE approved performance standard for Open Water (Table 1).

Maps, Plans, Photos

Figure 1. Site Location Map



Project Area Maps/Figures: See Appendix A (Figure A-2 – 2023 Monitoring Activity Locations; Figure A-3 – 2023 Mapped Site Features; Figure A-4 – 2023 Wetland Credit Areas; Figure A-5 – 2023 Wetland Delineation)

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

Plant List: See Table B-1 in Appendix B

Photos: See Appendix C

Plans: See Appendix D of the 2015 Schrieber Lake Wetland Mitigation Monitoring Report at this website:

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

Conclusions

Based on the results of the ninth year of monitoring, the mitigation site is continuing to develop into a diverse wetland ecosystem. The site is meeting all performance standards except the following:

- 1. Planted trees and shrubs will be considered successful when they exhibit 50 percent survival after 5 years.
- 2. Bank Restoration Success (only along Reach SC-1 of Schrieber Creek).

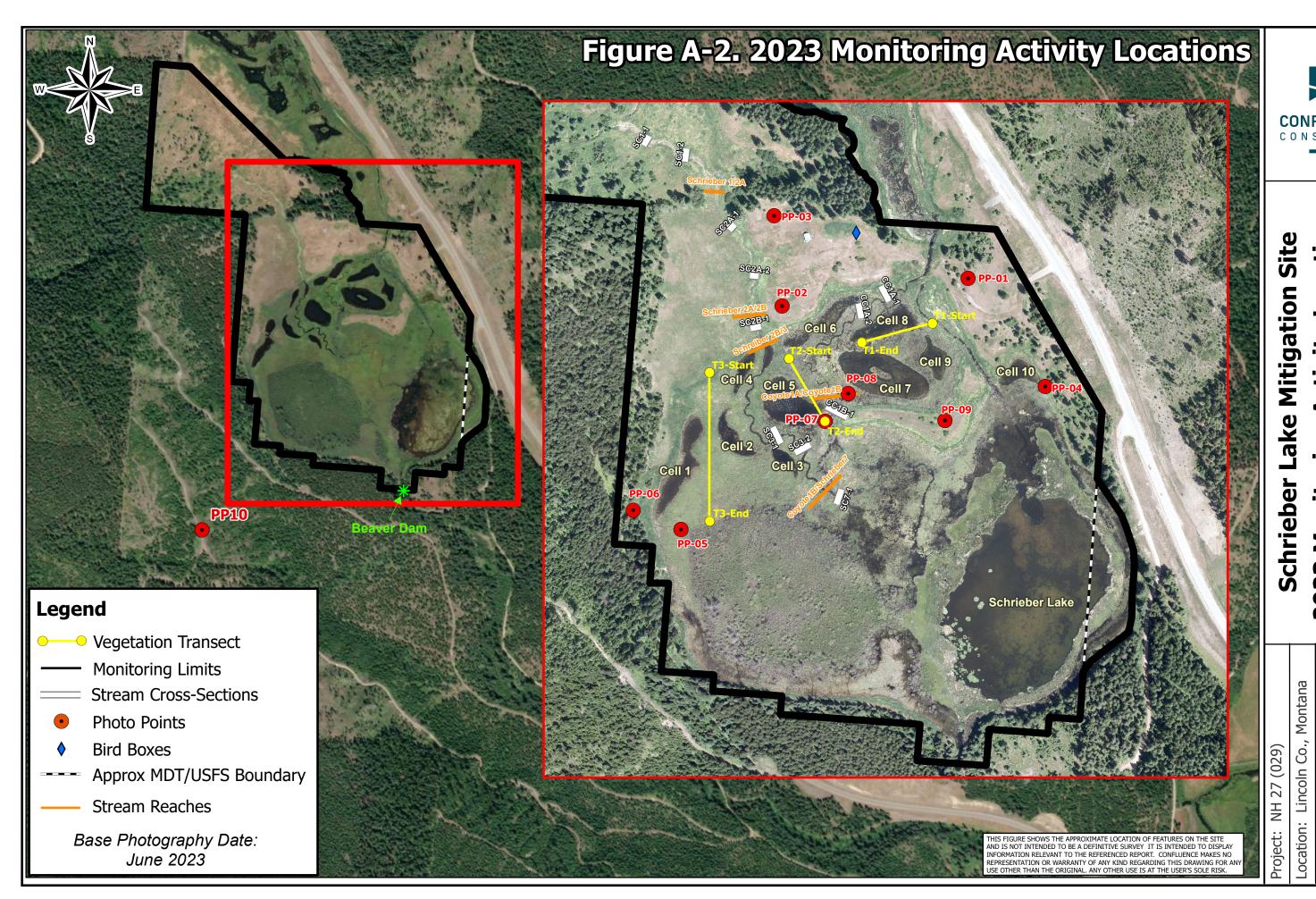
Woody plant survival is not expected to meet the established performance standard. Reach SC-1 along Schrieber Creek is an ephemeral reach that is taking longer for deep-rooted vegetation to establish but is expected to meet this success criterion in the future as it is in an upward trajectory based upon annual monitoring. No remedial actions are recommended at this time.

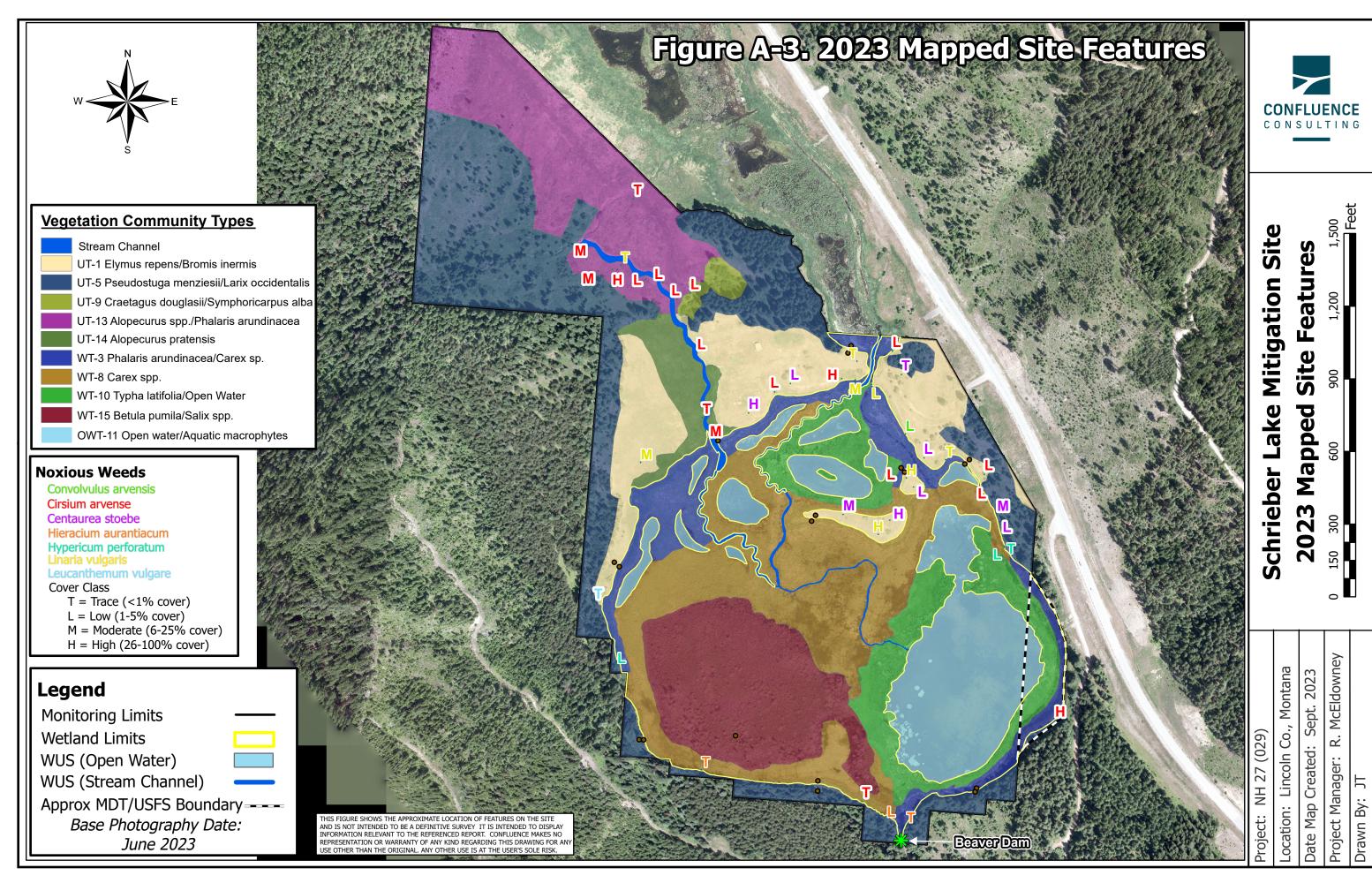
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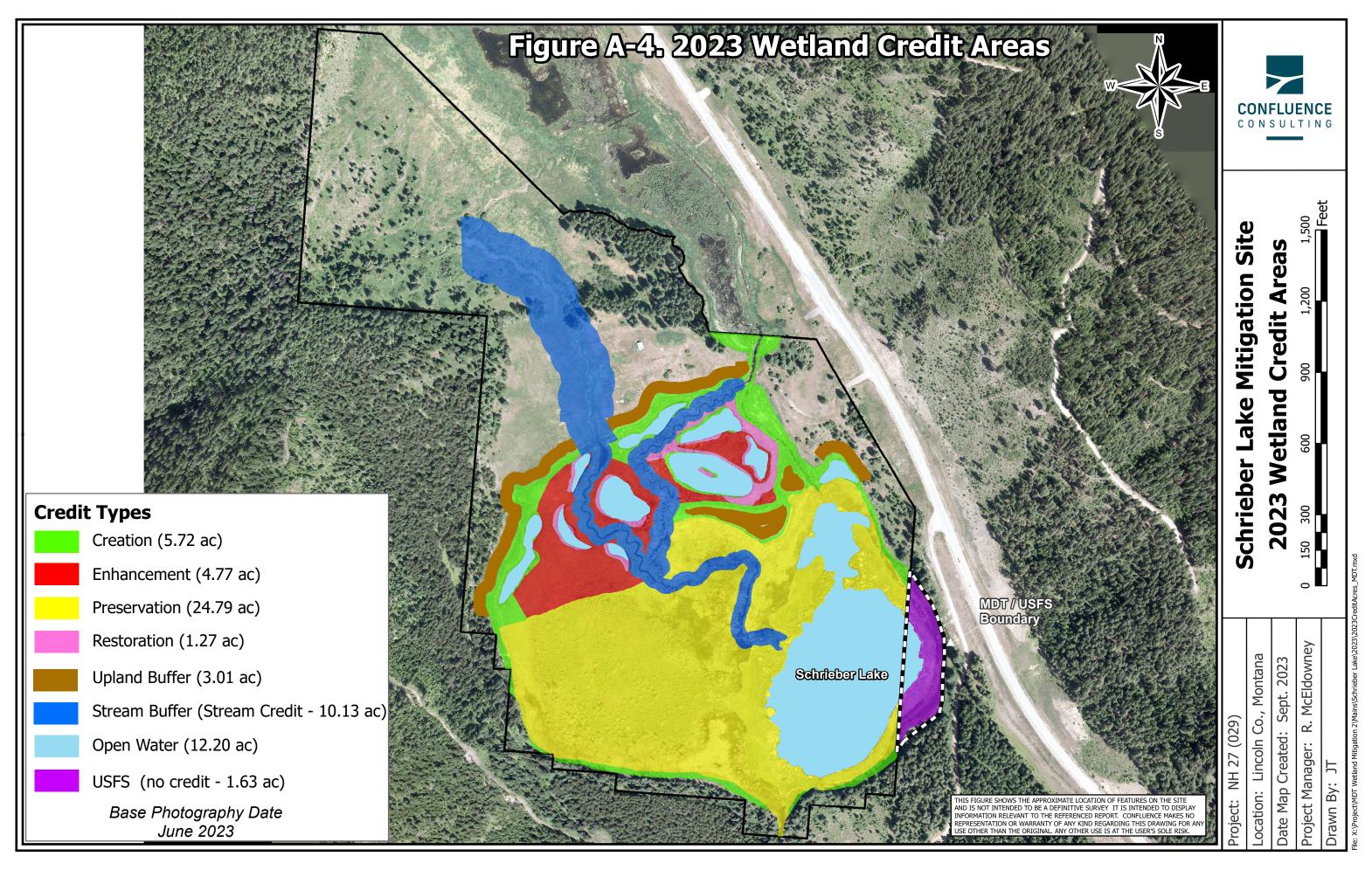
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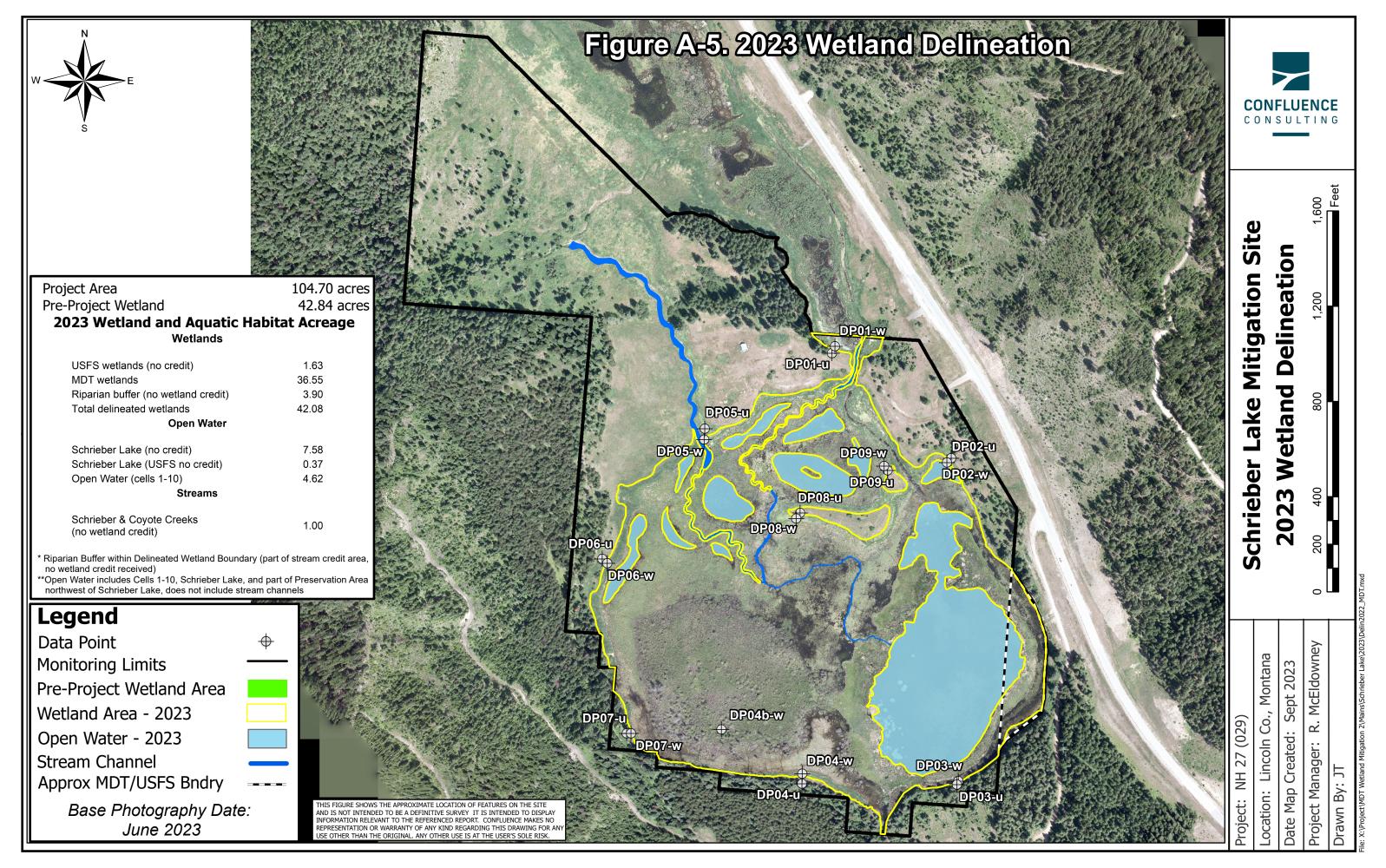
APPENDIX A PROJECT AREA MAPS

MDT Wetland Mitigation Monitoring Schrieber Lake Lincoln County, Montana









APPENDIX B MONITORING FORMS

MDT Wetland Mitigation Monitoring Schrieber Lake Lincoln County, Montana

VEGETATION COMMUNITIES

Site Schrieber Lake

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

Community # 1 Community Type: Elymus repens / Bromus spp. Acres: 11.52

Species	Cover class	Species	Cover class
Achillea millefolium	1	Agrostis stolonifera	1
Alopecurus arundinaceus	1	Alopecurus pratensis	1
Apocynum androsaemifolium	0	Berberis repens	0
Bromus inermis	3	Bromus tectorum	2
Cirsium arvense	1	Dactylis glomerata	0
Elymus repens	4	Linaria vulgaris	1
Nassella viridula	1	Pascopyrum smithii	3
Phalaris arundinacea	2	Phleum pratense	2
Poa compressa	2	Poa pratensis	1
Pseudoroegneria spicata	1	Pseudotsuga menziesii	1
Symphoricarpos albus	1	Verbascum thapsus	1
Comments:			

Comments:

Upland CT relatively unchanged since 2022.

Community # 3 Community Type: Phalaris arundinacea / Carex spp. Acres: 6.66

Species	Cover class	Species	Cover class
grostis capillaris	1	Alopecurus arundinaceus	1
lopecurus pratensis	1	Carex aquatilis	2
Carex bebbii	1	Carex lasiocarpa	2
Carex nebrascensis	1	Carex simulata	1
arex stipata	1	Carex utriculata	3
arex vesicaria	1	Comarum palustre	1
eschampsia caespitosa	0	Epilobium ciliatum	1
eum macrophyllum	0	Juncus filiformis	1
ncus tenuis	0	Lemna minor	1
copus asper	1	Open Water	2
ersicaria amphibia	1	Phalaris arundinacea	4
choenoplectus acutus	0	Scutellaria galericulata	1
mphyotrichum spathulatun	n 0	Typha latifolia	1

Comments:

Reed canary grass is continuing to decline in cover with CT 3 significatly decreasing in size in 2023 . The areas previously occupied by reed canary grass are converting to open water, Persicaria amphibia, and Carex species

Community #	<u>5</u> Community Type:	Pseudotsuga menziesii / Larix occidentalis	Acres:	<u>22.6</u>
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Species	Cover class	Species	Cover class
Abies grandis	2	Agrostis capillaris	1
Alopecurus arundinaceus	1	Alopecurus pratensis	1
Amelanchier alnifolia	1	Arctostaphylos uva-ursi	2
Berberis repens	1	Bromus inermis	2
Calamagrostis rubescens	2	Campanula rotundifolia	0
arex geyeri	2	Centaurea stoebe	1
ymus glaucus	1	Elymus repens	1
ieracium aurantiacum	2	Larix occidentalis	2
nnaea borealis	1	Penstemon confertus	0
icea engelmannii	2	Pinus contorta	2
seudotsuga menziesii	3	Rosa woodsii	1
ymphoricarpos albus	2		

Comments:

Upland forested community at edges of wetland boundaries.

Community # 8 Community Type: Carex spp. / Acres: 16.98

Species	Cover class	Species	Cover class
Carex aquatilis	2	Carex atherodes	1
Carex bebbii	0	Carex lasiocarpa	2
Carex utriculata	3	Carex vesicaria	4
Comarum palustre	1	Lemna minor	1
Open Water	3	Persicaria amphibia	2
Phalaris arundinacea	2	Salix bebbiana	1
Salix candida	1	Scirpus microcarpus	1
Typha latifolia	0		

Comments:

In 2023, this community was inundated with an average of 1.5 feet of ponded water, and increased in size as a result of absorbing CT 4 and 6.

Community #	6	Community Typ	oe:	Crataegus douglasii / Symphoricarpos albus	Acres:	0.74
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Achillea millefolium0Alopecurus arundinaceus1Alopecurus pratensis2Cirsium arvense1Crataegus douglasii5Cynoglossum officinale0Dactylis glomerata0Elymus trachycaulus1Galium triflorum0Phalaris arundinacea2Symphoricarpos albus4Taraxacum officinale0	Species	Cover class	Species	Cover class
Crataegus douglasii5Cynoglossum officinale0Dactylis glomerata0Elymus trachycaulus1Galium triflorum0Phalaris arundinacea2	Achillea millefolium	0	Alopecurus arundinaceus	1
Dactylis glomerata0Elymus trachycaulus1Galium triflorum0Phalaris arundinacea2	Alopecurus pratensis	2	Cirsium arvense	1
Galium triflorum 0 Phalaris arundinacea 2	Crataegus douglasii	5	Cynoglossum officinale	0
-	Dactylis glomerata	0	Elymus trachycaulus	1
Symphoricarnos albus 4 Tarayacum officinale 0	Galium triflorum	0	Phalaris arundinacea	2
Cymphonodipos dibdo 4 Taraxadam omondio	Symphoricarpos albus	4	Taraxacum officinale	0
Urtica dioica 0	Urtica dioica	0		

Comments:

Upland community type in the northern portion of project area.

Community # 10 Community Type: Typha latifolia / Open Water Acres: 7.78

Species	Cover class	Species	Cover class
Aquatic macrophytes	1	Carex vesicaria	1
Comarum palustre	2	Lemna minor	1
Myriophyllum sibiricum	1	Nuphar polysepala	0
Open Water	5	Persicaria amphibia	2
Phalaris arundinacea	1	Typha latifolia	4

Comments:

Wetland community type that surrounds Schrieber Lake and open water areas. This CT increased in size because it absorbed some open water areas northwest of Schrieber Lake and added acreage around northeast wetland cells.

Community # 11 Community Type: Open Water / Aquatic macrophytes Acres: 12.59

Species	Cover class	Species	Cover class
Aquatic macrophytes	4	Myriophyllum sibiricum	1
Nuphar polysepala	0	Open Water	5
Persicaria amphibia	2	Typha latifolia	1

Comments:

This CT decreased in acreage slightly due to an open water area northwest of Schrieber Lake decreasing in size. This CT was dominated by an average of 2-3 feet of standing water, less than 5% emergent wetland vegetation, and a diversity of submergent/floating aquatic macrophytes.

Community # 13 Community Type: Alopecurus spp. / Phalaris arundinacea Acres: 11.56

Species	Cover class	Species	Cover class
Alopecurus arundinaceus	2	Alopecurus pratensis	4
Bare Ground	2	Bromus inermis	3
Cirsium arvense	1	Elymus repens	2
Phalaris arundinacea	3	Poa compressa	2
Poa pratensis	2	Sisymbrium altissimum	1

Comments:

Although reed canary grass provided slightly more (<5%) cover than smooth brome within this upland area, smooth brome was observed frequently and is considered an additional codominant within this community. This CT remained relatively unchanged since 2021.

Community # 14 Community Type: Alopecurus pratensis / Acres: 2.5

Species	Cover class	Species	Cover class
Alopecurus pratensis	4	Bromus inermis	3
Cirsium arvense	1	Elymus repens	2
Linaria dalmatica	0	Phalaris arundinacea	1
Phleum pratense	1	Poa pratensis	1

Comments:

Upland CT created in 2022 which replaced a portion of CT1 - Elymus/Bromus because of the increase in dominance of Alopecurus pratensis. The area appears to be slightly wetter than the adjacent CT1, which is slightly higher in elevation.

Community # 15 Community Type: Betula pumila / Salix spp. Acres: 10.69

Species	Cover class	Species	Cover class
Betula pumila	4	Carex vesicaria	3
Comarum palustre	1	Open Water	3
Persicaria amphibia	1	Salix bebbiana	1
Salix boothii	1	Salix candida	1
Salix geyeriana	1		

Comments:

Approximately 50% of the shrubs in this CT have died due to perennial inundation caused by the beaver dam which was first observed in 2019.

Total Vegetation Community Acreage

103.62

VEGETATION TRANSECTS

Interval Data:			
Ending Station	30 Community Type:	Phalaris arundinacea / Carex	spp.
Species	Cover class	Species	Cover class
Bare Ground	1	Carex lasiocarpa	2
Carex utriculata	3	Carex vesicaria	1
Lemna minor	2	Persicaria amphibia	1
Phalaris arundinacea	5		
Ending Station	284 Community Type:	Typha latifolia / Open Water	
Species	Cover class	Species	Cover class
Aquatic macrophytes	4	Carex aquatilis	0
Carex vesicaria	0	Lemna minor	1
Open Water	2	Persicaria amphibia	4
Phalaris arundinacea	3	Typha latifolia	3
Transect Notes:			

Transect Number: 2 Compass Direction from Start: 152

Interval Data:

Ending Station 280 Community Type: Carex spp. /

Species	Cover class	Species	Cover class
Carex utriculata	1	Carex vesicaria	4
Lemna minor	2	Open Water	5
Persicaria amphibia	4	Phalaris arundinacea	1

Transect Notes:

In 2023 this transect only spans one vegetation community because of the expansion of Carex spp. and a reduction in reed canary grass in the perennially inundated portions of the project area.

Transect Number: 3 Compass Direction from Start: 175

Interval Data:

Ending Station 325 Community Type: Phalaris arundinacea / Carex sp	Ending Station	325 Community Type:	Phalaris arundinacea / Carex spp.
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Species	Cover class	Species	Cover class
Bare Ground	2	Carex utriculata	3
Carex vesicaria	2	Persicaria amphibia	1
Phalaris arundinacea	5		

Ending Station 584 Community Type: Carex spp. /

	• • • • • • • • • • • • • • • • • • • •	1 1	
Species	Cover class	Species	Cover class
Bare Ground	2	Carex aquatilis	2
Carex utriculata	0	Carex vesicaria	5
Comarum palustre	1	Persicaria amphibia	1
Phalaris arundinacea	0		

Transect Notes:

The northern portion of this transect did not contain surface water, while the southern portion had up to 20" of surface water.

PLANTED WOODY VEGETATION SURVIVAL

Schrieber Lake

Planting Type #Planted #Alive Notes

Various Species

1500

Comments

MDT planted 1,500 woody plants in the riparian buffer along Schrieber Creek, Coyote Creek, and around some wetland excavations. In 2020-2023, based on observations at the parallel and perpendicular belt transects, woody planting survival was estimated as well below the required 50% survival. For most of the plantings, competition with herbaceous vegetation such as reed canary grass is problematic, as are the deep perennial inundation conditions present in most of the wetland habitat across the site. Woody plantings along the upper Schrieber Creek corridor were adversely affected by previous weed spraying activities.

Schrieber Lake

WILDLIFE

Birds

Were man-made nesting structures installed? If yes, type of structure: Bird Boxes	Yes
How many? 2	
Are the nesting structures being used?	No
Do the nesting structures need repairs?	Yes
Nesting Structure Comments:	
Bird boxes were not located in 2023.	

Species	#Observed	Behavior	Habitat
American Coot	5		
American Crow	1		
American Robin	1		
Barn Swallow	1		
Cedar Waxwing	1		
Common Yellowthroat	1		
Dark-eyed Junco	1		
Eastern Kingbird	2		
Great Blue Heron	1		
Killdeer	5		
Mallard	2		
Marsh Wren	1		
Red-winged Blackbird	27		
Rock Wren	2		
Song Sparrow	4		
Sora	1		
Tree Swallow	5		
Violet-green Swallow	3		
Wilson's Snipe	2		
Yellow Warbler	1		
Yellow-rumped Warbler	1		

Bird Comments

An abundance of bird species was observed at this site.

BEHAVIOR CODES

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

HABITAT CODES

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

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

Mammals and Herptiles

Species	# Observed	Tracks	Scat	Burrows	Comments
Columbia Spotted Frog	6	No	No	No	
Elk Carcass	1	No	No	No	
Richardson's Ground Squirrel	2	No	No	No	
Vole	3	No	No	No	
White-tailed Deer	7	No	No	No	
Wolf	1	No	Yes	No	

Wildlife Comments:

A diversity of bird and wildlife species utilize the site. A elk carcass with possible wolf scat next to it was observed at 48.106956, -115.410911.

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 wetla	nd.
	At least one photograph showing upland use surrounding the wetland. If mor	e than one upland
exists	s then take additional photographs.	

At least one photograph showing the buffer surrounding the wetland.

One photograph from each end of the vegetation transect, showing the transect.

Photo #	Latitude	Longitude	Bearing	Description
CC1A-1	48.106803	-115.410891	320	CC1A-1 right bank
CC1A-1	48.106803	-115.410891	50	CC1A-1 upstream
CC1A-2	48.1066	-115.41127	175	CC1A-2 left bank
CC1A-2	48.1066	-115.41127	85	CC1A-2 upstream
CC1B-1	48.105509	-115.411518	200	CC1B-1 downstream
CC1B-1	48.105509	-115.411518		
DP01-u	48.1073499047	-115.41066867		
DP01-w	48.1074345058	-115.410624998		
DP02-u	48.1062504335	-115.408486543		
DP02-w	48.1061963335	-115.408556739		
DP03-u	48.102503343	-115.407966813		
DP03-w	48.1025462708	-115.407945759		
DP04b-w	48.1029323809	-115.412076705		
DP04-u	48.1023788115	-115.410623861		
DP04-w	48.102493257	-115.410630608		
DP05-u	48.1063722138	-115.412751218		
DP05-w	48.106250107	-115.41274793		
DP06-u	48.1047882864	-115.414340719		
DP06-w	48.1047421373	-115.414250108		
DP07-u	48.1028068847	-115.413696412		
DP07-w	48.1028074024	-115.413621343		
DP08-u	48.105489235	-115.411008153		
DP08-w	48.1054210255	-115.411067952		
DP09-u	48.1060541637	-115.409562246		
DP09-w	48.1060981204	-115.409625555		
PP-1	48.107033	-115.409592	164	Photo Point 1, Photo 3
PP-1	48.107033	-115.409592	242	Photo Point 1, Photo 1

PP-1	48.107033	-115.409592	197	Photo Point 1, Photo 2
PP-10	48.100529	-115.415406	39	Photo Point 10
PP-2	48.106591	-115.412511	69	Photo Point 2, Photo 5
PP-2	48.106591	-115.412511	162	Photo Point 2, Photo 3
PP-2	48.106591	-115.412511	323	Photo Point 2, Photo 1
PP-2	48.106591	-115.412511	205	Photo Point 2, Photo 2
PP-2	48.106591	-115.412511	104	Photo Point 2, Photo 4
PP-3	48.10754	-115.412747	183	Photo Point 3
PP-4	48.105948	-115.408236	287	Photo Point 4
PP-5	48.104136	-115.413847	359	Photo Point 5, Photo 3
PP-5	48.104136	-115.413847	173	Photo Point 5, Photo 1
PP-5	48.104136	-115.413847	35	Photo Point 5, Photo 2
PP-6	48.104297	-115.414628	52	Photo Point 6, Photo 3
PP-6	48.104297	-115.414628	103	Photo Point 6, Photo 2
PP-6	48.104297	-115.414628	150	Photo Point 6, Photo 1
PP-7	48.105398	-115.411691	355	Photo Point 7, Photo 3
PP-7	48.105398	-115.411691	228	Photo Point 7, Photo 1
PP-7	48.105398	-115.411691	299	Photo Point 7, Photo 2
PP-8	48.105714	-115.411356	79	Photo Point 8, Photo 3
PP-8	48.105714	-115.411356	49	Photo Point 8, Photo 2
PP-8	48.105714	-115.411356	320	Photo Point 8, Photo 1
PP-9	48.105502	-115.409787	120	Photo Point 9, Photo 2
PP-9	48.105502	-115.409787	323	Photo Point 9, Photo 1
SC1-1	48.108236	-115.414862	30	SC1-1 left bank
SC1-1	48.10823599	-115.4148624	300	SC1-1 upstream
SC1-2	48.108116	-115.414221	280	SC1-2 upstream
SC1-2	48.108116	-115.414221	10	SC1-2 left bank
SC2A-1	48.107386	-115.413401	45	SC2A-1 left bank
SC2A-1	48.107386	-115.413401	315	SC2A-1 downstream
SC2A-2	48.106889	-115.41299	275	SC2A-2 downstream
SC2A-2	48.106889	-115.41299	185	SC2A-2 downstream
SC2B-1	48.106342	-115.412902	175	SC2B-1 downstream
SC2B-1	48.106342	-115.412902	265	SC2B-1 right bank
SC3-1	48.105212	-115.412439	240	SC3-1 upstream
SC3-1	48.105212	-115.412439	330	SC3-1 left bank
SC3-2	48.10509	-115.412014	160	SC3-2 downstream
SC3-2	48.10509	-115.412014	70	SC3-2 left bank
SC7-1	48.104608	-115.41138	110	SC7-1 downstream
SC7-1	48.104608	-115.41138	20	SC7-1 left bank
T-1 end	48.106268	-115.411205	71	Transect 1 end
T-1 start	48.106526	-115.410102	251	Transect 1 start
T-2 end	48.105398	-115.411692	332	Transect 2 end

T-2 start	48.106037	-115.412335	152	Transect 2 start
T-3 end	48.104242	-115.413401	335	Transect 3 end
T-3 start	48.105866	-115.413539	175	T-3 start

Comments:

ADDITIONAL ITEMS CHECKLIST

Hydrology	
 ✓ Map emergent vegetation/open water boundary on aerial photos. ✓ Observe extent of surface water. Look for evidence of past surface water elevations (e.g. driflines, vegetation staining, erosion, etc). 	t
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	
☑ Map vegetation community boundaries	
✓ Complete Vegetation Transects	
Soils	
✓ Assess soils	
Wetland Delineations	
Delineate wetlands according to applicable USACE protocol (1987 form or	
Supplement) ☑ Delineate wetland – upland boundary onto aerial photograph.	
Vetland Delineation Comments	
The total wetland and aquatic habitat delineated at the Schrieber Lake mitigation site in 2023 was 55.65 acres, a increase of 0.12 acres since 2022 (Table 2; see maps in Appendix A). Schrieber Lake occupied 7.58 acres on MDT property and remaining 'open water' areas represented a total of 4.62 acres.	;
Functional Assessments	
Complete and attach full MDT Montana Wetland Assessment Method field orms.	
Functional Assessment Comments:	
Classified as Category I wetland.	

Maintenance

Were man-made nesting structure installed at this site? Yes

If yes, do they need to be repaired? Yes

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

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

into or out of the wetland? No

If yes, are the structures in need of repair?

If yes, describe the problems below.

The beaver dam at the southern outlet of the site is intact but does not appear to be active anymore. The beaver dam is still impounding water throughout the mitigation sites at a depth of .5-3 feet. Within the inundated areas, reed canary grass and shrubs declining in cover, while native herbaceous species are increasing in cover.

Project/Site: Schrieber Lake 2023	(City/Count	_{y:} Lincoln (County Sampling Date: 2023-07-10
Applicant/Owner: MDT		-	-	State: Montana Sampling Point: DP01U
				nge: S13 T27N R30W
Landform (hillslope, terrace, etc.): Toeslope				
				Long: -115.41074386 Datum: NAD 83
Soil Map Unit Name: 108 - Andic Dystric Eutrochrepts, lacustrine ter				-
Are climatic / hydrologic conditions on the site typical for t				
Are Vegetation, Soil, or Hydrology				_
Are Vegetation, Soil, or Hydrology				
				ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No 🗸			-
Hydric Soil Present? Yes	No		he Sampled	
Wetland Hydrology Present? Yes	No	witl	hin a Wetlar	nd? Yes No
Remarks:		•		
Approximately 5' higher in elevation	n than th	e paire	ed wetla	nd sample point.
VEGETATION – Use scientific names of pla	ınts.			
Tree Stratum (Plot size: 30 ft r	Absolute		t Indicator	Dominance Test worksheet:
	<u>% Cover</u> 15	Species?	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
		-		That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant Species Across All Strata: 5 (B)
				Species Across All Strata: <u>5</u> (B)
4	15	= Total Co	over	Percent of Dominant Species That Are OBL_FACW_or FAC*40.00 (A/B)
Sapling/Shrub Stratum (Plot size: 5 ft r)			ovci	
1. Picea engelmannii	5		FAC	Prevalence Index worksheet:
2				Total % Cover of: Multiply by: OBL species 0 x 1 = 0
3				FACW species 0 $x = 0$
4				
5				FAC species
	5	= Total Co	over	UPL species 5 x 5 = 25
Herb Stratum (Plot size: 5 ft r) 1. Elymus trachycaulus	40	.,	EAC	Column Totals: 100 (A) 355 (B)
2. Pascopyrum smithii	<u>40</u> 15		FACU	
3. Poa compressa	15		FACU	Prevalence Index = B/A = 3.55
4. Alopecurus arundinaceus	5		FAC	Hydrophytic Vegetation Indicators:
5 Penstemon confertus	5		UPL	1 - Rapid Test for Hydrophytic Vegetation
o	_ 			2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 ¹
7 8				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
9.				5 - Wetland Non-Vascular Plants ¹
10.				Problematic Hydrophytic Vegetation¹ (Explain)
11.				¹ Indicators of hydric soil and wetland hydrology must
· · ·		= Total Co	ver	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 30 ft r)				
1				Hydrophytic
2				Vegetation Present? Yes No
% Bare Ground in Herb Stratum 25.0	0	= Total Co	over	165 NO
Remarks:				
No evidence of a hydrophytic vege	tation co	mmun	ity obse	erved. Supported by a PL of 3.55
lie struction of a riyar opriyar vogo			, 5.550	

SOIL Sampling Point: DP01U

Profile Desc	ription: (Describe	to the depth	neede				onfirm 1	the absence	of indicato	rs.)		
Depth (inches)	Matrix Color (moist)	%	Color	Redox (moist)	Features %	Type ¹ Lo	oc ²	Texture		Remarks		
0 - 3	7.5YR 2.5/1	100		,				Loam	Fine root			
3-7	7.5YR 3/2	100						Loam	Gravelly			
7 - 11	•									ebris and be	edrock at 1	11"
-												
									-			
												—
		 -						. 2				
	ncentration, D=Depndicators: (Applic						and Gra			Pore Lining, M lematic Hydr		
Histosol		able to all L		dy Redox (S		u.)			n Muck (A10	•	ic Julis .	
	ipedon (A2)	_		ped Matrix (•				Parent Mat	•		
Black His		=) (except ML	RA 1)			ark Surface (T	F12)	
	n Sulfide (A4)	_		my Gleyed M			,		er (Explain i	•	,	
	Below Dark Surfac	e (A11) _		leted Matrix	. ,							
	rk Surface (A12)	_		ox Dark Surf					, ,	hytic vegetati		
-	ucky Mineral (S1)	_		leted Dark S		()				y must be pre		
	leyed Matrix (S4) ayer (if present):	_	_ Ked	ox Depression	ons (F8)		1	unies	s disturbed	or problemation). 	
Type: Be												
Depth (inc								Hydric Soil	Present?	Yes	No 🗸	
Remarks:								,				
No hydri	c soil indicat	ors obse	erve	d.								
HYDROLO:	GV											
-	Irology Indicators: ators (minimum of c		chack s	all that anniv	١			Secon	ndary Indica	tors (2 or more	e required)	
-	Water (A1)	nie requireu,	CHECK			s (B9) (excep	nt		•	d Leaves (B9)		
	ter Table (A2)		_		, 2, 4A, a		ρι	'\	4A, and 4		(WILIXA I,	۷,
Saturatio				Salt Crust (iiu 40)		D	rainage Pat	•		
Water M	• •			Aquatic Inve	,	: (B13)			_	Vater Table (0	22)	
	t Deposits (B2)			Hydrogen S					-	sible on Aerial		C9)
	osits (B3)					es along Livin	na Roots					,
	t or Crust (B4)			Presence of		_	.g00k		hallow Aquit			
	osits (B5)					n in Tilled So	ils (C6)		AC-Neutral			
	Soil Cracks (B6)					Plants (D1) (L				ounds (D6) (L	.RR A)	
	on Vis ble on Aerial	lmagery (B7)		Other (Expl			/			Hummocks (D		
·	Vegetated Concave	, ,		(—·· P ·		- /				(=	,	
Field Observ		- (-	•									
Surface Water	er Present? Y	es No		Depth (incl	nes): _							
Water Table		es No										
Saturation Pr		es No					Wetlar	nd Hydrolog	y Present?	Yes	No_	
(includes cap	illary fringe)				•					-		
Describe Red	corded Data (stream	gauge, mon	itoring \	weii, aeriai pl	notos, pre	vious inspect	iions), if	available:				
Domarka												
Remarks:	_											
No evide	ence of wetla	and hydr	olog	y obser	ved. S	oils very	/ dry.	•				

Project/Site: Schrieber Lake 2023	City/	County: Lincol	n County	Sampling Date: 2023-07-10
Applicant/Owner: MDT			State: Montana	Sampling Point: DP01W
Investigator(s): S Weyant	Sect	ion, Township, F	Range: S13 T27N R30W	1
Landform (hillslope, terrace, etc.): Mountain Valley				
Subregion (LRR): E 43A				
Soil Map Unit Name: 108 - Andic Dystric Eutrochrepts, lacustrine terrace	<u> </u>			
Are climatic / hydrologic conditions on the site typical for this				<u></u>
	-			
Are Vegetation, Soil, or Hydrologysi				
Are Vegetation, Soil, or Hydrology na	aturally problem	natic? (If	needed, explain any answer	s in Remarks.)
SUMMARY OF FINDINGS - Attach site map s	showing sa	mpling point	locations, transects,	, important features, etc.
Hydrophytic Vegetation Present? Yes No				
Hydric Soil Present? Yes No		Is the Sample within a Wetl		No
Wetland Hydrology Present? Yes No		within a weti	and? Tes	NO
Remarks:				
Wetland sample point located at nort	heast end	d of projec	t area.	
VEGETATION – Use scientific names of plant	S.			
20.4 "	Absolute Do	minant Indicator		sheet:
		ecies? Status	Number of Dominant Sp	
1			_ That Are OBL, FACW, o	or FAC: 1 (A)
2			Total Number of Domina	ant
3			_ Species Across All Strat	ta: <u>1</u> (B)
4	<u>0</u> = T	otal Cover	Percent of Dominant Sp That Are OBL, FACW, o	
Sapling/Shrub Stratum (Plot size: 5 ft r			Prevalence Index work	(/ 12)
1			Total % Cover of:	
2				x 1 = 3
3				x 2 = 150
4				x 3 = 0
5			FACU species 0	
Herb Stratum (Plot size: 5 ft r	<u>0</u> = T	otal Cover		x 5 = 0
1. Phalaris arundinacea	75	✓ FACW	Column Totals: 78	(A) <u>153</u> (B)
2. Lemna minor	3	OBL	- Prevalence Index	- D/A - 196
3.			Hydrophytic Vegetatio	· · · · · · · · · · · · · · · · · · ·
4.			_	
5			2 - Dominance Test	
6			_ 3 - Prevalence Inde	
7			_ 4 - Morphological A	daptations ¹ (Provide supporting
8			= 	or on a separate sheet)
9			5 - Wetland Non-Va	
10			- .	ohytic Vegetation ¹ (Explain)
11			 Indicators of hydric soil be present, unless distu 	and wetland hydrology must
Woody Vine Stratum (Plot size: 30 ft r	<u>78</u> = To	otal Cover	be present, amess dista	Thea or problematio.
1 2			HydrophyticVegetation	
-	0 = To		Present? Yes	s No
% Bare Ground in Herb Stratum 25.0				
Remarks:				
A positive rapid test, positive dominance	e test, and	prevalence	e index below three	indicate the
presence of a hydrophytic vegetation co	-	•		

SOIL Sampling Point: DP01W

		depth needed to docur	ment the maicatt	or or contirn	n the absence	of indicators.)
Depth (inches) Color	Matrix (moist) %		x Features % Type	Loc ²	Texture	Remarks
(inches) Color (inches) 10YR 2			<u>% Type</u>	LOC	Peat	Sandy hemic - mucky mineral
			<u> </u>			
5 - 16 10YR 2	100	' <u> </u>			Loam	High OM content
-						
			<u> </u>			
-						
-						
						
1= 0.0					. 2,	
		RM=Reduced Matrix, CS all LRRs, unless other		ited Sand G		cation: PL=Pore Lining, M=Matrix. prs for Problematic Hydric Soils ³ :
Histosol (A1)	. (Applicable to	Sandy Redox (m Muck (A10)
Histic Epipedon (A	2)	Stripped Matrix	•			d Parent Material (TF2)
Black Histic (A3)	_,		Mineral (F1) (exce	pt MLRA 1)		y Shallow Dark Surface (TF12)
✓ Hydrogen Sulfide (A4)	Loamy Gleyed	Matrix (F2)		Oth	er (Explain in Remarks)
Depleted Below Da			. ,		2	
Thick Dark Surface	` '	Redox Dark Su	, ,			ors of hydrophytic vegetation and
Sandy Mucky Mine Sandy Gleyed Mat		Depleted Dark : Redox Depress				and hydrology must be present, as disturbed or problematic.
Restrictive Layer (if p		Nedox Depress	sions (i o)		unies	ss disturbed or problematic.
Type:	,					
Depth (inches):					Hvdric Soil	Present? Yes No
Remarks:					,	
	l soils.					
HYDROLOGY Wetland Hydrology In	dicators:				0	
HYDROLOGY Wetland Hydrology In Primary Indicators (min	dicators:	uired; check all that appl	-	/		ndary Indicators (2 or more required)
HYDROLOGY Wetland Hydrology In Primary Indicators (min Surface Water (A1)	dicators: imum of one req	Water-Sta	ined Leaves (B9)			Vater-Stained Leaves (B9) (MLRA 1, 2,
HYDROLOGY Wetland Hydrology In Primary Indicators (min Surface Water (A1) High Water Table (dicators: imum of one req	Water-Sta	ined Leaves (B9) 1, 2, 4A, and 4B)		V	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology In Primary Indicators (min Surface Water (A1) High Water Table (V Saturation (A3)	dicators: imum of one req	Water-Sta MLRA Salt Crust	ined Leaves (B9) 1, 2, 4A, and 4B) (B11)		v	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10)
Wetland Hydrology In Primary Indicators (min Surface Water (A1 High Water Table (Saturation (A3) Water Marks (B1)	dicators: imum of one req) (A2)	Water-Sta MLRA Salt Crust Aquatic In	ined Leaves (B9) 1, 2, 4A, and 4B) (B11) vertebrates (B13)		V C	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2)
HYDROLOGY Wetland Hydrology In Primary Indicators (min Surface Water (A1 High Water Table (Saturation (A3) Water Marks (B1) Sediment Deposits	dicators: imum of one req) (A2) s (B2)	Water-Sta MLRA Salt Crust Aquatic In Hydrogen	ined Leaves (B9) 1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1)		V C S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
HYDROLOGY Wetland Hydrology In Primary Indicators (min Surface Water (A1 High Water Table (Saturation (A3) Water Marks (B1) Sediment Deposits (B3)	dicators: imum of one req (A2)	Water-Sta MLRA Salt Crust Aquatic In: ✓ Hydrogen Oxidized F	ined Leaves (B9) 1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1)	ng Living Roo	V C S ots (C3) C	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
HYDROLOGY Wetland Hydrology In Primary Indicators (min Surface Water (A1 High Water Table (Saturation (A3) Water Marks (B1) Sediment Deposits	dicators: imum of one req (A2)	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence	ined Leaves (B9) 1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres alor	ng Living Roo	V E E S ots (C3) G	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
HYDROLOGY Wetland Hydrology In Primary Indicators (min Surface Water (A1 High Water Table (Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust	idicators: imum of one req (A2) (B2) (B4)	Water-Sta MLRA Salt Crust Aquatic In ✓ Hydrogen Oxidized F Presence Recent Iro	ined Leaves (B9) 1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (ng Living Roo C4) led Soils (C0	V C C S S S S S S S S S F S S F S S F S S F S S F S S F S S S S F S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Seomorphic Position (D2) Shallow Aquitard (D3)
HYDROLOGY Wetland Hydrology In Primary Indicators (min Surface Water (A1) High Water Table (Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust Iron Deposits (B5)	dicators: imum of one req) (A2) (B2) (B4) (B6)	Water-Sta MLRA Salt Crust Aquatic In ✓ Hydrogen Oxidized F Presence Recent Iro Stunted or	ined Leaves (B9) 1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (in Reduction in Ti	ng Living Roo C4) led Soils (C0	V C S ots (C3) C S 6) F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Seomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
HYDROLOGY Wetland Hydrology In Primary Indicators (min Surface Water (A1 High Water Table (Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Crack Inundation Vis ble of Sparsely Vegetated	dicators: imum of one req) (A2) (B2) (B4) (B4) (B6) on Aerial Imager	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or y (B7) Water-Sta	ined Leaves (B9) 1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (in Reduction in Ti	ng Living Roo C4) led Soils (C0	V C S ots (C3) C S 6) F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology In Primary Indicators (min Surface Water (A1) High Water Table (Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Crack Inundation Vis ble of Sparsely Vegetated Field Observations:	idicators: imum of one req) (A2) (B2) (B4) (B4) s (B6) on Aerial Imager d Concave Surfa	Water-Sta MLRA Salt Crust Aquatic In: Hydrogen Oxidized F Presence Recent Iro Stunted or y (B7) Ce (B8)	ined Leaves (B9) 1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (on Reduction in Ti Stressed Plants plain in Remarks)	ng Living Roo C4) led Soils (C0 (D1) (LRR A	V C S ots (C3) C S 6) F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology In Primary Indicators (min Surface Water (A1 High Water Table (Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Crack Inundation Vis ble of Sparsely Vegetater Field Observations: Surface Water Present	idicators: imum of one req) (A2) (B2) (B4) (B4) s (B6) on Aerial Imager d Concave Surfa	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or y (B7) Ce (B8) Water-Sta Hydrogen Oxidized F Oxidized F Presence Recent Iro Stunted or Under (Exp	ined Leaves (B9) 1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (in Reduction in Ti Stressed Plants plain in Remarks) ches):	ng Living Roo C4) led Soils (Co (D1) (LRR A	V C S ots (C3) C S 6) F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology In Primary Indicators (min Surface Water (A1) High Water Table (Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Crack Inundation Vis ble of Sparsely Vegetated Field Observations:	dicators: imum of one req) (A2) (B2) (B4) s (B6) on Aerial Imager d Concave Surfa	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or y (B7) Ce (B8) No Depth (in Depth (in	ined Leaves (B9) 1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (in Reduction in Ti Stressed Plants blain in Remarks) ches):	ng Living Roo C4) led Soils (C6 (D1) (LRR A		Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology In Primary Indicators (min Surface Water (A1 High Water Table (Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Crack Inundation Vis ble of Sparsely Vegetater Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringer	idicators: imum of one req) (A2) (B2) (B4) s (B6) on Aerial Imager d Concave Surfa ? Yes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or y (B7) Ce (B8) Water-Sta Hydrogen Oxidized F Oxidized F Presence Recent Iro Stunted or Under (Exp	ined Leaves (B9) 1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (on Reduction in Ti Stressed Plants plain in Remarks) ches):	ng Living Roo C4) led Soils (Co (D1) (LRR A		Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
HYDROLOGY Wetland Hydrology In Primary Indicators (min Surface Water (A1 High Water Table (Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Crack Inundation Vis ble of Sparsely Vegetated Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fring) Describe Recorded Date	idicators: imum of one req) (A2) (B2) (B4) s (B6) on Aerial Imager d Concave Surfa ? Yes	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or y (B7) Other (Exp ce (B8) No Depth (in Depth (in	ined Leaves (B9) 1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (on Reduction in Ti Stressed Plants plain in Remarks) ches):	ng Living Roo C4) led Soils (Co (D1) (LRR A		Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology In Primary Indicators (min Surface Water (A1 High Water Table (Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Crack Inundation Vis ble (Sparsely Vegetated Field Observations: Surface Water Present' Water Table Present? Saturation Present? (includes capillary fring) Describe Recorded Dat	dicators: imum of one req) (A2) (B2) (B4) (B4) s (B6) on Aerial Imager d Concave Surfa Yes Yes Yes Yes e) ta (stream gauge	Water-Sta MLRA Salt Crust Aquatic In: Hydrogen Oxidized F Presence Recent Iro Stunted or y (B7) Ce (B8) No Depth (in: No Depth (in: n, monitoring well, aerial	ined Leaves (B9) 1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (in Reduction in Ti stressed Plants plain in Remarks) ches): ches): ches): 0 photos, previous i	ng Living Roo C4) led Soils (Co (D1) (LRR A	V	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Seomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
HYDROLOGY Wetland Hydrology In Primary Indicators (min Surface Water (A1 High Water Table (Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Surface Soil Crack Inundation Vis ble (Sparsely Vegetated Field Observations: Surface Water Present' Water Table Present? Saturation Present? (includes capillary fring) Describe Recorded Dat	dicators: imum of one req) (A2) (B2) (B4) (B4) s (B6) on Aerial Imager d Concave Surfa Yes Yes Yes Yes e) ta (stream gauge	Water-Sta MLRA Salt Crust Aquatic In: Hydrogen Oxidized F Presence Recent Iro Stunted or y (B7) Ce (B8) No Depth (in: No Depth (in: n, monitoring well, aerial	ined Leaves (B9) 1, 2, 4A, and 4B) (B11) vertebrates (B13) Sulfide Odor (C1) Rhizospheres alor of Reduced Iron (in Reduction in Ti stressed Plants plain in Remarks) ches): ches): ches): 0 photos, previous i	ng Living Roo C4) led Soils (Co (D1) (LRR A	V	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

Project/Site: Schrieber Lake 2023		City/Count	_{y:} Lincoln (County	Sampling Date: 2023-07-10
Applicant/Owner: MDT		-	-		Sampling Point: DP02U
Investigator(s): S Weyant		Section. To	ownship. Rai	nge: S13 T27N R30W	,
Landform (hillslope, terrace, etc.): Toeslope					
					2 Datum: NAD 83
Soil Map Unit Name: 108 - Andic Dystric Eutrochrepts, lacustrine terr				· · ·	
Are climatic / hydrologic conditions on the site typical for the					
•	•			· .	
Are Vegetation, Soil, or Hydrology					resent? Yes No
Are Vegetation, Soil, or Hydrology SUMMARY OF FINDINGS - Attach site map				eded, explain any answer	
			ig point it		important routaroo, otor
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes		ls t	he Sampled		
Wetland Hydrology Present? Yes	No 🔽	wit	hin a Wetlar	nd? Yes	No
Remarks:					
Data point located upslope from paired wetland data water cell.	point. Appro	ximately	6' higher in	elevation than the water	surface in adjacent open
VEGETATION – Use scientific names of pla	nts.				
	Absolute	Dominan	t Indicator	Dominance Test works	sheet:
Tree Stratum (Plot size: 30 ft r)	% Cover	Species?		Number of Dominant Sp	
1. Pinus ponderosa	_ <u>15</u>		FACU	That Are OBL, FACW, o	or FAC: 0 (A)
2. Pseudotsuga menziesii	_ 5		FACU	Total Number of Domina	
3. Pinus contorta	_ 2		FAC	Species Across All Strat	ta: <u>4</u> (B)
4				Percent of Dominant Sp	ecies
Sapling/Shrub Stratum (Plot size: 5 ft r	22	= Total C	over	That Are OBL, FACW, o	or FAC: <u>0.00</u> (A/B)
1. Pinus ponderosa	5	~	FACU	Prevalence Index work	
2.				Total % Cover of:	
3					x 1 = 0
4					x 2 = 0
5				FAC species 17 FACU species 25	x 3 = 51 x 4 = 100
	5	= Total C	over		x 5 = 300
Herb Stratum (Plot size: 5 ft r) 1. Bromus carinatus	60	./	LIDI	Column Totals: 102	
Phleum pratense	80		FAC		
Agreetic stolenifora		-	FAC	Prevalence Index	
4				Hydrophytic Vegetatio	
5				1 - Rapid Test for H 2 - Dominance Tes	
6				3 - Prevalence Inde	
7					daptations ¹ (Provide supporting
8.					or on a separate sheet)
9.				5 - Wetland Non-Va	scular Plants ¹
10				Problematic Hydrop	ohytic Vegetation ¹ (Explain)
11				,	and wetland hydrology must
	7-	= Total Co		be present, unless distu	rbed or problematic.
Woody Vine Stratum (Plot size: 30 ft r)					
1				Hydrophytic	
2				Vegetation Present? Yes	s No <u> </u>
% Bare Ground in Herb Stratum 25	0	= Total Co	over		
Remarks:				I	
No hydrophytic vegetation indicato	rs obser	ved.			

SOIL Sampling Point: DP02U

Profile Desc	cription: (Descri	be to the dep	th needed to docu	ment the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-3	7.5YR 2.5/1	100					Silt Loam	High content of fine roots
3 - 16	7.5YR 2.5/1	100					Silt Loam	Some gravels
-								
				_				
	-							
	-		-					
-								
¹Type: C=C	oncentration, D=D	epletion, RM	=Reduced Matrix, C	S=Covered	d or Coate	d Sand Gr	rains. ² Loc	cation: PL=Pore Lining, M=Matrix.
			LRRs, unless othe					rs for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Redox (S5)			2 cn	n Muck (A10)
Histic E	pipedon (A2)		Stripped Matrix	(S6)			Red	Parent Material (TF2)
	istic (A3)		Loamy Mucky	Mineral (F	1) (except	MLRA 1)		Shallow Dark Surface (TF12)
	en Sulfide (A4)		Loamy Gleyed	•	2)		Othe	er (Explain in Remarks)
	d Below Dark Sur	` '	Depleted Matri				3	
	ark Surface (A12)		Redox Dark Su	. ,				ors of hydrophytic vegetation and
-	Mucky Mineral (S1 Gleyed Matrix (S4)		Depleted Dark Redox Depress	•	-7)			nd hydrology must be present, s disturbed or problematic.
	Layer (if present		Redux Deples:	510115 (1 0)			T	s disturbed or problematic.
Type:	Layer (ii present	,-						
Depth (in	choe).						Hydric Soil	Present? Yes No
	Ciles).		,				Hydric 30ii	rieseiit: iesNo
Remarks:								
No hydri	ic soil indic	ators ob	served.					
HYDROLO	GY							
Wetland Hy	drology Indicato	rs:						
Primary Indi	cators (minimum o	of one require	d; check all that app	ly)			Secor	ndary Indicators (2 or more required)
Surface	Water (A1)		Water-Sta	ined Leav	es (B9) (e :	xcept	W	/ater-Stained Leaves (B9) (MLRA 1, 2,
High Wa	ater Table (A2)		MLRA	1, 2, 4A, a	and 4B)	•		4A, and 4B)
Saturati			Salt Crust	(B11)			D	rainage Patterns (B10)
Water M	larks (B1)		Aquatic In	vertebrate	s (B13)		D	ry-Season Water Table (C2)
Sedime	nt Deposits (B2)		Hydrogen	Sulfide O	dor (C1)		s	aturation Visible on Aerial Imagery (C9)
Drift De	posits (B3)		Oxidized	Rhizosphe	res along	Living Roo	ots (C3) G	eomorphic Position (D2)
Algal Ma	at or Crust (B4)		Presence	of Reduce	ed Iron (C4	!)	s	hallow Aquitard (D3)
Iron Der	oosits (B5)		Recent Iro	n Reducti	on in Tilled	d Soils (C6	S) F.	AC-Neutral Test (D5)
Surface	Soil Cracks (B6)		Stunted o	r Stressed	Plants (D	1) (LRR A) R	aised Ant Mounds (D6) (LRR A)
Inundati	on Vis ble on Aeri	al Imagery (B	7) Other (Ex	plain in Re	emarks)		F	rost-Heave Hummocks (D7)
Sparsely	y Vegetated Conc	ave Surface (B8)					
Field Obser	vations:							
Surface Wat	er Present?	Yes	No Depth (in	ches):		_		
Water Table	Present?	Yes	No Depth (in	ches):				
Saturation P	resent?	Yes	No Depth (in	ches):		Wetla	and Hydrolog	y Present? Yes No
(includes ca	oillary fringe)							
Describe Re	corded Data (stre	am gauge, mo	onitoring well, aerial	pnotos, pr	evious ins	pections),	if available:	
Remarks:								
No evide	ence of wet	tland hyd	drology obse	rved. S	Soils d	ry.		
		•				-		
Ì								

Project/Site: Schrieber Lake 2023	(City/Co	ounty: <u>I</u>	_incoln	County Sampling Date: 2023-07-10
Applicant/Owner: MDT					State: Montana Sampling Point: DP02W
Investigator(s): S Weyant		Sectio	n, Towr	nship, Ra	nge: S13 T27N R30W
Landform (hillslope, terrace, etc.): Mountain Valley		Local	relief (c	concave,	convex, none): Concave Slope (%): 10
					Long: -115.40850774 Datum: NAD 83
Soil Map Unit Name: 105 - Aquic Udifluvents, poor					NWI classification: PEM1C
Are climatic / hydrologic conditions on the site typical for ti					
, ,	•				 ;
Are Vegetation, Soil, or Hydrology					"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology				,	eeded, explain any answers in Remarks.)
	showing	sam	pling	point l	ocations, transects, important features, etc.
	No		lo the	Sampled	I Avec
	No			a Wetlar	•
Wetland Hydrology Present? Yes	No		•••••	u mona	
Remarks:					
PEM, riverine wetland. Sample poin	t is locat	ed i	in we	tland	fringe around Wetland Cell #10.
VEGETATION – Use scientific names of pla	nts.				
Tree Stratum (Plot size: 30 ft r	Absolute				Dominance Test worksheet:
1	% Cover				Number of Dominant Species That Are OBL, FACW, or FAC: $\underline{2}$ (A)
2					Total Number of Dominant
3					Species Across All Strata: 2 (B)
4	0		al Cove	er	Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
Sapling/Shrub Stratum (Plot size: 5 ft r)					Prevalence Index worksheet:
1					Total % Cover of: Multiply by:
2					OBL species 81
3					FACW species $0 x 2 = 0$
4					FAC species 12 x 3 = 36
5					FACU species $0 x 4 = 0$
Herb Stratum (Plot size: 5 ft r)	0	= 1 ot	al Cove	r	UPL species 0 x 5 = 0
1. Juncus nodosus	30	v	/ (OBL	Column Totals: <u>93</u> (A) <u>117</u> (B)
2. Carex pellita	20			OBL	Prevalence Index = B/A = 1.26
3. Carex atherodes	15		(OBL	Hydrophytic Vegetation Indicators:
4. Eleocharis palustris	10		(OBL	✓ 1 - Rapid Test for Hydrophytic Vegetation
5. Alopecurus arundinaceus			<u>F</u>	AC	✓ 2 - Dominance Test is >50%
6. Agrostis stolonifera	5		<u>F</u>	AC	✓ 3 - Prevalence Index is ≤3.0 ¹
7. Lycopus asper	_ 3			OBL	4 - Morphological Adaptations ¹ (Provide supporting
8. Typha latifolia	3		(OBL	data in Remarks or on a separate sheet)
9					5 - Wetland Non-Vascular Plants ¹
10					Problematic Hydrophytic Vegetation ¹ (Explain)
11					¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: 30 ft r	93	= Tota	al Cove	•	be present, unless disturbed of problematic.
1					Hydrophytic
2					Vegetation Present? Yes No
% Bare Ground in Herb Stratum 7			al Cove	•	
Remarks:					1
	ca tast a	nd n	reva	lanca i	index below three provide evidence for
a hydrophytic vegetation community a	-	-		iei ice i	maex below three provide evidence for

US Army Corps of Engineers

	cription: (Describe t	to the dept	th needed to docu	ment the	indicator	or confirm t	he absence	of indicators.)
Depth	Matrix			x Feature		. 2		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹		Texture	Remarks
0 - 3	10YR 2/1	100						Greasy/Organic
3 - 16	10YR 5/4	85	10YR 5/8	5	<u>C</u>	<u>M </u>	Sand	Fine sand
3 - 16	10YR 3/1	10			_		Clay Loam	Clay loam clods mixed in matrix
-								
-					-			
				_	-	· — –		-
	-					·		
	·							
	oncentration, D=Depl					ed Sand Grain		cation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applica	able to all	LRRs, unless othe	rwise not	ted.)		Indicato	ors for Problematic Hydric Soils ³ :
Histosol	` '		Sandy Redox (n Muck (A10)
	pipedon (A2)		Stripped Matrix					Parent Material (TF2)
	istic (A3)		Loamy Mucky I			t MLRA 1)		y Shallow Dark Surface (TF12)
	en Sulfide (A4)	- (011)	Loamy Gleyed	•	2)		<u>v</u> Oth	er (Explain in Remarks)
	d Below Dark Surface ark Surface (A12)	e (A11)	Depleted Matri: Redox Dark Su		١		3Indicate	ors of hydrophytic vegetation and
	Mucky Mineral (S1)		Redox Dark St Depleted Dark	•	•			and hydrology must be present,
-	Gleyed Matrix (S4)		Redox Depress					es disturbed or problematic.
	Layer (if present):			(- /				
Type:								
Depth (in	ches):						Hydric Soil	Present? Yes V No No
Remarks:			<u> </u>					
	ne location of developing.	tne sc	oli pit, wnich	usea	to be a	a aumps	ite and v	was reclaimed, the soils
	GY							
IYDROLO	GY drology Indicators:							
YDROLO Wetland Hy		ne requirec	l; check all that app	ly)			<u>Seco</u>	ndary Indicators (2 or more required)
YDROLO Wetland Hy Primary Indi	drology Indicators: cators (minimum of or	ne requirec	l; check all that app Water-Sta		ves (B9) (€	except		ndary Indicators (2 or more required) Vater-Stained Leaves (B9) (MLRA 1, 2,
YDROLO Wetland Hy Primary Indi ✓ Surface	drology Indicators: cators (minimum of or	ne required	Water-Sta		, , ,	except		· · · · · ·
YDROLO Wetland Hy Primary Indi V Surface High Wa	drology Indicators: cators (minimum of or Water (A1) ater Table (A2)	ne requirec	Water-Sta	ined Leav	, , ,	except	v	Vater-Stained Leaves (B9) (MLRA 1, 2,
YDROLO Wetland Hy Primary Indi Surface High Wa	drology Indicators: cators (minimum of or Water (A1) ater Table (A2)	ne required	Water-Sta	ined Leav 1, 2, 4A, (B11)	and 4B)	except	v	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
YDROLO Wetland Hy Primary Indi ✓ Surface ✓ High Wa ✓ Saturati Water M	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3)	ne required	Water-Sta MLRA Salt Crust	ined Leav 1, 2, 4A, (B11) vertebrate	and 4B) es (B13)	except	v	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10)
YDROLO Wetland Hy Primary Indi ✓ Surface ✓ High Wa ✓ Saturati ✓ Water M ✓ Sedime	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1)	ne required	Water-Sta MLRA Salt Crust Aquatic In Hydrogen	ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O	and 4B) es (B13) edor (C1)	except Living Roots	W D D S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2)
YDROLO Wetland Hy Primary Indi Surface High Wa Saturati Water N Sedime Drift De	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2)	ne requirec	Water-Sta MLRA Salt Crust Aquatic In Hydrogen	ined Leav 1, 2, 4A, (B11) vertebrate Sulfide O	and 4B) es (B13) edor (C1) eres along	Living Roots	D D S S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Paturation Visible on Aerial Imagery (C9
YDROLO Wetland Hy Primary Indi Surface High Wa Saturati Water M Sedime Drift De Algal Ma	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)	ne required	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I	ined Leaven 1, 2, 4A, (B11) vertebrate Sulfide ORhizosphe of Reduce	es (B13) dor (C1) eres along ed Iron (C	Living Roots	V D S (C3) <u>v</u> G	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Eaturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
YDROLO Wetland Hy Primary Indi ✓ Surface ✓ High Wa ✓ Saturati Water N Sedime Drift De Algal Ma Iron De	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	ne required	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro	ined Leavenined Leaven	es (B13) dor (C1) eres along ed Iron (C- ion in Tille	Living Roots 4)	V D S S S S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Praituration Visible on Aerial Imagery (C9) Recomorphic Position (D2) Phallow Aquitard (D3)
YDROLO Wetland Hy Primary Indi ✓ Surface ✓ High Wa ✓ Saturati ─ Water M ─ Sedime ─ Drift De ─ Algal Ma ─ Iron De ─ Surface	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)		Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Iro Stunted o	ined Leavanned L	es (B13) dor (C1) eres along ed Iron (Ci ion in Tille I Plants (D	Living Roots 4) d Soils (C6)	V D S (C3) <u>v</u> G S F R	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Parainage Patterns (B10) Pary-Season Water Table (C2) Patturation Visible on Aerial Imagery (C9) Pathological Position (D2) Pathological Test (D3) Parainage Patterns (D5)
YDROLO Wetland Hy Primary Indi ✓ Surface ✓ High Wa ✓ Saturati Water M Sedime Drift De Algal Ma Iron De Surface Inundati	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	magery (B7	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Ird Stunted o Other (Ex	ined Leavanned L	es (B13) dor (C1) eres along ed Iron (Ci ion in Tille I Plants (D	Living Roots 4) d Soils (C6)	V D S S (C3) <u>v</u> G S F R	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Praturation Visible on Aerial Imagery (CS) Promorphic Position (D2) Praillow Aquitard (D3) Praillow Aquitard (D3) Praillow And (D5) Praillow And (D6) (LRR A)
Wetland Hy Primary Indi ✓ Surface ✓ High Wa ✓ Saturati Water M Sedime Drift De Algal Ma Iron De Surface Inundati	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6) ion Vis ble on Aerial In	magery (B7	Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I Presence Recent Ird Stunted o Other (Ex	ined Leavanned L	es (B13) dor (C1) eres along ed Iron (Ci ion in Tille I Plants (D	Living Roots 4) d Soils (C6)	V D S S (C3) <u>v</u> G S F R	Vater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Praturation Visible on Aerial Imagery (CS) Promorphic Position (D2) Praillow Aquitard (D3) Praillow Aquitard (D3) Praillow And (D5) Praillow And (D6) (LRR A)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No ____ Depth (inches): 9

Remarks:

Evidence of wetland hydrology includes surface water, high water table, saturation to the soil surface, geomorphic position, and a positive fac-neutral test.

Water Table Present?
Saturation Present?

(includes capillary fringe)

Wetland Hydrology Present?

Project/Site: Schrieber Lake 2023	(City/County	Lincoln	County Sampling Date: 2023-07-10
Applicant/Owner: MDT				State: Montana Sampling Point: DP03U
• •				nge: S13 T27N R30W
Landform (hillslope, terrace, etc.): Mountain Valley				
				Long: -115.40794791 Datum: WGS 84
Soil Map Unit Name: 108 - Andic Dystric Eutrochrepts, lacustrine terrac				
Are climatic / hydrologic conditions on the site typical for this	-			
Are Vegetation, Soil, or Hydrologys	ignificantly of	disturbed?	Are "	Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrologyn	aturally prol	blematic?	(If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	samplin	g point le	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	o _ / _			
Hydric Soil Present? Yes No	o <u> </u>		e Sampled	•
Wetland Hydrology Present? Yes No	o <u> </u>	with	in a Wetlan	id? YesNo
Remarks:				
Forested hillside/local terrace locate	d south	of Sch	rieber	Lake.
VEGETATION – Use scientific names of plan	ts.			
	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?		Number of Dominant Species
1. Pseudotsuga menziesii	20		FACU	That Are OBL, FACW, or FAC: 1 (A)
2. Pinus monticola	10		FACU	Total Number of Dominant
3	·			Species Across All Strata: 6 (B)
4				Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)	30	= Total Co	ver	That Are OBL, FACW, or FAC: 16.66 (A/B)
1. Symphoricarpos albus	10	~	FACU	Prevalence Index worksheet:
2. Pinus monticola	- — —		FACU	Total % Cover of: Multiply by:
3. Spiraea betulifolia	5 2		FACU	OBL species $0 \times 1 = 0$
4				FACW species $0 \times 2 = 0$
5.				FAC species 33 x 3 = 99
	17	= Total Co	ver	FACU species 64 $x 4 = 256$
Herb Stratum (Plot size:)				UPL species 30 x 5 = 150
1. Bromus carinatus	30		UPL	Column Totals: <u>127</u> (A) <u>505</u> (B)
2. Elymus repens	20		FAC	Prevalence Index = B/A = 3.97
3. Fragaria virginiana	10		FACU	Hydrophytic Vegetation Indicators:
4. Penstemon confertus	5		FAC	1 - Rapid Test for Hydrophytic Vegetation
5. Phleum pratense	5		FAC	2 - Dominance Test is >50%
6. Achillea millefolium	3		FACU	3 - Prevalence Index is ≤3.0 ¹
7. Alopecurus arundinaceus	3 2		FACIL	4 - Morphological Adaptations (Provide supporting
8. Allium cernuum 9. Campanula rotundifolia	2		FACU	data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants ¹
			FACU	Problematic Hydrophytic Vegetation¹ (Explain)
10				Indicators of hydric soil and wetland hydrology must
11	80			be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	-00	= Total Cov	er er	
1				Hydrophytic
2.				Vegetation
	_	= Total Cov	ver	Present? Yes No
% Bare Ground in Herb Stratum 20.0				
Remarks:				
No hydrophytic vegetation indicators	s obser	ved.		

DEU311

SOIL						Sampling Point: DP030
Profile Desc	ription: (Describe	to the depth	n needed to document the indicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redox Features			
(inches)	Color (moist)	<u> </u>	Color (moist) % Type ¹	Loc ²	Texture	Remarks
0 - 3	7.5YR 4/2	100			Sandy Clay Loam	Many fine roots
3 - 6.5	7.5YR 4/2	100			Sandy Clay Loam	Gravelly
				· ——		
-						
_		_ <u></u> _				
1- 0.0					. 2.	
, , , , , , , , , , , , , , , , , , ,			Reduced Matrix, CS=Covered or Coat	ed Sand Gr		cation: PL=Pore Lining, M=Matrix.
		able to all L	.RRs, unless otherwise noted.)			ors for Problematic Hydric Soils ³ :
Histosol		=	Sandy Redox (S5)		· 	n Muck (A10)
Histic Ep	oipedon (A2)	_	Stripped Matrix (S6)Loamy Mucky Mineral (F1) (exception)	4 MI DA 1\		Parent Material (TF2) Shallow Dark Surface (TF12)
	n Sulfide (A4)	_	Loamy Gleyed Matrix (F2)	I WILKA I)	-	er (Explain in Remarks)
	d Below Dark Surfac	e (A11)	Depleted Matrix (F3)		0	cr (Explain in Nomana)
	ark Surface (A12)		Redox Dark Surface (F6)		³ Indicato	ors of hydrophytic vegetation and
	lucky Mineral (S1)	_	Depleted Dark Surface (F7)			nd hydrology must be present,
	Bleyed Matrix (S4)	_	Redox Depressions (F8)		unles	s disturbed or problematic.
	_ayer (if present):					
Type: Ro	ock bottom		<u> </u>			
Depth (inc	ches): 6.5		<u></u>		Hydric Soil	Present? Yes No
Remarks:					1	
HYDROLO	oil indicators GY	observ	ea.			
Wetland Hyd	drology Indicators	:				
-			check all that apply)		Secor	ndary Indicators (2 or more required)
	Water (A1)		Water-Stained Leaves (B9) (except		Vater-Stained Leaves (B9) (MLRA 1, 2,
	iter Table (A2)		MLRA 1, 2, 4A, and 4B)			4A, and 4B)
Saturation			Salt Crust (B11)		D	rainage Patterns (B10)
	arks (B1)		Aquatic Invertebrates (B13)			ry-Season Water Table (C2)
·	nt Deposits (B2)		Hydrogen Sulfide Odor (C1)			aturation Visible on Aerial Imagery (C9)
	posits (B3)		Oxidized Rhizospheres along	Living Roo	·	• • • •
	at or Crust (B4)		Presence of Reduced Iron (C	•		hallow Aquitard (D3)
_	osits (B5)		Recent Iron Reduction in Tille	ed Soils (C6		AC-Neutral Test (D5)
	Soil Cracks (B6)		Stunted or Stressed Plants (I			aised Ant Mounds (D6) (LRR A)
Inundation	on Vis ble on Aerial	Imagery (B7)	Other (Explain in Remarks)		F	rost-Heave Hummocks (D7)
Sparsely	Vegetated Concav	e Surface (B	8)			
Field Observ	vations:					
Surface Water	er Present?	/es N	o Depth (inches):			
Water Table			o Depth (inches):			
Saturation Pr			o Depth (inches):		and Hydrolog	y Present? Yes No
(includes cap	oillary fringe)					,
Describe Red	corded Data (stream	n gauge, mor	nitoring well, aerial photos, previous in	spections),	if available:	
Remarks:						
No evide	ence of wetla	and hydi	rology observed. Soils o	lry.		
		,	3, 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	, .		

Project/Site: Schrieber Lake 2023	C	City/Count	_{ty:} Lincoln (County	Sampling Date: 2023-07-	-10
Applicant/Owner: MDT		-	,		Sampling Point: DP03W	
Investigator(s): S Weyant	9	Section, T	ownship. Rar	nge: S13 T27N R30W		
Landform (hillslope, terrace, etc.): Mountain Valley					_	
Subregion (LRR): E 43A			•			3
Soil Map Unit Name: 108 - Andic Dystric Eutrochrepts, lacustrine terrace				-		
Are climatic / hydrologic conditions on the site typical for this						
Are Vegetation, Soil, or Hydrologysi						
Are Vegetation, Soil, or Hydrology no SUMMARY OF FINDINGS – Attach site map s				eded, explain any answer		etc.
Hydrophytic Vegetation Present? Yes No						
	o		he Sampled	Area		
Wetland Hydrology Present? Yes No	·	Wit	hin a Wetlan	d? Yes	No	
Remarks:						
Located in wetland fringe on the sou	th side	of Sch	nrieber L	ake.		
VEGETATION – Use scientific names of plant	ts.					
Tree Stratum (Plot size: 30 ft r			nt Indicator	Dominance Test works	sheet:	
1	% Cover			Number of Dominant Sp That Are OBL, FACW, o		١
2.					、,	'
3.				Total Number of Domina Species Across All Strate	^)
4.						
.	0	= Total C	over	Percent of Dominant Sp That Are OBL, FACW, or		'B)
Sapling/Shrub Stratum (Plot size: 5 ft r)				Prevalence Index work	ksheet:	_
1				Total % Cover of:	Multiply by:	
2					x 1 = 57	
3				FACW species 20	x 2 = 40	
5.				FAC species 3	x 3 = 9	
	0	= Total C	over	FACU species 0	x 4 = 0	
Herb Stratum (Plot size: 5 ft r				UPL species 0	$\times 5 = 0$	٠,
1. Juncus nodosus	20		OBL	Column Totals: 80	(A) <u>106</u> (B	3)
2. Carex stipata 3. Phalaris arundinacea	15 15	<u> </u>	OBL FACW	Prevalence Index		
4. Lycopus asper	10		OBL	Hydrophytic Vegetatio		
5. Carex bebbii	5		OBL	1 - Rapid Test for H		
6. Eleocharis palustris	5		OBL	✓ 2 - Dominance Test✓ 3 - Prevalence Inde		
7. Epilobium ciliatum	5		FACW		Adaptations ¹ (Provide supporti	ina
8. Agrostis stolonifera	3		FAC		s or on a separate sheet)	nig
9. Scutellaria galericulata	2		OBL	5 - Wetland Non-Va	ascular Plants ¹	
10					phytic Vegetation ¹ (Explain)	
11				¹ Indicators of hydric soil be present, unless distu	l and wetland hydrology must	
Woody Vine Stratum (Plot size: 30 ft r	80 :	= Total Co	over	be present, unless distu	——————————————————————————————————————	
1				Hardward a		
2.				Hydrophytic Vegetation		
	_	= Total Co	over		s No	
% Bare Ground in Herb Stratum 20		, 3	-			
Remarks:						
A positive rapid test, positive dominance hydrophytic vegetation community at the	-	•	revalence	index below thre	ee indicate a	

US Army Corps of Engineers

SOIL Sampling Point: DP03W

Profile Desc	cription: (Describ	e to the de	pth needed to docu	ment the in	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix		Rede	ox Features				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-3	7.5YR 2.5/1	100					Mucky Sand	Mucky mineral - greasy
4 - 7	10YR 4/2	100					Clay Loam	90% gravels and cobbles
-								
-								
	-							
	-							
	-							
-								
¹Type: C=C	oncentration, D=D	epletion, RM	/I=Reduced Matrix, C	S=Covered	or Coate	d Sand Gr	ains. ² Loc	cation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (App	licable to al	II LRRs, unless othe	rwise note	ed.)			rs for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Redox	. ,			2 cn	n Muck (A10)
·	pipedon (A2)		Stripped Matrix	, ,				Parent Material (TF2)
_	istic (A3)		<u>✓</u> Loamy Mucky			MLRA 1)		y Shallow Dark Surface (TF12)
	en Sulfide (A4)	000 (011)	Loamy Gleyed	, ,)		Othe	er (Explain in Remarks)
	d Below Dark Surf ark Surface (A12)	ace (ATT)	Depleted Matri Redox Dark St				3Indicato	rs of hydrophytic vegetation and
	Mucky Mineral (S1))	Depleted Dark	. ,	7)			nd hydrology must be present,
	Gleyed Matrix (S4)		Redox Depres		. ,			s disturbed or problematic.
-	Layer (if present)			, ,				·
Type: Ro	ock bottom							
Depth (in	ches): <u>7</u>						Hydric Soil	Present? Yes No
Remarks:								
A mucks	, minoral lay	or indi	cates hydric s	oil in t	hic nro	ofilo		
Amucky	/ IIIIII ei ai ia	ei illuid	cates flyulic s	oon iii ti	ilis pi	Jilie.		
HYDROLO)GY							
	drology Indicator	·e•						
			ed; check all that app	lv)			Secor	ndary Indicators (2 or more required)
✓ Surface		TOTIC TOQUIT		ained Leave	s (R9) (a	vcent		/ater-Stained Leaves (B9) (MLRA 1, 2,
·	ater Table (A2)			1, 2, 4A, a		косрі	``	4A, and 4B)
✓ Saturati	, ,		Salt Crus		na 45)		D	rainage Patterns (B10)
	farks (B1)		<u> </u>	vertebrates	s (B13)			ry-Season Water Table (C2)
	nt Deposits (B2)			Sulfide Od	, ,		·	aturation Visible on Aerial Imagery (C9)
	posits (B3)			Rhizospher		Living Roo		seomorphic Position (D2)
	at or Crust (B4)			of Reduce	_	_		hallow Aquitard (D3)
Iron Dep	posits (B5)		Recent Ir	on Reductio	on in Tilled	d Soils (C6	j) F.	AC-Neutral Test (D5)
Surface	Soil Cracks (B6)		Stunted o	r Stressed	Plants (D	1) (LRR A) R	aised Ant Mounds (D6) (LRR A)
Inundati	ion Vis ble on Aeria	al Imagery (E	B7) Other (Ex	plain in Rei	marks)		F	rost-Heave Hummocks (D7)
Sparsel	y Vegetated Conca	ave Surface	(B8)					
Field Obser	vations:							
Surface Wat	or Present?	Yes 🗸	No Depth (ir					
	er i resent:			iches). 0				
Water Table		Yes 🗸	No Depth (ir	ici ico)				
Saturation P	Present?		No Depth (ir			Wetla	and Hydrolog	y Present? Yes V No No
Saturation P (includes ca	Present? resent? pillary fringe)	Yes	No Depth (in	nches): 0	avious ins			y Present? Yes V No No
Saturation P (includes ca	Present? resent? pillary fringe)	Yes		nches): 0	evious ins			y Present? Yes No
Saturation P (includes ca Describe Re	Present? resent? pillary fringe)	Yes	No Depth (in	nches): 0	evious ins			y Present? Yes <u> </u>
Saturation P (includes ca) Describe Re Remarks:	Present? resent? pillary fringe) corded Data (strea	Yes	No Depth (in nonitoring well, aerial	photos, pre		pections),	if available:	
Saturation P (includes cal Describe Re Remarks: 2 inches	Present? Present? pillary fringe) corded Data (streated)	Yes am gauge, m	No Depth (in nonitoring well, aerial at the point, a	photos, pre		pections),	if available:	ter table at the soil
Saturation P (includes cal Describe Re Remarks: 2 inches	Present? resent? pillary fringe) corded Data (strea	Yes am gauge, m	No Depth (in nonitoring well, aerial at the point, a	photos, pre		pections),	if available:	

Project/Site: Schrieber Lake	(Citv/Countv	Lincoln	County	Sampling Date: 2023-07-10						
Applicant/Owner: MDT					Sampling Point: DP04U						
				nge: S13 T27N R30W							
Landform (hillslope, terrace, etc.): Mountain Valley											
Subregion (LRR): E 43A											
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly			_								
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ar? Yes	No_	(If no, explain in Re	emarks.)						
Are Vegetation, Soil, or Hydrology	significantly o	disturbed?	Are "	Normal Circumstances" p	resent? Yes No						
Are Vegetation, Soil, or Hydrology	naturally prol	blematic?	(If ne	eded, explain any answer	s in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.											
Hydrophytic Vegetation Present? Yes N	lo 🗸										
Hydric Soil Present? Yes N	lo <u> </u>		e Sampled		No 🗸						
Wetland Hydrology Present? Yes N	lo	with	in a Wetlar	10? Yes	NO						
Remarks:											
Upland sample point located on MD	T prope	rty alor	ng the s	outhern bounda	ry.						
VEGETATION – Use scientific names of plan	nts.										
Troo Stratum (Plot size:	Absolute	Dominant		Dominance Test works							
Tree Stratum (Plot size:) 1. Larix occidentalis	30	Species? ✓	FACU	Number of Dominant Sp							
2 Pinus contorta	30	<u> </u>	FAC	That Are OBL, FACW, o	or FAC: 1 (A)						
3. Abies grandis	15		FACU	Total Number of Domina							
4. Picea engelmannii	10		FAC	Species Across All Strat	ta: <u>6</u> (B)						
4. 11000 011901110111111		- Total Co		Percent of Dominant Sp							
Sapling/Shrub Stratum (Plot size:)	00	= Total Co	vei	That Are OBL, FACW, o	` ` '						
1. Amelanchier alnifolia	20	~	FACU	Prevalence Index work							
2. Spiraea betulifolia	5	~	FACU	Total % Cover of:							
3. Lonicera hispidula	0		FACU	-	x 1 = 0						
4.				T	x 2 = 0						
5					x 3 = 135						
	25	= Total Co	ver	FACU species 142	· · · · · · · · · · · · · · · · · · ·						
Herb Stratum (Plot size:)					x = 0						
1. Linnaea borealis				Column Totals: 187	(A) <u>703</u> (B)						
2. Actaea rubra	_ 20		FACU	Prevalence Index	= B/A = <u>3.76</u>						
3. Cornus canadensis	- 5 2		FAC	Hydrophytic Vegetatio	n Indicators:						
4. Campanula rotundifolia			FACU	1 - Rapid Test for H	• • •						
5				2 - Dominance Test							
6				3 - Prevalence Inde							
7					daptations ¹ (Provide supporting or on a separate sheet)						
8				5 - Wetland Non-Va	• • • • • • • • • • • • • • • • • • • •						
9					ohytic Vegetation ¹ (Explain)						
10					and wetland hydrology must						
11				be present, unless distu							
Woody Vine Stratum (Plot size:)	11	= Total Cov	er/er								
1				Hydrophytic							
2				Vegetation							
	^	= Total Cov		Present? Yes	s No						
% Bare Ground in Herb Stratum 33											
Remarks:	· <u> </u>										
No evidence of a hydrophytic veget	ation co	mmuni	ty obse	erved.							

SOIL Sampling Point: DP04U

OIL								
Profile Descript	tion: (Describe t	o the depti	n needed to docum			or confirn	n the absence o	of indicators.)
Depth	Matrix Color (moint)	0/		Features		Loc ²	Toyturo	Domarko
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	LOC	<u>Texture</u>	Remarks
0 - 18 10	OYR 6/1						Loam	
<u> </u>							·	
-								
							· ·	
							 -	
								
<u> </u>								
<u> </u>								
-								
Type: C=Conc	entration, D=Depl	etion. RM=I	Reduced Matrix, CS	=Covered	or Coate	d Sand G	rains. ² Loca	ation: PL=Pore Lining, M=Matrix.
			RRs, unless other					s for Problematic Hydric Soils ³ :
Histosol (A1)	_	Sandy Redox (S	5)			2 cm	Muck (A10)
Histic Epipedon (A2) Stripped Matrix (S6)							·	Parent Material (TF2)
Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA							Very	Shallow Dark Surface (TF12)
Hydrogen S	ulfide (A4)	_	Loamy Gleyed N	/latrix (F2)			Other	(Explain in Remarks)
	elow Dark Surface	(A11) _	Depleted Matrix				2	
	Surface (A12)	=	Redox Dark Sur	` ,	- \			s of hydrophytic vegetation and
	ky Mineral (S1)	=	Depleted Dark S	,	()			d hydrology must be present,
Restrictive Lay	ed Matrix (S4)		Redox Depressi	ons (Fo)			uniess	disturbed or problematic.
_	ei (ii present).							
Type: Depth (inches	۵۱.						Undria Cail F	Dranama Van Na Na
	S)						Hydric Soil F	Present? Yes No'
Remarks:	-				•	•		o-lacustrine deposits, and in Schrieber Meadov
Remarks: Light soil co nave been f	ound in dee				•	•		• •
Remarks: Light soil con nave been f	ound in dee				•	•		• •
Remarks: Light soil conave been for a second	ound in dee	per soil		g the U	•	•	corridor an	• •
Remarks: Light soil con ave been for a second seco	ound in dee	per soil	borings along	g the U	S 2 Hig	ghway	corridor an	d in Schrieber Meadov
Remarks: Light soil conave been for a second	logy Indicators:	per soil	check all that apply Water-Stai	g the U	s (B9) (e	ghway	corridor an	d in Schrieber Meadov
Remarks: Light soil contained been for the soil contained been for the soil contained been for the soil contained by the soil conta	logy Indicators: rs (minimum of orter (A1) Table (A2)	per soil	check all that apply Water-Stail	ned Leave	s (B9) (e	ghway	Corridor an Second Wa	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 4A, and 4B)
Remarks: Light soil contained been for the soil contained	logy Indicators: rs (minimum of or ter (A1) Table (A2)	per soil	check all that apply Water-Stai	ned Leave	s (B9) (e. nd 4B)	ghway	Second Wa	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 44A, and 4B) ainage Patterns (B10)
Remarks: Light soil conave been for the soil c	logy Indicators: rs (minimum of or ter (A1) Table (A2)	per soil	check all that apply Water-Stail MLRA	ned Leave 1, 2, 4A, a B11) ertebrates	S 2 High	ghway	Second Wa	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 4A, and 4B)
Remarks: Light soil conave been for the soil c	logy Indicators: rs (minimum of orter (A1) Table (A2) A3) s (B1) eposits (B2)	per soil	check all that apply Water-Stain MLRA Salt Crust (Aquatic Inv	ned Leave 1, 2, 4A, a B11) ertebrates Gulfide Od	es (B9) (es nd 4B) s (B13) or (C1)	ghway	Second Water Draw Second Water Second	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2)
Remarks: Light soil contains a c	logy Indicators: rs (minimum of orter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3)	per soil	check all that apply Water-Stain MLRA Salt Crust (Aquatic Inv	the U ned Leave 1, 2, 4A, a B11) ertebrates Sulfide Od hizospher	es (B9) (end 4B) (s (B13)) (or (C1)) (es along	ghway xcept	Second Was Dra Dry Sa ots (C3) Ge	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2)
Remarks: Light soil contains the property of	logy Indicators: rs (minimum of orter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3)	per soil	check all that apply Water-Stail MLRA 1 Salt Crust (Aquatic Inv Hydrogen 3 Oxidized R	ned Leave 1, 2, 4A, a 1811) ertebrates Sulfide Od hizospher	es (B9) (e. nd 4B) s (B13) or (C1) es along d Iron (C4	xcept Living Roo	Second Water Draws Draws Draws Sa Ots (C3) — Ge — Sh	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery
Remarks: Light soil conave been for a second secon	logy Indicators: rs (minimum of orter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3)	per soil	check all that apply Water-Stail MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence of	ned Leave 1, 2, 4A, a 1811) ertebrates Sulfide Od hizospher of Reduced	es (B9) (end 4B) s (B13) or (C1) es along d Iron (C4 on in Tilled	xcept Living Roo	Second Was Dra Sa Sts (C3) Ge Sh FA	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 44A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3)
Remarks: Light soil conave been for a second secon	logy Indicators: rs (minimum of orter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4)	per soil	check all that apply Water-Stain MLRA 1 Salt Crust of Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iron Stunted or	ned Leave 1, 2, 4A, a B11) ertebrates Sulfide Od hizospher of Reduction Stressed	es (B9) (e. nd 4B) s (B13) or (C1) es along d Iron (C4 on in Tilled	xcept Living Roo	Second Wa Dra Dry Sa ots (C3) Ge Sh FA) Ra	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 44, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) (C-Neutral Test (D5)
Remarks: Light soil conave been for a second secon	logy Indicators: rs (minimum of orter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) ts (B5) I Cracks (B6)	ne required;	check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence co Recent Iron Stunted or Other (Exp	ned Leave 1, 2, 4A, a B11) ertebrates Sulfide Od hizospher of Reduction Stressed	es (B9) (e. nd 4B) s (B13) or (C1) es along d Iron (C4 on in Tilled	xcept Living Roo	Second Wa Dra Dry Sa ots (C3) Ge Sh FA) Ra	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A)
Remarks: Light soil conave been for ave been for average for avera	logy Indicators: rs (minimum of orter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) ts (B5) I Cracks (B6) //is ble on Aerial Ingestated Concave	ne required;	check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence co Recent Iron Stunted or Other (Exp	ned Leave 1, 2, 4A, a B11) ertebrates Sulfide Od hizospher of Reduction Stressed	es (B9) (e. nd 4B) s (B13) or (C1) es along d Iron (C4 on in Tilled	xcept Living Roo	Second Wa Dra Dry Sa ots (C3) Ge Sh FA) Ra	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A)
Remarks: Light soil conave been for ave been for average for averag	logy Indicators: rs (minimum of orter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) c Crust (B4) ts (B5) I Cracks (B6) //is ble on Aerial Ingetated Concave	magery (B7)	check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv Hydrogen S Oxidized R Presence co Recent Iron Stunted or Other (Exp	ned Leave 1, 2, 4A, a 1811) ertebrates Sulfide Od hizospher of Reduced n Reduction Stressed	es (B9) (end 4B) es (B13) or (C1) es along d Iron (C4 on in Tilled Plants (D marks)	xcept Living Root Soils (C6	Second Wa Dra Dry Sa ots (C3) Ge Sh FA) Ra	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A)
Remarks: Light soil conave been for the soil conave soil con the soil conave soil conave soil con the soil conave soil consumer soil conave	logy Indicators: rs (minimum of orter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) ts (B5) I Cracks (B6) Vis ble on Aerial Integrated Concave ons:	magery (B7 Surface (B	check all that apply Water-Stail Salt Crust of Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iron Stunted or Other (Exp. 8) to Depth (inc. 1)	ned Leave 1, 2, 4A, a 1811) ertebrates Sulfide Od hizospher of Reduced n Reductio Stressed lain in Rer	es (B9) (es nd 4B) s (B13) or (C1) es along d Iron (C4 on in Tilled Plants (D marks)	xcept Living Roo Soils (C6	Second Wa Dra Dry Sa ots (C3) Ge Sh FA) Ra	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A)
Remarks: Light soil conave been for a soil conave and a soil conave	logy Indicators: rs (minimum of orter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) ts (B5) I Cracks (B6) //is ble on Aerial Ingetated Concave ons: Present? Yesent? Yesent? Yesent? Yesent? Yesent? Yesent? Yesent? Yesent?	magery (B7; Surface (B	check all that apply Water-Stail MLRA 1 Salt Crust (Aquatic Inv Hydrogen 3 Oxidized R Presence co Recent Iron Stunted or Other (Exp	ned Leave 1, 2, 4A, a B11) ertebrates Sulfide Od hizospher of Reduceto Stressed lain in Rer hes):	es (B9) (e. nd 4B) s (B13) or (C1) es along d Iron (C4 on in Tilled Plants (D	chway Living Roo Soils (C6	Second Was Dra Dry Sa Ots (C3) — Ge Sh FA Fro	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A)
Remarks: Light soil conave been for a soil c	logy Indicators: rs (minimum of orter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) ts (B5) I Cracks (B6) Vis ble on Aerial Iregetated Concave ons: Present? Present? Yeart? Prefringe)	magery (B7; Surface (B	check all that apply Water-Stain MLRA Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iron Stunted or Other (Exp Depth (inc	ned Leave 1, 2, 4A, a B11) ertebrates Sulfide Od hizospher of Reduceto Stressed lain in Rer hes): hes):	es (B9) (e. nd 4B) s (B13) or (C1) es along d Iron (C4 on in Tilled Plants (D	chway Living Roc Soils (C6 1) (LRR A	Second Water Dra Dra Dry Sa Ots (C3) — Ge Sh FA Fro and Hydrology	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
Remarks: Light soil conave been for a soil c	logy Indicators: rs (minimum of orter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) ts (B5) I Cracks (B6) Vis ble on Aerial Iregetated Concave ons: Present? Present? Yeart? Prefringe)	magery (B7; Surface (B	check all that apply Water-Stain MLRA Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iron Stunted or Other (Exp	ned Leave 1, 2, 4A, a B11) ertebrates Sulfide Od hizospher of Reduceto Stressed lain in Rer hes): hes):	es (B9) (e. nd 4B) s (B13) or (C1) es along d Iron (C4 on in Tilled Plants (D	chway Living Roc Soils (C6 1) (LRR A	Second Water Dra Dra Dry Sa Ots (C3) — Ge Sh FA Fro and Hydrology	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
Remarks: Light soil conave been for ave been for average	logy Indicators: rs (minimum of orter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) ts (B5) I Cracks (B6) Vis ble on Aerial Iregetated Concave ons: Present? Present? Yeart? Prefringe)	magery (B7; Surface (B	check all that apply Water-Stain MLRA Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iron Stunted or Other (Exp Depth (inc	ned Leave 1, 2, 4A, a B11) ertebrates Sulfide Od hizospher of Reduceto Stressed lain in Rer hes): hes):	es (B9) (e. nd 4B) s (B13) or (C1) es along d Iron (C4 on in Tilled Plants (D	chway Living Roc Soils (C6 1) (LRR A	Second Water Dra Dra Dry Sa Ots (C3) — Ge Sh FA Fro and Hydrology	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
Remarks: Light soil conave been for ave been for average	logy Indicators: rs (minimum of orter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) ts (B5) I Cracks (B6) //is ble on Aerial Ingetated Concave ons: Present? Yesent?	magery (B7) Surface (B es N es N gauge, mor	check all that apply Water-Stain MLRA 1 Salt Crust (Aquatic Inv. Hydrogen 3 Oxidized R Presence of Recent Iron Stunted or Other (Exp. 8) Depth (inc. Depth (inc.	the U The U The Leave Th	es (B9) (e. nd 4B) s (B13) or (C1) es along d Iron (C4 on in Tilled Plants (D	chway Living Roc Soils (C6 1) (LRR A	Second Water Dra Dra Dry Sa Ots (C3) — Ge Sh FA Fro and Hydrology	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
Remarks: Light soil conave been for ave been for average	logy Indicators: rs (minimum of orter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) ts (B5) I Cracks (B6) //is ble on Aerial Ingetated Concave ons: Present? Yesent?	magery (B7) Surface (B es N es N gauge, mor	check all that apply Water-Stain MLRA Salt Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iron Stunted or Other (Exp Depth (inc	the U The U The Leave Th	es (B9) (e. nd 4B) s (B13) or (C1) es along d Iron (C4 on in Tilled Plants (D	chway Living Roc Soils (C6 1) (LRR A	Second Water Dra Dra Dry Sa Ots (C3) — Ge Sh FA Fro and Hydrology	dary Indicators (2 or more required ater-Stained Leaves (B9) (MLRA 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) turation Visible on Aerial Imagery comorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) ised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)

-		-	-	County		
Applicant/Owner: MDT				State: Montana		DP04W
Investigator(s): S Weyant		Section,	Township, Rar	nge: S13 T27N R30W	<u>!</u>	
Landform (hillslope, terrace, etc.): Toeslope	I	Local rel	lief (concave, c	convex, none): Concave	Slo	pe (%): <u>5</u>
Subregion (LRR): E 43A	_ Lat: 48.1	102513	393	Long: -115.4105997	l Datu	m: WGS 84
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly	drained			NWI classifica	ation: PEM1B	
Are climatic / hydrologic conditions on the site typical for this						
Are Vegetation, Soil, or Hydrologys	-			Normal Circumstances" p		No.
	-					NO
Are Vegetation, Soil, or Hydrology n SUMMARY OF FINDINGS – Attach site map				eded, explain any answer		atures etc
		<u> </u>	mg pomit it			ata 00, 0101
Hydrophytic Vegetation Present? Yes V Hydric Soil Present? Yes No		Is	the Sampled	Area		
Wetland Hydrology Present?		w	ithin a Wetlan	id? Yes <u> </u>	No	_
Remarks:						
Sample point located in DEM wetland	lalona	tha c	outhoont	ral partion of the	o cito	
Sample point located in PEM wetland	along	lile S	outricerit		e site.	
VEGETATION – Use scientific names of plant	ts.					
Tree Stratum (Plot size:)			ant Indicator s? Status	Dominance Test works		
1		-		Number of Dominant Sp That Are OBL, FACW, o	pecies or FAC: 2	(A)
2				Total Number of Domina	ant	
3				Species Across All Strat	ta: <u>2</u>	(B)
4	0	= Total	Cover	Percent of Dominant Sp That Are OBL, FACW, o		O (A/B)
Sapling/Shrub Stratum (Plot size:)				Prevalence Index work	sheet:	
1				Total % Cover of:	Multipl	y by:
2				OBL species 0	x 1 = 0	
3				FACW species 75	x 2 = 150)
4				FAC species 25	x 3 = <u>75</u>	
5	0	- Total	Cover	FACU species 0	x 4 = <u>0</u>	
Herb Stratum (Plot size:)		= rotar	Cover	UPL species 0	x 5 = <u>0</u>	
1. Phalaris arundinacea	75		FACW	Column Totals: 100	(A) <u>225</u>	(B)
2. Alopecurus arundinaceus	20	'	FAC	Prevalence Index	= R/A = 2.25	
3. Polygonum aviculare	5		FAC	Hydrophytic Vegetatio		
4				1 - Rapid Test for H		ation
5				✓ 2 - Dominance Test	t is >50%	
6				✓ 3 - Prevalence Inde	x is ≤3.0 ¹	
7				4 - Morphological A	daptations ¹ (Prov	ide supporting
8					or on a separate	sheet)
9				5 - Wetland Non-Va		
10				Problematic Hydrop	-	
11				¹ Indicators of hydric soil be present, unless distu		
Woody Vine Stratum (Plot size:)	100 =	= Total C	Cover			
1						
1 2				Hydrophytic Vegetation		
	^	= Total C		Present? Yes	s No	
% Bare Ground in Herb Stratum 0 Remarks:		Total				
A positive dominance test and the Preva community at this location.	aience In	idex b	pelow 3 in	aicate a hydrophy	/τιc vegetati	ion

US Army Corps of Engineers

SOIL Sampling Point: DP04W

Profile Desc	ription: (Describe	to the de	pth needed to doc	ument the	indicator	or confirm	n the absence of indicators.)				
Depth	Matrix			lox Feature							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks				
0 - 15	7.5YR 2.5/1	99	N 2.5/0	_ 1	D	<u>M</u>	Loam				
<u> 15 - 18</u>	10YR 7/1	100					Loam				
-											
		_									
	-										
					· ·						
-											
			I=Reduced Matrix, (ed Sand Gr					
-		cable to a	I LRRs, unless oth		ed.)		Indicators for Problematic Hydric Soils ³ :				
Histosol	(A1) ipedon (A2)		Sandy Redox Stripped Matr				2 cm Muck (A10) Red Parent Material (TF2)				
Black His			Simpped Mati	` '	1) (ovcon	• MI D A 1\					
	n Sulfide (A4)		Loamy Gleye	,		L WILKA I)	Other (Explain in Remarks)				
	Below Dark Surfac	ce (A11)	Depleted Mat		-)		Other (Explain in Nemarks)				
	rk Surface (A12)	(, , , , ,	Redox Dark S)		³ Indicators of hydrophytic vegetation and				
	ucky Mineral (S1)		Depleted Darl	` '			wetland hydrology must be present,				
-	leyed Matrix (S4)		Redox Depres	ssions (F8)			unless disturbed or problematic.				
Restrictive L	ayer (if present):										
Type:											
Depth (inc	hes):						Hydric Soil Present? Yes No				
Remarks:											
HYDROLO Wetland Hyd	GY Irology Indicators	:									
Primary Indic	ators (minimum of	one require	ed; check all that ap	ply)			Secondary Indicators (2 or more required)				
Surface	Water (A1)		Water-St	tained Leav	es (B9) (e	except	Water-Stained Leaves (B9) (MLRA 1, 2				
High Wa	ter Table (A2)		MLR	A 1, 2, 4A,	and 4B)		4A, and 4B)				
✓ Saturation	n (A3)		Salt Crus	st (B11)			Drainage Patterns (B10)				
Water M	arks (B1)		Aquatic I	nvertebrate	es (B13)		Dry-Season Water Table (C2)				
Sedimen	t Deposits (B2)		Hydroge	n Sulfide O	dor (C1)		Saturation Visible on Aerial Imagery (CS				
Drift Dep	osits (B3)		Oxidized	Rhizosphe	res along	Living Roo	ots (C3) Geomorphic Position (D2)				
Algal Ma	t or Crust (B4)		Presence	e of Reduce	ed Iron (C	4)	Shallow Aquitard (D3)				
Iron Dep	osits (B5)		Recent I	ron Reduct	ion in Tille	d Soils (C6	6) YAC-Neutral Test (D5)				
Surface	Soil Cracks (B6)		Stunted	or Stressec	l Plants (D	1) (LRR A)	A) Raised Ant Mounds (D6) (LRR A)				
Inundation	on Vis ble on Aerial	Imagery (I	37) Other (E	xplain in Re	emarks)		Frost-Heave Hummocks (D7)				
Sparsely	Vegetated Concav	e Surface	(B8)								
Field Observ	ations:										
Surface Water	er Present?	Yes	No Depth (inches):							
Water Table			No Depth (1						
Saturation Pr (includes cap		res 🔽	No Depth (inches): 6		Wetla	land Hydrology Present? Yes 🚩 No				
		n gauge, n	onitoring well, aeria	l photos, pi	evious ins	spections),	if available:				
Remarks:											
Saturatio	n at a depth o	of 6 inc	hes and a pos	sitive FA	C-neu	tral test	t and a dry season water table				
	-		-				vas recorded at 15 inches.				
	•	J.				-					

-		-	-	County		
Applicant/Owner: MDT				State: Montana)P04b-w
Investigator(s): S Weyant	8	Section, T	ownship, Rar	nge: S13 T27N R30W	<u>'</u>	
Landform (hillslope, terrace, etc.): Valley	!	Local relie	ef (concave, c	convex, none): Convex	Slop	e (%): 0
Subregion (LRR): E 43A	Lat: 48.	102932	3	Long: -115.412076	Datum	n: WGS 84
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly				-		
Are climatic / hydrologic conditions on the site typical for thi						
• •	•			Normal Circumstances" p	· .	NI-
Are Vegetation, Soil, or Hydrology	-			•	·	NO
Are Vegetation, Soil, or Hydrology SUMMARY OF FINDINGS - Attach site map				eded, explain any answer		aturos oto
			ing point it	Julions, transects		itures, etc.
Hydrophytic Vegetation Present? YesN		ls t	the Sampled	Area		
Hydric Soil Present? Yes N Wetland Hydrology Present? Yes N			hin a Wetlan		No	
Remarks:						
This point is located in the inundated	a ten-ca	ır snru	ibiand.			
VEGETATION – Use scientific names of plan	nts.					
Tree Stratum (Plot size:)	Absolute % Cover		nt Indicator	Dominance Test works	sheet:	
1				Number of Dominant Sp That Are OBL, FACW, o	pecies or FAC: 3	(A)
2				Total Number of Domina		
3				Species Across All Strat	ta: <u>3</u>	(B)
4	0	= Total C	over	Percent of Dominant Sp That Are OBL, FACW, o		(A/B)
Sapling/Shrub Stratum (Plot size:)			0.51	Prevalence Index work	-	
1. Betula pumila	_ 25		OBL	Total % Cover of:		bv:
2. Salix bebbiana	- 5		FACW		x 1 = 70	-
3. Salix lasiandra			FACW		x 2 = 16	
4					x 3 = 0	
5				FACU species 0		
Herb Stratum (Plot size:)	33	= Total C	Cover	UPL species 0	x 5 = 0	
1. Carex vesicaria	30	~	OBL	Column Totals: 78	(A) <u>86</u>	(B)
2. Persicaria amphibia	15	~	OBL	Prevalence Index	- B/A - 110	
3.				Hydrophytic Vegetatio		
4.				✓ 1 - Rapid Test for H		tion
5.				✓ 2 - Dominance Test		uon
6				3 - Prevalence Inde		
7				4 - Morphological A		de supportina
8				data in Remarks	or on a separate s	
9				5 - Wetland Non-Va		
10.				Problematic Hydrop	ohytic Vegetation¹ ((Explain)
11.				¹ Indicators of hydric soil be present, unless distu		
	45	= Total Co	over	be present, unless distu	Thed of problemati	<u>C.</u>
Woody Vine Stratum (Plot size:)						
1				Hydrophytic Vegetation		
2				Present? Yes	s <u>/</u> No	
% Bare Ground in Herb Stratum		= Total Co	uver			
Remarks:						
A positive rapid test and dominance tes at the sample point.	st indicat	e hydr	ophytic v	regetation. Stand	ing water is p	oresent

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OIL								Sampling Point: DP04b-		
	ription: (Describe to t	he depth				or confirm	the absence of	f indicators.)		
Depth	Matrix					. 2				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks		
-				_						
-										
-										
_										
_										
				-						
			advesad Matrix Of				21	ion. DI -Dono Lining M-Makely		
• •	ncentration, D=Depletion ndicators: (Applicable					u Sanu Gi		tion: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :		
-	,	to all Li			eu.)					
_ Histosol	` '	-	_ Sandy Redox (Muck (A10)		
	ipedon (A2)	_	_ Stripped Matrix				Red Parent Material (TF2)			
_ Black His	` '	_	_ Loamy Mucky I	•		MLRA 1)	· · · · · · · · · · · · · · · · · ·			
	n Sulfide (A4)	_	_ Loamy Gleyed	•	2)		Other (Explain in Remarks)			
	Below Dark Surface (A	.11)	_ Depleted Matrix	. ,						
_ Thick Da	rk Surface (A12)	_	Redox Dark Su	rface (F6))		³ Indicators of hydrophytic vegetation and			
Sandy M	ucky Mineral (S1)		Depleted Dark	Surface (F	- 7)		wetland hydrology must be present,			
_ Sandy G	leyed Matrix (S4)		_ Redox Depress	sions (F8)			unless disturbed or problematic.			
estrictive L	ayer (if present):									
Type:										
Depth (inc	hes):						Hydric Soil P	resent? Yes No		
emarks:							•			
 	4:	. لم ماه ما	: 00 : 1				: :	ilala ka a ff aakii		
nis ioca	tion was inund	iated v	with 20 inci	nes or	water	makin	g it imposs	sible to effectively		
xcavate	a soil test nit	hut si	ilfidic odor	wasn	resen [.]	when	the soil w	as probed with a stic		
	a son test pit,						the son w	as probed with a stic		
DROLO										
	- -									

Wetland Hydrology Indicat	ors:		
Primary Indicators (minimum		ack all that apply)	Secondary Indicators (2 or more required)
-	i oi one required, ci		
Surface Water (A1)		Water-Stained Leaves (B9) (exce	pt Water-Stained Leaves (B9) (MLRA 1, 2,
High Water Table (A2)		4A, and 4B)	
✓ Saturation (A3)		Salt Crust (B11)	Drainage Patterns (B10)
Water Marks (B1)		Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2)		Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)		ng Roots (C3) <a>Commonthetic Position (D2)	
Algal Mat or Crust (B4)	Shallow Aquitard (D3)		
Iron Deposits (B5)		Recent Iron Reduction in Tilled S	pils (C6) ✓ FAC-Neutral Test (D5)
Surface Soil Cracks (B6)	LRR A) Raised Ant Mounds (D6) (LRR A)	
Inundation Vis ble on Ae	erial Imagery (B7)	Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Cor	ncave Surface (B8)		
Field Observations:			
Surface Water Present?	Yes V No	Depth (inches): 20	
Water Table Present?	Yes _ 🗸 No	Depth (inches): 0	
Saturation Present? (includes capillary fringe)	Yes No _	Depth (inches): 0	Wetland Hydrology Present? Yes No
	ream gauge, monito	ring well, aerial photos, previous inspec	tions), if available:
Remarks:			
Evidence of wetland	d bydrology p	recent in a caturation and	a high water table at the soil surface 20
			a high water table at the soil surface, 20
inches of water abo	ve the surfac	e, the site's geomorphic p	osition, a positive FAC-neutral test, and

saturation visible on aerial imagery.

Project/Site: Schrieber Lake	(City/Cour	_{ity:} Lincoln (County Sampling Date: 2023-07-10
Applicant/Owner: MDT		•	,	M. J. J. J. D.
• •		Section.	Township. Rar	nge: S13 T27N R30W
Landform (hillslope, terrace, etc.): Toe				_
· · · · · · · · · · · · · · · · · · ·			•	Long: -115.4127623 Datum: WGS 84
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly				
Are climatic / hydrologic conditions on the site typical for thi			_	
Are Vegetation, Soil, or Hydrologys	-			Normal Circumstances" present? Yes No
	-			
Are Vegetation, Soil, or Hydrology I SUMMARY OF FINDINGS – Attach site map				eded, explain any answers in Remarks.)
Hydrophytic Vegetation Present? Yes N		<u> </u>	g po	,,,,,,,
Hydric Soil Present? Yes N		Is	the Sampled	
Wetland Hydrology Present? Yes N	10	wi	thin a Wetlan	nd? Yes No
Remarks:		I		
Upland sample point located to the r	northwe	est of	Wetland	Cell 6.
VEGETATION – Use scientific names of plan	nts.			
Troe Stratum (Blat size:	Absolute		nt Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)			? Status	Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
1				
3.				Total Number of Dominant Species Across All Strata: 2 (B)
4.			·	
	0	= Total (Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00 (A/B)
Sapling/Shrub Stratum (Plot size:)		-		Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species 0 $x 1 = 0$
3				FACW species $0 x 2 = 0$
4		-		FAC species 52 x 3 = 156
5	0	- Total (FACU species <u>0</u> x 4 = <u>0</u>
Herb Stratum (Plot size:)	<u> </u>	= Total (Jovei	UPL species <u>45</u> x 5 = <u>225</u>
1. Bromus inermis	45		UPL	Column Totals: <u>97</u> (A) <u>381</u> (B)
2. Alopecurus arundinaceus	40		FAC	Prevalence Index = B/A = 3.93
3. Poa pratensis	10		FAC	Hydrophytic Vegetation Indicators:
4. Cirsium arvense	_ 2		FAC	1 - Rapid Test for Hydrophytic Vegetation
5				2 - Dominance Test is >50%
6				3 - Prevalence Index is ≤3.0 ¹
7				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
8				5 - Wetland Non-Vascular Plants ¹
9				Problematic Hydrophytic Vegetation¹ (Explain)
10.				¹Indicators of hydric soil and wetland hydrology must
11.	~~	= Total C	· over	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		- Total C	ovei	
1				Hydrophytic
2				Vegetation
	0	= Total C	over	Present? Yes No
% Bare Ground in Herb Stratum				
No evidence of a hydrophytic vegeta	ation co	mmur	nity obse	ervea.

SOIL Sampling Point: DP05U

Profile Des	cription: (Descri	be to the dep	oth needed to docur	nent the	indicator	or confirm	n the absend		rs.)	
Depth	Matri			x Feature						
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0 - 8	10YR 2/2	100					Loam			
8 - 10	10YR 6/2	100					Sandy Loan	<u> </u>		
-										
	-							_		
-			-							
	<u> </u>									
	_									
								_		
-										
¹Type: C=C	Concentration, D=[Depletion, RM	=Reduced Matrix, CS	S=Covere	d or Coate	d Sand Gr	rains. ² L	ocation: PL=F	ore Lining, M	=Matrix.
Hydric Soil	Indicators: (App	olicable to all	LRRs, unless other	wise not	ed.)		Indica	tors for Probl	ematic Hydri	c Soils³:
Histoso	ol (A1)		Sandy Redox (S	S5)				cm Muck (A10		
Histic Epipedon (A2) Stripped Matrix (S6)								ed Parent Mate		
	Histic (A3)		Loamy Mucky N			MLRA 1)		ery Shallow Da		F12)
	en Sulfide (A4)	f (A44)	Loamy Gleyed		2)		0	ther (Explain ir	n Remarks)	
	ed Below Dark Sur Oark Surface (A12)		Depleted Matrix Redox Dark Su		`		3Indica	ators of hydrop	hytic vogotatic	on and
	Mucky Mineral (S1		Depleted Dark St	, ,				tland hydrolog		
-	Gleyed Matrix (S4		Redox Depress					ess disturbed	•	
	Layer (if present	•	<u> </u>							
Type:										
Depth (ir	nches):						Hydric So	oil Present?	Yes	No
Remarks:	,		<u> </u>							
HYDROLO Wetland Hy	OGY ydrology Indicato	rs:								
Primary Indi	icators (minimum	of one require	d; check all that appl	y)			Sec	ondary Indicat	ors (2 or more	required)
Surface	e Water (A1)		Water-Sta	ned Leav	es (B9) (e :	xcept		Water-Stained	d Leaves (B9)	(MLRA 1, 2,
High W	ater Table (A2)		<u> </u>	1, 2, 4A,		•		4A, and 4I		` , , ,
Saturat			Salt Crust		,		Drainage Patterns (B10)			
Water N	Marks (B1)		Aquatic In	vertebrate	es (B13)		Dry-Season Water Table (C2)			
Sedime	ent Deposits (B2)		Hydrogen	Sulfide O	dor (C1)			Saturation Vis	sible on Aerial	Imagery (C9
Drift De	eposits (B3)		Oxidized F	Rhizosphe	eres along	Living Roc	ots (C3)	Geomorphic F	Position (D2)	
Algal M	lat or Crust (B4)		Presence	of Reduce	ed Iron (C4	!)		Shallow Aquit	ard (D3)	
Iron De	eposits (B5)		Recent Iro	n Reduct	ion in Tille	d Soils (Ce	3)	FAC-Neutral	Γest (D5)	
Surface	e Soil Cracks (B6)		Stunted or	Stressed	l Plants (D	1) (LRR A	.)	Raised Ant M	ounds (D6) (L	RR A)
Inundat	tion Vis ble on Aer	ial Imagery (E	Other (Exp	olain in Re	emarks)			Frost-Heave I	Hummocks (D	7)
	ly Vegetated Cond	ave Surface	(B8)							
Field Obse	rvations:									
Surface Wa	iter Present?		No Depth (in							
Water Table	e Present?		No Depth (in							
Saturation F	Present? apillary fringe)	Yes	No Depth (in	ches):		Wetl	and Hydrolo	gy Present?	Yes	No
		am gauge, m	onitoring well, aerial ı	ohotos, pr	revious ins	pections),	if available:			
Remarks:										
	ence of we	tland hve	drology obse	rved						
	ence of we	tland hy	drology obse	rved.						
	ence of we	tland hy	drology obse	rved.						

Project/Site: Schrieber Lake	City	y/County: Linc	oln County	Sampling Date: 2023-07-10
Applicant/Owner: MDT			State: Montana	Sampling Point: DP05w
Investigator(s): J Trilling	Se	ction, Township	o, Range: S13 T27N R30W	<u> </u>
Landform (hillslope, terrace, etc.): Toe				
				Datum: WGS 84
Soil Map Unit Name: 105 - Aquic Udifluvents, poor				
Are climatic / hydrologic conditions on the site typical for tl				
Are Vegetation, Soil, or Hydrology	-			resent? Yes No
Are Vegetation, Soil, or Hydrology			(If needed, explain any answei	
SUMMARY OF FINDINGS – Attach site map				
Hydrophytic Vegetation Present? Yes	No			
Hydric Soil Present? Yes	No	Is the Sam	pled Area	No
	No	within a W	etiand? Yes	NO
Remarks:				
Wetland sample point located adjacent to	Schrieber C	reek channe	el at the northwest edg	e of Wetland Cell 6.
VEGETATION – Use scientific names of pla	nts.			
Trac Stratum (Plot size:		ominant Indica		sheet:
Tree Stratum (Plot size:) 1			Number of Dominant Sp That Are OBL, FACW, o	
2.				
3.			Total Number of Domina Species Across All Stra	4
4				
	<u>0</u> =	Total Cover	Percent of Dominant Sp That Are OBL, FACW, of	
Sapling/Shrub Stratum (Plot size:)			Prevalence Index worl	rsheet:
1			Total % Cover of:	
2 3				x 1 = 0
4.			FACW species 75	
5				x 3 = 75
	_	Total Cover	_	x 4 = 0
Herb Stratum (Plot size:)			UPL species 0	x = 0
1. Phalaris arundinacea		FAC	 -	(A) <u>225</u> (B)
2. Alopecurus arundinaceus	<u>15</u>	FAC	— Prevalence Index	
3. Poa pratensis		FAC	— Hydrophytic vegetatio	
4			1 - Rapid Test for H	
5			2 - Dominance Tes	
6			3 - Prevalence Inde	
7 8				daptations ¹ (Provide supporting s or on a separate sheet)
9.			5 - Wetland Non-Va	ascular Plants ¹
10.				ohytic Vegetation¹ (Explain)
11.				and wetland hydrology must
	400	Total Cover	be present, unless distu	rbed or problematic.
Woody Vine Stratum (Plot size:)				
1				
2	_		Vegetation Present? Yes	s No
% Bare Ground in Herb Stratum 0	<u> </u>	Total Cover		
Remarks:			<u>.</u>	
A positive rapid test, positive dominan	ce test, and	d prevalen	ce index below three	indicate the
presence of a hydrophytic vegetation		=		

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SOIL								Sampling Point: DP05w
Profile Desc	ription: (Describe	to the dep	th needed to docu	ment the	indicator	or confirm	n the absence	e of indicators.)
Depth								•
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0 - 4	10YR 3/2	98	7.5YR 4/6	5	С	M	Loam	many fine roots
4 - 16	10YR 2/1	88	10YR 6/2	10	D	М	Loam	
4 - 16			10YR 4/6	2	С	М		
16 - 20	10YR 4/1	100					Clay Loam	
_								
						- <u></u>		
	-							
					_			
							. 2.	
	oncentration, D=Dep					ed Sand G		ocation: PL=Pore Lining, M=Matrix.
-	Indicators: (Applic				itea.)			ors for Problematic Hydric Soils ³ :
Histosol	(A1) pipedon (A2)		Sandy Redox Stripped Matrix	. ,				m Muck (A10) d Parent Material (TF2)
	istic (A3)		Comy Mucky	` '	=1) (excen	t MIRA 1		ry Shallow Dark Surface (TF12)
	en Sulfide (A4)		Loamy Gleyed			t inches		ner (Explain in Remarks)
	d Below Dark Surfac	ce (A11)	Depleted Matri		_,		0	ioi (Explain in Nomano)
	ark Surface (A12)		Redox Dark Si		6)		³ Indicate	ors of hydrophytic vegetation and
	Mucky Mineral (S1)		Depleted Dark					and hydrology must be present,
Sandy G	Bleyed Matrix (S4)		Redox Depres	sions (F8)		unle	ss disturbed or problematic.
Restrictive I	Layer (if present):							
Type:								
Depth (in	ches):						Hydric Soi	Il Present? Yes No
Remarks:							•	
Promine	nt redoximo	rphic co	ncentration	s com	ımon v	vithin t	he dark s	surface layer.
		•						•
HYDROLO	GY							
Wetland Hy	drology Indicators:	:						
Primary India	cators (minimum of o	one required	l; check all that app	oly)			<u>Seco</u>	ondary Indicators (2 or more required)
Surface	Water (A1)		Water-Sta	ained Lea	ves (B9) (except	\	Water-Stained Leaves (B9) (MLRA 1, 2,
High Wa	ater Table (A2)		MLRA	1, 2, 4A,	and 4B)			4A, and 4B)
✓ Saturation	on (A3)		Salt Crus	t (B11)			[Drainage Patterns (B10)
Water M	larks (B1)		Aquatic Ir	nvertebrat	es (B13)		<u>~</u> [Dry-Season Water Table (C2)
Sedimer	nt Deposits (B2)		Hydroger	Sulfide C	Odor (C1)		8	Saturation Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)		Oxidized	Rhizosph	eres along	Living Ro	ots (C3) 👱 (Geomorphic Position (D2)
Algal Ma	at or Crust (B4)		Presence	of Reduc	ced Iron (C	4)	8	Shallow Aquitard (D3)
Iron Dep	Iron Deposits (B5) Recent Iron Reduction in Tilled Soils (C					6) <u>~</u> F	FAC-Neutral Test (D5)	
Surface	Soil Cracks (B6)		Stunted of	r Stresse	d Plants ([01) (LRR A	N) F	Raised Ant Mounds (D6) (LRR A)
	on Vis ble on Aerial	Imagery (B7						Frost-Heave Hummocks (D7)
	Vegetated Concav				•		_	
Field Obser		`						
Surface Wat	er Present?	es I	No Penth (ir	nches).				

(includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No _____ Depth (inches): 18

__ Depth (inches): 0

Remarks:

Saturation to the soil surface, the geomorphic position of the point, a dry season water table, and a positive FAC-neutral test provide evidence of wetland hydrology. Water table depth was measured at 18 inches.

Water Table Present?

Saturation Present?

Wetland Hydrology Present?

Project/Site: Schrieber Lake	(City/Co	ounty: Lincoln	County	Sampling Date: _2023-07-10
Applicant/Owner: MDT		•	,		Sampling Point: DP06U
	,	Section	n. Township. R	ange: S13 T27N R30W	· · · ·
Landform (hillslope, terrace, etc.): Upland, Flat			•	-	
, , ,			,	, -	Datum: WGS 84
Soil Map Unit Name: 105 - Aquic Udifluvents, poorl					
Are climatic / hydrologic conditions on the site typical for the			_		
	-				
Are Vegetation, Soil, or Hydrology					resent? Yes No
Are Vegetation, Soil, or Hydrology SUMMARY OF FINDINGS – Attach site map				needed, explain any answe	·
-		Samp	pinig point	Tocations, transects	, important reatures, etc.
Hydrophytic Vegetation Present? Yes I Hydric Soil Present? Yes I			Is the Sample	d Area	
Wetland Hydrology Present? Yes	No V		within a Wetla	and? Yes	No
Remarks:					
Upland sample point located between	en Wetla	and (Cell 1 and	I the western nro	iect houndary
Opiana sample point located between	CII VVCII	aria v		the western pro	ject bouridary.
VEGETATION – Use scientific names of plan	nts.				
Trace Chartering (Diet sings	Absolute		nant Indicator	Dominance Test work	sheet:
Tree Stratum (Plot size:) 1. Pinus contorta		Speci	ies? Status FAC	Number of Dominant Sp	
				That Are OBL, FACW, o	or FAC: I (A)
2				Total Number of Domin Species Across All Stra	
4				_ Species Across Air Stra	ia. <u>-</u> (b)
T		= Tota	al Cover	Percent of Dominant Sp That Are OBL, FACW, of	
Sapling/Shrub Stratum (Plot size:)				Prevalence Index wor	
1				Total % Cover of:	
2					x 1 = 0
3				FACW species 0	
4					x 3 = 75
5				FACU species 0	
Herb Stratum (Plot size:)	0	= Tota	al Cover	UPL species 85	x 5 = 425
1. Bromus inermis	85	~	' UPL	Column Totals: 110	(A) <u>500</u> (B)
2. Alopecurus arundinaceus	10		FAC	- Prevalence Index	- D/A - 151
3. Poa pratensis	5		FAC	Hydrophytic Vegetation	
4				1 - Rapid Test for H	
5				2 - Dominance Tes	
6				3 - Prevalence Inde	
7					daptations ¹ (Provide supporting
8				data in Remarks	s or on a separate sheet)
9				5 - Wetland Non-Va	
10				- _	ohytic Vegetation ¹ (Explain)
11				Indicators of hydric soil be present, unless distu	and wetland hydrology must
Mandy Vine Stratum (Plat size:	100	= Tota	l Cover	be present, unless diste	indea of problematio.
Woody Vine Stratum (Plot size:) 1				Harley I. d.	
				Hydrophytic Vegetation	
2	_		I Cover		s No
% Bare Ground in Herb Stratum		. 510			
Remarks:					
No evidence of a hydrophytic veget	ation co	mm	unity obs	erved.	

SOIL Sampling Point: DP06U

Profile Des	cription: (Descri	be to the de	pth needed to docu	ment the	indicator	or confir	m the abs	sence of indicators.)		
Depth	Matrix			ox Feature	es	2	<u>.</u>			
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	_			
0 - 10	10YR 3/1	99	5YR 4/6	_ 1	<u> </u>	М	Loam			
10 - 18	10YR 6/1	98	5YR 4/6	_ 2	<u>C</u>	М	Loam	extremely dry		
-										
-						'				
		· · · · · · · · · · · · · · · · · · ·				-	-			
							<u> </u>			
			<u> </u>		_	-				
			_							
		_	M=Reduced Matrix, C			ed Sand G		² Location: PL=Pore Lining, M=Matrix.		
_		olicable to a	II LRRs, unless othe		ted.)		Inc	dicators for Problematic Hydric Soils ³ :		
Histoso	` '		Sandy Redox (. ,				2 cm Muck (A10)		
	pipedon (A2) listic (A3)		Stripped Matrix Loamy Mucky		=1) (evcen	· MI DA 1	, –	Red Parent Material (TF2) Very Shallow Dark Surface (TF12)		
	en Sulfide (A4)		Loamy Gleyed	•		LIVILNAI	,	Other (Explain in Remarks)		
	ed Below Dark Sur	face (A11)	Depleted Matri		_,			_ Other (Explain in Remails)		
-	ark Surface (A12)		Redox Dark Su		6)		³ In	dicators of hydrophytic vegetation and		
Sandy N	Mucky Mineral (S1)	Depleted Dark					wetland hydrology must be present,		
	Gleyed Matrix (S4)		Redox Depres	sions (F8)			unless disturbed or problematic.		
Restrictive	Layer (if present):								
Type:										
Depth (in	nches):						Hydrid	c Soil Present? Yes No		
Remarks:										
Observe		rs·								
_			ed; check all that app	lv)				Secondary Indicators (2 or more required)		
	: Water (A1)	<u> </u>		•	ves (B9) (except		Water-Stained Leaves (B9) (MLRA 1, 2,		
	ater Table (A2)			1, 2, 4A,	` , `	хосрі	•	4A, and 4B)		
Saturati			Salt Crus				Drainage Patterns (B10)			
	Marks (B1)		Aquatic Ir		es (B13)		Dry-Season Water Table (C2)			
	nt Deposits (B2)		Hydrogen		, ,			Saturation Visible on Aerial Imagery (C9)		
	posits (B3)		Oxidized	Rhizosph	eres along	Living Ro	ots (C3)	Geomorphic Position (D2)		
Algal M	at or Crust (B4)		Presence	of Reduc	ed Iron (C	4)		Shallow Aquitard (D3)		
Iron De	posits (B5)		Recent Ire	on Reduc	tion in Tille	d Soils (C	(6)	FAC-Neutral Test (D5)		
Surface	Soil Cracks (B6)		Stunted o	r Stresse	d Plants (D	1) (LRR A	A)	Raised Ant Mounds (D6) (LRR A)		
Inundat	ion Vis ble on Aeri	al Imagery (B7) Other (Ex	plain in R	temarks)			Frost-Heave Hummocks (D7)		
	y Vegetated Conc	ave Surface	(B8)							
Field Obser	rvations:		. 4							
Surface Wat	ter Present?		No Depth (ir							
Water Table	Present?		No Pepth (ir							
Saturation F		Yes	No Depth (ir	nches):		Wet	land Hyd	rology Present? Yes No		
	pillary fringe) ecorded Data (stre	am gauge, n	nonitoring well, aerial	photos, p	revious ins	pections)	, if availab	ole:		
Remarks:										
No evid	ence of we	tland hy	drology obse	rved						
INO EVIU	CHE OF WE	danu ny	arology obse	ı veu.						

Project/Site: Schrieber Lake	City/	County: Lincoln	County	Sampling Date: 2023-07-10
Applicant/Owner: MDT			State: Montana	Sampling Point: DP06W
Investigator(s): J Trilling	Sect	ion, Township, Rai	nge: S13 T27N R30W	1
Landform (hillslope, terrace, etc.): Toeslope				
				Datum: WGS 84
Soil Map Unit Name: 105 - Aquic Udifluvents, poor			-	
Are climatic / hydrologic conditions on the site typical for t				
Are Vegetation, Soil, or Hydrology				
Are Vegetation, Soil, or Hydrology			eded, explain any answe	
SUMMARY OF FINDINGS – Attach site ma				•
Hydrophytic Vegetation Present? Yes	No			
	No	Is the Sampled		
	No	within a Wetlan	id? Yes	No
Remarks:				
Wetland sample point located to th	e northwes	t of Wetland	d Cell 1.	
VEGETATION – Use scientific names of pla	ints.			
Tree Stratum (Plot size:		minant Indicator ecies? Status	Dominance Test work	
1			Number of Dominant Sp That Are OBL, FACW, of	
2			Total Number of Domin	
3			Species Across All Stra	4
4			Percent of Dominant Sp	pecies
Sapling/Shrub Stratum (Plot size:)	<u>0</u> = T	otal Cover	That Are OBL, FACW, o	
1			Prevalence Index world	ksheet:
2.			Total % Cover of:	
3.				$x = \frac{2}{180}$
4			· ·	x 2 = 180
5				x 3 = 0 x 4 = 0
Hart Otatura (District	<u>0</u> = T	otal Cover		x = 0
Herb Stratum (Plot size:) 1. Phalaris arundinacea	90	✓ FACW		(A) 182 (B)
2. Carex utriculata		OBL		
3.			Prevalence Index Hydrophytic Vegetation	
4			✓ 1 - Rapid Test for H	
5			✓ 2 - Dominance Tes	
6			✓ 3 - Prevalence Inde	
7			4 - Morphological A	daptations ¹ (Provide supporting
8				s or on a separate sheet)
9			5 - Wetland Non-Va	
10				ohytic Vegetation ¹ (Explain) and wetland hydrology must
11	00		be present, unless distu	
Woody Vine Stratum (Plot size:)	= 10	otal Cover		
1			Hydrophytic	
2			Vegetation	s_
	_	otal Cover	Present? Yes	S NU
% Bare Ground in Herb Stratum 8 Remarks:				
	nanca taata	indicate the	process of burden	onbutio vogototion of
A positive rapid test and positive domithis data point.	mance tests	mulcate the	presence of flydr	ophytic vegetation at

US Army Corps of Engineers

TOTHE DESC	cription: (Describe t	to the dept	th needed to docu	ment the	indicator	or confirm t	he absen	ice of indicators.)	
Depth	Matrix	0/		x Feature	-	1 2	- .	5	
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type'	Loc ²	Texture	Remarks	
0 - 3	10YR 2/1	98					Loam		
3 - 10	10YR 2/1	98	10YR 4/6	2	С	<u>M I</u>	Loam	_	
10 - 18	10YR 6/1	96	5YR 4/6	4	С	<u>l</u>	Loam		
-									
				_					
	-			_	-				
					-				
-				_					
/pe: C=C	oncentration, D=Depl	letion, RM=	Reduced Matrix, C	S=Covere	d or Coate	ed Sand Grain	ns. 2	Location: PL=Pore Lining, M=Matrix.	
	Indicators: (Applica							ators for Problematic Hydric Soils ³ :	
Histosol	(A1)		Sandy Redox (S5)			2	2 cm Muck (A10)	
Histic Er	pipedon (A2)		Stripped Matrix	(S6)			F	Red Parent Material (TF2)	
Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA 1)						t MLRA 1)	\	/ery Shallow Dark Surface (TF12)	
_ Hydroge	en Sulfide (A4)		Loamy Gleyed	Matrix (F2	2)		(Other (Explain in Remarks)	
Depleted	d Below Dark Surface	e (A11)	Depleted Matri	x (F3)					
_	ark Surface (A12)		✓ Redox Dark Sugar					ators of hydrophytic vegetation and	
-			Depleted Dark	Surface (I	Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)				
Sandy Gleyed Matrix (S4) Redox Depressions (F8)								etland hydrology must be present,	
	• • • • • • • • • • • • • • • • • • • •		Redox Depress	sions (F8)			ur	lless disturbed or problematic.	
	Layer (if present):		Redox Depress	sions (F8)			ur		
	• • • • • • • • • • • • • • • • • • • •		Redox Depress	sions (F8)			ur		
estrictive I	Layer (if present):		Redox Depress	sions (F8)					
estrictive I Type: Depth (incemarks:	Layer (if present):		_				Hydric S	oil Present? Yes No	
estrictive In Type: Depth (incomarks: omine the date	ches): nt redoximor ark surface la	•	_				Hydric S	oil Present? Yes No	
Type: Depth (indemarks: Tomine the da	ches): nt redoximorpark surface la	•	_				Hydric S	oil Present? Yes No	
Type:	ches): nt redoximor ark surface la	yer.	oncentration	s com			Hydric S	oil Present? Yes No	
estrictive In Type:	ches): ont redoximor ark surface la	yer.	oncentration	s com	mon ir	n both th	Hydric S	soil Present? Yes No No letted matrix and the matri	
estrictive I Type: Depth (incemarks: romine the da 'DROLO letland Hydrimary India _ Surface	ches): ches):	yer.	oncentration I; check all that app — Water-Sta	S COM	mon ir	n both th	Hydric S	Soil Present? Yes No No	
estrictive I Type: Depth (incemarks: romine f the da romine f the da romany India Surface High Wa	ches): ches): ches): ches intredoximor ark surface la ark surface la drology Indicators: cators (minimum of or Water (A1) ater Table (A2)	yer.	oncentration I; check all that app Water-Sta	S COM	mon ir	n both th	Hydric S	Soil Present? Yes No	
Type:	ches): ches): ches): ches): ches): ches in redoximor	yer.	oncentration I; check all that app Water-Sta MLRA Salt Crust	S COM	mon ir ves (B9) (e and 4B)	n both th	Hydric S	leted matrix and the matrix and Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10)	
Type: Depth (incommarks: Tomine The da	ches): ches): ches): ches): ches): ches in redoximor	yer.	check all that app Water-Sta MLRA Salt Crust Aquatic In	S COM	mon ir /es (B9) (e and 4B)	n both th	Hydric S	leted matrix and the	
estrictive I Type: Depth (incemarks: Tomine The da The	ches): ches): ches): ches): ches): ches intredoximor ark surface la ark	yer.	check all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen	S COM ly) sined Leav 1, 2, 4A, 1 (B11) evertebrate Sulfide O	mon ir ves (B9) (e and 4B) es (B13) dor (C1)	n both th	Hydric S	Recordary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Care in the same	
romine the da Type: Depth (incemarks: Tomine The da TDROLO Tetland Hydrimary Indice High Water M Sedimer Drift Dep	ches): ches): ches): ches): ches): ches intredoximor ark surface la arks (A1) ater Table (A2) on (A3) arks (B1) nt Deposits (B2) posits (B3)	yer.	E; check all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized I	S COM ly) sined Leav 1, 2, 4A, 1 (B11) ertebrate Sulfide O Rhizosphe	res (B9) (eand 4B) es (B13) edor (C1) eres along	n both th	Hydric S	Roil Present? Yes No	
estrictive I Type: Depth (incemarks: romine f the da romary India Surface High Wa Saturatia Water M Sedimer Drift Dep Algal Ma	ches): ches): ches): ches): ches): ches intredoximor ark surface la check sur	yer.	I; check all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen V Oxidized I Presence	S COM ly) nined Leav 1, 2, 4A, (B11) evertebrate Sulfide O Rhizosphe of Reduce	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C-	except Living Roots	Hydric S ne dep	Roil Present? Yes No Rolleted matrix and the matrix	
romine f the da //DROLO /etland Hyrimary India Surface High Wa /_ Saturatia Water M Sedimer Drift Dep Algal Ma Iron Dep	ches): ches): ches): ches): ches intredoximorpark surface land and surface land and surface land and surface land and surface interest in land and surface in land	yer.	Discontration I: check all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen V Oxidized I Presence Recent Iro	S COM ly) nined Leave 1, 2, 4A, (B11) evertebrate Sulfide O Rhizosphe of Reduce on Reduct	res (B9) (eand 4B) es (B13) edor (C1) eres along ed Iron (Cion in Tille	except Living Roots 4) d Soils (C6)	Hydric S ne dep	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)	
romine f the da Type: Depth (incemarks: FOMINE f the da Type f the da Type: Fomine f the da Type f the da Type: Fomine f the da Type f	ches): ches): ches): ches): ches intredoximorical ark surface la GY drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	yer.	Discontration I: check all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen V Oxidized I Presence Recent Iro Stunted o	s com ly) sined Leaven 1, 2, 4A, 1: (B11) evertebrate Sulfide O Rhizosphe of Reduce on Reduce on Reduce r Stressee	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C-ion in Tille	except Living Roots	Hydric S ne dep	leted matrix and the	
pestrictive I Type: Depth (incemarks: Tomine The da DROLO etland Hydinary India Surface High Wa Saturatia Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundati	ches): ches): ches): ches): ches intredoximorpark surface land and surface land and surface land and surface land and surface interest in land and surface in land	ne required	d; check all that app Water-Sta MLRA Salt Crust Aquatic In Hydrogen V Oxidized I Presence Recent Ird Stunted o Other (Ex	s com ly) sined Leaven 1, 2, 4A, 1: (B11) evertebrate Sulfide O Rhizosphe of Reduce on Reduce on Reduce r Stressee	res (B9) (e and 4B) es (B13) dor (C1) eres along ed Iron (C-ion in Tille	except Living Roots 4) d Soils (C6)	Hydric S ne dep	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)	

(includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Yes No Depth (inches): 10

Yes _____ No ___ Depth (inches):

Remarks:

Saturation at a depth of 10 inches, oxidized rhizospheres along living roots, and a positive FAC-neutral test indicate the presence of wetland hydrology at this location.

Water Table Present?

Saturation Present?

Wetland Hydrology Present? Yes

Project/Site: Schrieber Lake	(City/County	_{/:} Lincoln (County Sampling Date: 2023-07-10
Applicant/Owner: MDT				State: Montana Sampling Point: DP07U
				nge: S13 T27N R30W
Landform (hillslope, terrace, etc.): Toeslope				
· · · · · · · · · · · · · · · · · · ·			•	Long: -115.4136715 Datum: WGS 84
Soil Map Unit Name: 108 - Andic Dystric Eutrochrepts, lacustrine terr				
Are climatic / hydrologic conditions on the site typical for the				
				Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology SUMMARY OF FINDINGS – Attach site mar				eded, explain any answers in Remarks.) ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes		<u> </u>	<u> </u>	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Hydric Soil Present? Yes		ls th	ne Sampled	
Wetland Hydrology Present? Yes	No 🔽	with	nin a Wetlan	nd? Yes No V
Remarks:		<u> </u>		
Upland sample point located in sou	thwest c	orner o	of proje	ct area.
VEGETATION – Use scientific names of pla	nts.			
Trac Stratum (Diet eizer	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:) 1. Pinus contorta	<u>% Cover</u> 10	Species?	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
2. Abies grandis	_ 10	~		That Are OBL, FACW, or FAC: 1 (A)
3				Total Number of Dominant Species Across All Strata: 4 (B)
4		-	-	Species Across All Strata.
T	15	= Total Co	over	Percent of Dominant Species That Are OBL, FACW, or FAC: 25.00 (A/B)
Sapling/Shrub Stratum (Plot size:)				Prevalence Index worksheet:
1. Symphoricarpos albus	25		FACU	Total % Cover of: Multiply by:
2				OBL species 0 x 1 = 0
3				FACW species 10 x 2 = 20
4			·	FAC species 15 x 3 = 45
5				FACU species 40 x 4 = 160
Herb Stratum (Plot size:)	25	= Total Co	over	UPL species 45 x 5 = 225
1. Hieracium aurantiacum	40	~	UPL	Column Totals: 110 (A) 450 (B)
2 Calamagrostis canadensis	10		FACW	Prevalence Index = B/A = 4.09
3. Centaurea stoebe	5		UPL	Hydrophytic Vegetation Indicators:
4. Fragaria virginiana	5		FACU	1 - Rapid Test for Hydrophytic Vegetation
5. Lotus corniculatus	5		FAC	2 - Dominance Test is >50%
6. Achillea millefolium	3		FACU	3 - Prevalence Index is ≤3.0 ¹
7. Campanula rotundifolia	2		FACU	4 - Morphological Adaptations ¹ (Provide supporting
8				data in Remarks or on a separate sheet)
9				5 - Wetland Non-Vascular Plants ¹
10			·	Problematic Hydrophytic Vegetation ¹ (Explain)
11	70		. ———	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	70	= Total Co	ver	
1				Hydrophytic
2.				Vegetation
	_	= Total Co	ver	Present? Yes No
% Bare Ground in Herb Stratum 30		_		
Remarks:				
No evidence of a hydrophytic veget	tation co	mmun	ity obse	erved.

SOIL Sampling Point: DP07U

Profile Des	cription: (Descri	be to the de	pth needed to docu	ment the i	ndicator	or confirm	n the absence	of indicators.)			
Depth	Matri	Х	Redo	x Feature							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks			
0 - 2	7.5YR 3/2	100					Loam	many fine roots			
2 - 16	7.5YR 4/2	100									
_	•				<u> </u>						
				-							
<u> </u>	-										
-											
-	•						-				
¹Tvpe: C=C	oncentration. D=[Depletion, RI	M=Reduced Matrix, C	S=Covered	d or Coate	ed Sand Gr	rains. ² Lo	cation: PL=Pore Lining, M=Matrix.			
			II LRRs, unless othe					ors for Problematic Hydric Soils ³ :			
Histosol	I (A1)		Sandy Redox (S5)			2 cr	m Muck (A10)			
l '	pipedon (A2)		Stripped Matrix				·	d Parent Material (TF2)			
Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA						t MLRA 1)	Ver	y Shallow Dark Surface (TF12)			
Hydroge	en Sulfide (A4)		Loamy Gleyed	Matrix (F2	.)		Oth	er (Explain in Remarks)			
. —	d Below Dark Sur	` ,	Depleted Matrix				2				
	ark Surface (A12)		Redox Dark Su	, ,	· - \			ors of hydrophytic vegetation and			
	Mucky Mineral (S1	•	Depleted Dark		-7)			and hydrology must be present,			
	Gleyed Matrix (S4 Layer (if present		Redox Depress	sions (F8)			unies	ss disturbed or problematic.			
	Layer (II present	<i>)</i> -									
Type:	-1						Unadaia Cail	I Dunganto Van Na V			
	ches):						Hydric Soil	Present? Yes No			
Remarks:											
No hydr	ic soil indic	ators of	served.								
HYDROLO	GY										
Wetland Hy	drology Indicato	rs:									
Primary Indi	cators (minimum	of one requir	ed; check all that appl	y)			Seco	ndary Indicators (2 or more required)			
Surface	Water (A1)		Water-Sta	ined Leav	es (B9) (e	xcept	V	Vater-Stained Leaves (B9) (MLRA 1, 2,			
High Wa	ater Table (A2)		MLRA	1, 2, 4A, a	and 4B)			4A, and 4B)			
Saturati	on (A3)		Salt Crust	(B11)			[Orainage Patterns (B10)			
Water N	/larks (B1)		Aquatic In	vertebrate	s (B13)		Dry-Season Water Table (C2)				
Sedime	nt Deposits (B2)		Hydrogen	Sulfide O	dor (C1)		s	Saturation Visible on Aerial Imagery (C9			
Drift De	posits (B3)		Oxidized F	Rhizosphe	res along	Living Roc	ots (C3) C	Geomorphic Position (D2)			
Algal Ma	at or Crust (B4)		Presence	of Reduce	ed Iron (C4	4)	s	Shallow Aquitard (D3)			
Iron De	posits (B5)		Recent Iro	n Reducti	on in Tille	d Soils (C6	6) F	AC-Neutral Test (D5)			
Surface	Soil Cracks (B6)		Stunted or	r Stressed	Plants (D	1) (LRR A	.) F	Raised Ant Mounds (D6) (LRR A)			
Inundati	ion Vis ble on Aer	ial Imagery (B7) Other (Ex	plain in Re	marks)		F	Frost-Heave Hummocks (D7)			
Sparsel	y Vegetated Cond	ave Surface	(B8)								
Field Obser	vations:										
Surface Wat	ter Present?	Yes	No V Depth (in	ches):							
Water Table	Present?	Yes	No V Depth (in	ches):							
Saturation P	resent?	Yes	No V Depth (in	ches):		Wetl	and Hydrolog	y Present? Yes No 💆			
	pillary fringe)										
Describe Re	ecoraea Data (stre	am gauge, r	nonitoring well, aerial	pnotos, pr	evious ins	spections),	ıı avallable:				
Remarks:											
No evide	ence of we	tland hy	drology obse	rved.							
		,									

Project/Site: Schrieber Lake	(Citv/Count	v: Lincoln	County Sampling Date: 2023-07-10
Applicant/Owner: MDT		-	-	State: Montana Sampling Point: DP07W
• •				nge: S13 T27N R30W
Landform (hillslope, terrace, etc.): Toeslope				
, , ,			•	Long: -115.4136867 Datum: WGS 84
Soil Map Unit Name: 108 - Andic Dystric Eutrochrepts, lacustrine ten	aces-Andic Dystr	ochrepts, glad	cial outwash terr	aces, complex NWI classification: Not mapped
Are climatic / hydrologic conditions on the site typical for tl	nis time of yea	ar? Yes	✓ No_	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly	disturbed?	Are '	'Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology	naturally pro	blematic?	(If ne	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing	samplir	ng point l	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No			
Hydric Soil Present? Yes		l l	he Sampled hin a Wetlar	
Wetland Hydrology Present? Yes Yes	No	Witi	IIIII a Wellai	IU: 165 NO
Wetland sample point located in the VEGETATION – Use scientific names of pla		est co	rner of	the project area.
Troc Stratum (Diet size)	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:) 1	% Cover			Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2.				
3				Total Number of Dominant Species Across All Strata: 2 (B)
4				Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)	0	= Total Co	over	That Are OBL, FACW, or FAC: 100.00 (A/B)
1. Alnus incana	8	~	FACW	Prevalence Index worksheet:
2.				Total % Cover of: Multiply by:
3				OBL species 0 $x 1 = 0$ FACW species 106 $x 2 = 212$
4				FAC species $0 \times 3 = 0$
5				FACU species 0 x 4 = 0
Herb Stratum (Plot size:)	0	= Total Co	over	UPL species <u>0</u> x 5 = <u>0</u>
Phalaris arundinacea	98		FACW	Column Totals: <u>106</u> (A) <u>212</u> (B)
2				Prevalence Index = B/A = 2.00
3				Hydrophytic Vegetation Indicators:
4				1 - Rapid Test for Hydrophytic Vegetation
5 6				✓ 2 - Dominance Test is >50%
7.				 ✓ 3 - Prevalence Index is ≤3.0¹ ✓ 4 - Morphological Adaptations¹ (Provide supporting
8.				data in Remarks or on a separate sheet)
9				5 - Wetland Non-Vascular Plants ¹
10				Problematic Hydrophytic Vegetation¹ (Explain)
11	~~	= Total Co	over	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1		-		Hydrophytic Vegetation
2 % Bare Ground in Herb Stratum 2	_	= Total Co	over	Present? Yes No
Remarks:				<u> </u>

A positive rapid test, dominance test, and a prevalence index of less than 3 indicate the presence of a hydrophytic vegetation community at this location.

SOIL Sampling Point: DP07W

Profile Desc	cription: (Describe	to the de	oth needed to docu	ment the	indicator	or confirm	n the absence of in	dicators.)		
Depth	Matrix		Redo	x Feature	es					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks		
0 - 12	10YR 2/1						Loam			
12 - 23	10YR 2/1	80	7.5YR 5/6	20	С	М	Loam			
-										
								·		
		_		_						
				_						
				_						
-										
¹ Type: C=C	oncentration, D=De	pletion, RM	=Reduced Matrix, C	S=Covere	d or Coate	ed Sand G	rains. ² Location	n: PL=Pore Lining, M=Matrix.		
			I LRRs, unless othe					r Problematic Hydric Soils ³ :		
Histosol	(A1)		Sandy Redox (S5)			2 cm Mu	ck (A10)		
Histic E	pipedon (A2)		Stripped Matrix				Red Pare	ent Material (TF2)		
	Black Histic (A3) Loamy Mucky Mineral (F1) (except MLRA							allow Dark Surface (TF12)		
	en Sulfide (A4)		Loamy Gleyed		2)		✓ Other (E)	xplain in Remarks)		
	d Below Dark Surfa	ce (A11)	Depleted Matri				3, ,, ,			
Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7)								hydrophytic vegetation and ydrology must be present,		
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8)								turbed or problematic.		
	Layer (if present):		Redox Depress	310113 (1 0)			unicos dis	tarbea or problematic.		
Type:										
Depth (in	ches):						Hydric Soil Pres	sent? Yes V No		
Remarks:							1.,	······································		
	ration to the esi	lourfood	it is likely that re	dovimo	rnhia aar	aantrati	ana in tha unnar	soil layer are mosked		
			-		-			soil layer are masked. centrations begin.		
Requireme	iits for the redox	Cuark Sur	race indicator are	e met, as	side ITOII	i tile dep	otii at willen conc	centrations begin.		
HYDROLO										
	drology Indicators									
Primary Indi	cators (minimum of	one require	ed; check all that app				<u>Secondary</u>	Indicators (2 or more required)		
	Water (A1)		Water-Sta	ined Leav	/es (B9) (e	xcept	Water-	-Stained Leaves (B9) (MLRA 1, 2,		
_	ater Table (A2)			1, 2, 4A,	and 4B)		4A, and 4B)			
<u>✓</u> Saturati	, ,		Salt Crust	` ,			Drainage Patterns (B10)			
	larks (B1)		Aquatic In		, ,		Dry-Season Water Table (C2)			
	nt Deposits (B2)		Hydrogen					ation Visible on Aerial Imagery (C9)		
	posits (B3)				eres along	_		orphic Position (D2)		
_	at or Crust (B4)		Presence		•	•		w Aquitard (D3)		
-	posits (B5)		Recent Iro					leutral Test (D5)		
	Soil Cracks (B6)		Stunted o			1) (LRR A		d Ant Mounds (D6) (LRR A)		
	on Vis ble on Aerial			plain in Re	emarks)		Frost-I	Heave Hummocks (D7)		
	y Vegetated Concav	/e Surface	(B8)							
Field Obser		.,	N V 5 11 (1)							
Surface Wat			No Depth (in							
Water Table			No Depth (in							
Saturation P	resent? pillary fringe)	Yes	No Depth (in	iches): 0		Wet	land Hydrology Pre	esent? Yes No		
		n gauge, m	onitoring well, aerial	photos, p	revious ins	pections),	if available:			
Remarks:										
Caturati	on at the cai	Lourfo	o the goom	ornhio	nociti	on of t	ho point and	d a positivo EAC		
				•	•		ne point, and	d a positive FAC-		
neutral t	test indicate	wetlan	d hydrology	at this	locati	on.				
•										

Project/Site: Schrieber Lake 2023	(City/County	Lincoln C	County S	ampling Date: 20	023-07-11
Applicant/Owner: MDT		-		State: Montana S	· -	
Investigator(s): S Weyant		Section, To	wnship, Rar	nge: S13 T27N R30W		
Landform (hillslope, terrace, etc.): Mound					Slope	e (%): 15
Subregion (LRR): E 43A						
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly						
Are climatic / hydrologic conditions on the site typical for this			_			
Are Vegetation, Soil, or Hydrologysi	-			Normal Circumstances" pre		No
Are Vegetation, Soil, or Hydrology na				eded, explain any answers		
SUMMARY OF FINDINGS – Attach site map s						tures, etc.
Hydrophytic Vegetation Present? Yes No	, ,	T				·
Hydric Soil Present? Yes No			e Sampled		🗸	
Wetland Hydrology Present? Yes No		with	in a Wetlan	d? Yes	_ No	
Remarks:						
Upland data point on island. Coarsely	/ textur	ed soil	s are w	ell drained and sh	nallow.	
VEGETATION – Use scientific names of plant	s.					
Tree Stratum (Plot size: 30 ft r	Absolute % Cover			Dominance Test worksh		
1			Otatus	Number of Dominant Spec That Are OBL, FACW, or		(A)
2.				Total Number of Dominan		
3				Species Across All Strata:		(B)
4				Percent of Dominant Spec	ries	
Sapling/Shrub Stratum (Plot size: 5 ft r)	0	= Total Co	ver	That Are OBL, FACW, or		(A/B)
				Prevalence Index works	heet:	
1				Total % Cover of:		by:
3.					x 1 = 0	
4.				FACW species 0		
5				FAC species 3 FACU species 20	x 3 = 9	
	0	= Total Co	ver	UPL species 37	x 4 = 00 x 5 = 185	
Herb Stratum (Plot size: 5 ft r 1. Centaurea stoebe	20	✓	LIDI	Column Totals: 60	(A) 274	(B)
2. Penstemon confertus	15		UPL			
3. Poa compressa	15	~	FACU	Prevalence Index = Hydrophytic Vegetation		
Rumex sp.	10			1 - Rapid Test for Hyd		ion
5. Verbascum thapsus	5		FACU	2 - Dominance Test is		.011
6. Phleum pratense	3		FAC	3 - Prevalence Index		
7. Pseudoroegneria spicata	2		UPL	4 - Morphological Ada		
8				data in Remarks o	•	heet)
9				5 - Wetland Non-Vaso		-valaia)
10				Indicators of hydric soil a		
11	70	= Total Cov		be present, unless disturb		
Woody Vine Stratum (Plot size: 30 ft r	<u>, , , , , , , , , , , , , , , , , , , </u>	- Total Cov	/ei		-	
1				Hydrophytic		
2				Vegetation Present? Yes	No 🗸	,
% Bare Ground in Herb Stratum 30.0	0	= Total Cov	/er	riesein! Tes_	NO	
Remarks:						
		no 100 · · · · · · · ·	ام برا	ru o d		
No evidence of a hydrophytic vegeta	ilion co	mmuni	ty obse	ı veu.		

SOIL Sampling Point: DP08U

50IL								Sampling Point: DF080		
	cription: (Describe	to the depth				or confirm	the absence	e of indicators.)		
Depth (inches)	Matrix Color (moist)	<u></u> %	Redo Color (moist)	x Feature: %	Type ¹	Loc²	Texture	Remarks		
0 - 3	7.5YR 2.5/1		Color (moist)		туре	LOC	Loam	Remains		
3 - 7	7.5YR 2.5/1	100					Loam	Gravelly		
	7.011(2.0)1							<u>c.a.c.</u> ,		
				·						
	-									
¹ Type: C=Ce	oncentration, D=De	pletion, RM=F	Reduced Matrix, CS	S=Covered	l or Coate	d Sand Gr	ains. ² Lo	cation: PL=Pore Lining, M=Matrix.		
Hydric Soil	Indicators: (Appli	cable to all L	RRs, unless other	wise note	ed.)		Indicate	ors for Problematic Hydric Soils ³ :		
Histosol	(A1)	_	_ Sandy Redox (•				m Muck (A10)		
	oipedon (A2)	_	Stripped Matrix					d Parent Material (TF2)		
	stic (A3)	_	Loamy Mucky N			MLRA 1)		ry Shallow Dark Surface (TF12)		
	en Sulfide (A4)	_	Loamy Gleyed)		Oth	ner (Explain in Remarks)		
	d Below Dark Surfa	ce (A11) _	Depleted Matrix				3			
	ark Surface (A12)	_	Redox Dark Su	` ,				ors of hydrophytic vegetation and		
	Mucky Mineral (S1)	_	Depleted Dark		7)			and hydrology must be present,		
	Bleyed Matrix (S4) Layer (if present):	_	Redox Depress	ions (F8)			unies	ss disturbed or problematic.		
	obble bottom/ro	ck refusal								
Depth (in							Hydric Soi	I Present? Yes No		
Remarks:	Cries). <u>'</u>						nyuric 301	I Present? Yes No		
excavati	on.							agments impede further		
HYDROLO	GY									
Wetland Hy	drology Indicators	:								
Primary India	cators (minimum of	one required;	check all that appl	y)			<u>Seco</u>	endary Indicators (2 or more required)		
Surface	Water (A1)		Water-Sta	ned Leave	es (B9) (e :	xcept	V	Water-Stained Leaves (B9) (MLRA 1, 2,		
High Wa	ater Table (A2)		MLRA	1, 2, 4A, a	nd 4B)			4A, and 4B)		
Saturation	on (A3)		Salt Crust	(B11)			Drainage Patterns (B10)			
Water M	larks (B1)		Aquatic In	vertebrate	s (B13)		Dry-Season Water Table (C2)			
Sedimer	nt Deposits (B2)		Hydrogen	Sulfide O	dor (C1)		8	Saturation Visible on Aerial Imagery (C9)		
Drift Dep	posits (B3)		Oxidized F	Rhizosphe	res along	Living Roo	ots (C3) (Geomorphic Position (D2)		
Algal Ma	at or Crust (B4)		Presence	of Reduce	d Iron (C4	!)	8	Shallow Aquitard (D3)		
Iron Dep	oosits (B5)		Recent Iro	n Reducti	on in Tilled	d Soils (C6	S) F	FAC-Neutral Test (D5)		
Surface	Soil Cracks (B6)		Stunted or	Stressed	Plants (D	1) (LRR A) F	Raised Ant Mounds (D6) (LRR A)		
Inundati	on Vis ble on Aerial	Imagery (B7)	Other (Exp	olain in Re	marks)		F	Frost-Heave Hummocks (D7)		
Sparsely	Vegetated Concav	e Surface (B8	3)							
Field Obser	vations:									
Surface Wat	er Present?	Yes No	o Depth (in	ches):						
Water Table			Depth (in							
Saturation P	resent?		Depth (in				and Hydrolog	gy Present? Yes No		
(includes cap Describe Re	oillary fringe) corded Data (strear	n gauge, mon	itoring well, aerial ¡	ohotos, pr	evious ins	pections),	if available:			
Remarks:										
No evide	ence of wetl	and hydr	ology obse	rved. S	Soil ex	tremel	v drv			
		•	0,				, ,			
		•	0,				, ,			

Project/Site: Schrieber Lake 2023	C	ity/County	Lincoln (County	Sampling Date: 2023-0	<u> </u>	
Applicant/Owner: MDT		State: Montana Sampling Point: DP08W					
Investigator(s): S Weyant				nge: S13 T27N R30W	<u> </u>		
Landform (hillslope, terrace, etc.): Mountain Valley						5	
Subregion (LRR): E 43A							
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly							
Are climatic / hydrologic conditions on the site typical for this			_				
Are Vegetation, Soil, or Hydrology signs of the sign of the s	gnificantly d	isturbed?	Are "	Normal Circumstances" p	resent? Yes No		
Are Vegetation, Soil, or Hydrology na	-			eded, explain any answei			
SUMMARY OF FINDINGS – Attach site map s						, etc.	
Hydrophytic Vegetation Present? Yes No)						
)	l l	e Sampled		NI-		
Wetland Hydrology Present? Yes No)	With	in a Wetlan	id? Yes	No		
Remarks:							
Fringe between island and Carex con	nmunity	/ with s	standing	g water.			
VEGETATION – Use scientific names of plant	S.						
Tree Stratum (Plot size: 30 ft r	Absolute % Cover	Dominant		Dominance Test works			
1				Number of Dominant Sp That Are OBL, FACW, of		(A)	
2.						,	
3				Total Number of Domina Species Across All Stra		(B)	
4				Percent of Dominant Sp	necies		
Sapling/Shrub Stratum (Plot size: 5 ft r)		= Total Co	ver	That Are OBL, FACW, o		(A/B)	
1				Prevalence Index worl	ksheet:		
2.				Total % Cover of:		-	
3.					x 1 = 56	-	
4					x 2 = 20	-	
5.				FAC species 24	x 3 = 72	-	
- 6		= Total Co	ver	FACU species 0 UPL species 0	x 4 = 0 x 5 = 0	-	
Herb Stratum (Plot size: 5 ft r	40		0.01	Column Totals: 90	(A) 148	- (B)	
1. Carex aquatilis	40			Column Totals. 30	(A) <u>140</u>	_ (D)	
2. Alopecurus pratensis 3. Persicaria amphibia	<u>20</u> 15		FAC	Prevalence Index		_	
4 Phalaris arundinacea	10		OBL FACW	Hydrophytic Vegetation			
5. Cirsium arvense	4		FAC	1 - Rapid Test for F			
6. Lemna minor	1	-	OBL	✓ 2 - Dominance Tes✓ 3 - Prevalence Inde			
7					adaptations¹ (Provide supp	orting	
8.					s or on a separate sheet)	orting	
9.				5 - Wetland Non-Va	ascular Plants ¹		
10				Problematic Hydrop	ohytic Vegetation¹ (Explain	1)	
11				¹ Indicators of hydric soil	l and wetland hydrology m	ust	
20 # *	90% =	= Total Cov	er er	be present, unless distu	rbed or problematic.		
Woody Vine Stratum (Plot size: 30 ft r							
1				Hydrophytic Vegetation			
2				Present? Yes	s No		
% Bare Ground in Herb Stratum 10.0		- 10ta100\	CI				
Remarks:				•			
A positive dominance test and a prevale	nce inde	ex belov	w three	indicate a hydrop	hytic vegetation		
community at this data point.					-		

SOIL Sampling Point: DP08W

Profile Desc	ription: (Describe	to the depth	needed to docur	ment the i	ndicator o	or confirm	the absence	of indicators.)			
Depth	Matrix			x Features	3						
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks			
0 - 5	10YR 2/1	100					Peat	Peat sand and high litter content			
5 - 20	10YR 2/1	100					Mucky Peat	Sulfidic odor. Greasy - hemic			
-											
_											
											
											
¹Type: C=Co	oncentration, D=Dep	oletion, RM=F	Reduced Matrix, CS	S=Covered	or Coate	d Sand Gr	ains. ² Lo	cation: PL=Pore Lining, M=Matrix.			
Hydric Soil	Indicators: (Applic	able to all L	RRs, unless other	rwise note	ed.)		Indicato	ors for Problematic Hydric Soils ³ :			
Histosol (A1) Sandy Redox (S5)								m Muck (A10)			
<u>✓</u> Histic Epipedon (A2) Stripped Matrix (S6)								l Parent Material (TF2)			
	stic (A3)	_	Loamy Mucky N	•		MLRA 1)		y Shallow Dark Surface (TF12)			
	en Sulfide (A4)		Loamy Gleyed)		Oth	er (Explain in Remarks)			
-	d Below Dark Surfac ark Surface (A12)	e (A11) _	Depleted Matrix Redox Dark Su				3Indiante	ors of hydrophytic vegetation and			
	Mucky Mineral (S1)	_	Depleted Dark	` ,	7)			and hydrology must be present,			
	Gleyed Matrix (S4)	_	Redox Depress	•	')			es disturbed or problematic.			
	Layer (if present):	_		(, ,							
Type:											
Depth (in	ches):						Hydric Soil	Present? Yes V No No			
Remarks:	,										
A histic 6	epipedon an	d a sulfic	dic odor ind	ıcate v	vetland	d hydro	ology at i	this data point.			
HYDROLO	GY										
Wetland Hy	drology Indicators										
Primary India	cators (minimum of o	one required;	check all that appl	y)			Seco	ndary Indicators (2 or more required)			
<u>✓</u> Surface			✓ Water-Sta	ined Leave	es (B9) (e x	cept	V	Vater-Stained Leaves (B9) (MLRA 1, 2,			
High Wa	ater Table (A2)		MLRA	1, 2, 4A, a	nd 4B)			4A, and 4B)			
<u>✓</u> Saturation	on (A3)		Salt Crust	(B11)			Drainage Patterns (B10)				
Water M	larks (B1)		Aquatic In				Dry-Season Water Table (C2)				
Sedimer	nt Deposits (B2)		<u></u> ✓ Hydrogen	Sulfide Od	dor (C1)			Saturation Visible on Aerial Imagery (C9)			
Drift Dep	posits (B3)		Oxidized F	Rhizospher	res along l	_iving Roo	ts (C3) 🔽 G	Geomorphic Position (D2)			
Algal Ma	at or Crust (B4)		Presence	of Reduce	d Iron (C4)		shallow Aquitard (D3)			
-	oosits (B5)		Recent Iro				· —	AC-Neutral Test (D5)			
·	Soil Cracks (B6)		Stunted or			1) (LRR A)		Raised Ant Mounds (D6) (LRR A)			
	on Vis ble on Aerial			olain in Re	marks)		F	rost-Heave Hummocks (D7)			
	Vegetated Concav	e Surface (B	8)								
Field Obser		./		_							
Surface Wat		· · · · · · · · · · · · · · · · · · ·	o Depth (in			-					
Water Table			o Depth (in			_		,			
Saturation P		es N	o Depth (in	ches): 0		_ Wetla	and Hydrolog	y Present? Yes No			
(includes car Describe Re	corded Data (strean	n gauge, mor	itoring well, aerial	photos, pre	evious insi	pections).	if available:				
		. 33-,	g,	, , , , , , , , , , , , , , , , , , ,		,,,					
Remarks:											
	rators of wetland h	vdrology w	are observed incl	udina sulf	fidic odor	water et	ained leaves	visible inundation on aerial imagery, a			
				_				it within the plot, the water table was			
-		-						in shallow pond and in water around			
the data poi								-			

Project/Site: Schrieber Lake 2023	(Citv/Countv	Lincoln	County	Sampling Date: 2023-07-11
Applicant/Owner: MDT		-			Sampling Point: DP09U
Investigator(s): S Weyant					
Landform (hillslope, terrace, etc.): Mound					
Subregion (LRR): E 43A					
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly					
•					<u>-</u>
Are climatic / hydrologic conditions on the site typical for this	-				
Are Vegetation, Soil, or Hydrologysi					resent? Yes No
Are Vegetation, Soil, or Hydrologyn	aturally pro	blematic?	(If ne	eded, explain any answer	's in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	samplin	g point lo	ocations, transects,	, important features, etc.
Hydrophytic Vegetation Present? Yes No				•	
Hydric Soil Present? Yes No			e Sampled in a Wetlan		No
Wetland Hydrology Present? Yes No		With	III a Wellan	163	
Remarks:					
Upland data point in upland island in cer	nter of s	ite. Soil	substra	te is shallow and	coarsely textured.
VEGETATION – Use scientific names of plant	s.				
20.65*	Absolute	Dominant		Dominance Test works	sheet:
	% Cover			Number of Dominant Sp	
1				That Are OBL, FACW, o	or FAC: 0 (A)
2				Total Number of Domina	
3	-	-		Species Across All Strat	ta: <u>3</u> (B)
4	0	= Total Co	ver	Percent of Dominant Sp	
Sapling/Shrub Stratum (Plot size: 5 ft r)		- Total Co	VCI	That Are OBL, FACW, o	()
1				Prevalence Index work	
2				Total % Cover of: OBL species 0	Multiply by: x 1 = 0
3				· ·	$x = \frac{1}{0}$
4					x 3 = 15
5		-		FACU species 37	
Herb Stratum (Plot size: 5 ft r)	0	= Total Co	ver		x 5 = 175
1. Poa compressa	25		FACU	Column Totals: 77	
2 Linaria vulgaris	15		UPL		
3. Lepidium draba	12	~	UPL	Prevalence Index Hydrophytic Vegetatio	-
4. Verbascum thapsus	10		FACU	1 - Rapid Test for H	
5. Rumex sp.	8			2 - Dominance Test	
6. Centaurea stoebe	5		UPL	3 - Prevalence Inde	
7. Phleum pratense	5		FAC	 -	daptations ¹ (Provide supporting
8. Bromus inermis	3		UPL		s or on a separate sheet)
9. Achillea millefolium	2		FACU	5 - Wetland Non-Va	
10				l .	ohytic Vegetation ¹ (Explain)
11				Indicators of hydric soil be present, unless distu	and wetland hydrology must
Woody Vine Stratum (Plot size: 30 ft r	85	= Total Cov	/er	be present, unless dista	Toda of problematio.
, , , , , , , , , , , , , , , , , , , ,					
1				Hydrophytic Vegetation	_
		= Total Cov	/er		s No
% Bare Ground in Herb Stratum 20.0		i olai ool	, .		
Remarks:					
No hydrophytic vegetation indicators	obser	ved.			

SOIL Sampling Point: DP09U

Depth Matrix		n the absence of indicators.)
	Redox Features	
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
0 - 2 7.5YR 2.5/1 100		Loamy Sand Shallow fine roots
<u>2-7</u> <u>2.5Y 4/1</u> <u>100</u> _		Sand Gravelly
-		
		·
	Reduced Matrix, CS=Covered or Coated Sand G	<u> </u>
Hydric Soil Indicators: (Applicable to all Li	· ·	Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10) Red Parent Material (TF2)
Histic Epipedon (A2) Black Histic (A3)	Stripped Matrix (S6)Loamy Mucky Mineral (F1) (except MLRA 1)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	Other (Explain in Nemarks)
Thick Dark Surface (A12)	Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):		
Type: Cobbles bedrock	<u></u>	
Depth (inches): 7	<u></u>	Hydric Soil Present? Yes No
Remarks:		
HYDROLOGY		
Wetland Hydrology Indicators:	ale and all the standards	
Wetland Hydrology Indicators: Primary Indicators (minimum of one required;	****	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13)	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) 	 Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	 Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roce 	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; 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)	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roc Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) ots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Schrieber Lake 2023	Cit	y/County:	Lincoln (County	Sampling Date: 2023-07-11
Applicant/Owner: MDT				State: Montana	Sampling Point: DP09W
Investigator(s): S Weyant				nge: S13 T27N R30W	1
Landform (hillslope, terrace, etc.): Mountain Valley					
Subregion (LRR): E 43A	Lat: 48.10	0604221		Long: -115.4097234	5 Datum: WGS 84
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly					
Are climatic / hydrologic conditions on the site typical for this			_		
Are Vegetation, Soil, or Hydrology si	_				resent? Yes No
Are Vegetation, Soil, or Hydrologyn	-			eded, explain any answer	
SUMMARY OF FINDINGS – Attach site map				-	
Hydrophytic Vegetation Present? Yes No	o				
Hydric Soil Present? Yes No	o		e Sampled		No
Wetland Hydrology Present? Yes No	o	withi	n a Wetlan	id? fes	NO
Remarks:					
Fringe at toe of upland island and alo	ng Wetla	and Co	ell 9.		
VEGETATION – Use scientific names of plant	ts.				
Tree Stratum (Plot size: 30 ft r	Absolute E % Cover S	Dominant Species?		Dominance Test works	
1				Number of Dominant Sp That Are OBL, FACW, o	
2.				Total Number of Domina	
3				Species Across All Strat	
4				Percent of Dominant Sp	ecies
Sapling/Shrub Stratum (Plot size: 5 ft r)	0 =	Total Cov	/er	That Are OBL, FACW, o	
1				Prevalence Index work	sheet:
2.				Total % Cover of:	
3.					x 1 = 0
4				FACW species 95	x 2 = 190 x 3 = 15
5	·			FAC species 5 FACU species 0	x = 0
Horb Stratum (Diet size: 5 ft r	<u>0</u> =	Total Cov	/er	UPL species 0	x 5 = 0
Herb Stratum (Plot size: 5 ft r 1. Phalaris arundinacea	95	~	FACW	Column Totals: 100	(A) 205 (B)
2 Cirsium arvense	5		FAC		· / · /
3				Prevalence Index Hydrophytic Vegetatio	
4.				✓ 1 - Rapid Test for H	
5				✓ 2 - Dominance Test	- · · ·
6				✓ 3 - Prevalence Inde	x is ≤3.0 ¹
7					daptations ¹ (Provide supporting
8					or on a separate sheet)
9				5 - Wetland Non-Va	ohytic Vegetation ¹ (Explain)
10.					and wetland hydrology must
11	400	 Total Cov		be present, unless distu	rbed or problematic.
Woody Vine Stratum (Plot size: 30 ft r		TOtal COV	CI		
1				Hydrophytic	
2				Vegetation Present? Yes	s No
% Bare Ground in Herb Stratum 0		Total Cov	er	. 10001111	·
Remarks:					
A positive rapid test, positive dominance	atest an	d nrev	alence i	ndex helow three	indicate the
1	-	-	uiciic e I	TIMEA DEIOW TITLEE	malcate the
presence of a hydrophytic vegetation co	minunity	•			

TOTHE DES	cription: (Describe	to the de	epth needed to docu	ıment the	indicator	or confir	m the absence	e of indicators.)
Depth	Matrix	0/		ox Feature		12		Damarika
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0 - 7	7.5YR 2.5/1	100					Peat	Peat and sand
7 - 20	10YR 2/1	98	10YR 4/4	_ 2	<u>C</u>	M	Mucky Loam/Clay	Horizon is primarily peat
20 - 23	2.5Y 4/1	95	10YR 6/8	5	CS	М	Sand	Gravelly
-								
-			-					
_			_					
	-		_			_	-	
-		_	_					
-						-		
			M=Reduced Matrix, C			ed Sand G		cation: PL=Pore Lining, M=Matrix.
		cable to a	III LRRs, unless othe		ted.)			ors for Problematic Hydric Soils ³ :
Histoso			Sandy Redox	. ,				m Muck (A10)
	pipedon (A2) listic (A3)		Stripped Matri Loamy Mucky		1) (evcen	+ MI DA 1		d Parent Material (TF2) y Shallow Dark Surface (TF12)
	en Sulfide (A4)		Loamy Gleyed			K WILKA I		ner (Explain in Remarks)
	ed Below Dark Surface	ce (A11)	Depleted Matr		_,		0"	ioi (Explain in Nomanio)
	ark Surface (A12)	(,	Redox Dark S)		³ Indicat	ors of hydrophytic vegetation and
	Mucky Mineral (S1)		Depleted Dark	Surface (F7)		wetla	and hydrology must be present,
	01							
	Gleyed Matrix (S4)		Redox Depres	ssions (F8)			unle	ss disturbed or problematic.
	Layer (if present):		Redox Depres	ssions (F8)	<u> </u>		unle	ss disturbed or problematic.
			·	ssions (F8)	1		unle	ss disturbed or problematic.
Restrictive	Layer (if present):		·	ssions (F8)	<u> </u>			ss disturbed or problematic. I Present? Yes No
Restrictive Type:	Layer (if present):		·	ssions (F8)				
Type: Depth (in	Layer (if present):					ulfide o	Hydric Soi	I Present? Yes V No
Restrictive Type: Depth (in Remarks: " litter	Layer (if present): anches): and roots in	top of	mineral soil.			ılfide o	Hydric Soi	
estrictive Type: Depth (in emarks:	Layer (if present):	top of	mineral soil.			ılfide o	Hydric Soi	I Present? Yes V No
Type:	Layer (if present): nches): and roots in dicate hydric	top of	mineral soil.			ılfide o	Hydric Soi	I Present? Yes V No
Type:	and roots in dicate hydric	top of soil in	mineral soil.			ılfide o	Hydric Soi	I Present? Yes V No
Type:	and roots in dicate hydric	top of soil in	mineral soil. this profile.	Hydro		ılfide o	Hydric Soi	I Present? Yes V No
Type:	Layer (if present): and roots in dicate hydric ody odrology Indicators icators (minimum of	top of soil in	mineral soil. this profile.	Hydro	gen su		Hydric Soi	I Present? Yes No
Type:	and roots in dicate hydric OGY Variotogy Indicators icators (minimum of a water (A1)	top of soil in	mineral soil. this profile. red; check all that approper water-St	Hydrogoly) ained Lear	gen su		Hydric Soi	I Present? Yes No
Type: Depth (in Remarks: " litter Typer inc YDROLC Vetland Hy Primary Indi Surface High W	and roots in dicate hydric OGY Vorology Indicators icators (minimum of a Water (A1) ater Table (A2)	top of soil in	mineral soil. this profile. red; check all that app Water-St. MLRA	Hydro	gen su		Hydric Soi	A loamy mucky mineral andary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2) 4A, and 4B)
Type:	and roots in dicate hydric OGY Various Indicators Cators (minimum of the Water (A1) ater Table (A2) ion (A3)	top of soil in	mineral soil. this profile. red; check all that app Water-St MLRA Salt Crus	Hydrogoly) ained Leaver A 1, 2, 4A, est (B11)	gen su ves (B9) (¢ and 4B)		Hydric Soi	A loamy mucky mineral endary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2) 4A, and 4B) Orainage Patterns (B10)
Type:	and roots in dicate hydric OGY Various Indicators Various Indic	top of soil in	mineral soil. this profile. red; check all that app Water-St MLRA Salt Crus Aquatic I	Hydrogoly) ained Leaver A. 1, 2, 4A, et (B11) nvertebrate	gen su ves (B9) (4 and 4B)		Hydric Soi	A loamy mucky mineral Indary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
Type:	and roots in dicate hydric OGY Variology Indicators (minimum of a Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2)	top of soil in	mineral soil. this profile. red; check all that app Water-St MLRA Salt Crus Aquatic II	Dly) ained Lear A 1, 2, 4A, st (B11) nvertebrate	gen su ves (B9) (4 and 4B) es (B13)	except	Hydric Soi	I Present? Yes No
Type: Depth (in Temarks: " litter Typer inc Typer	and roots in dicate hydric OGY rdrology Indicators icators (minimum of a water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2) eposits (B3)	top of soil in	mineral soil. this profile. red; check all that app Water-St MLRA Salt Crus Aquatic li Hydroger Oxidized	Hydrogoly) ained Lead A 1, 2, 4A, at (B11) nvertebrate n Sulfide C Rhizospho	yes (B9) (cand 4B) es (B13) edor (C1) eres along	except Living Ro	Hydric Soi	A loamy mucky mineral a loamy mucky mineral andary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2)
Restrictive Type: Depth (in Remarks: " litter Ryer inc YDROLC Vetland Hy Primary Indi Surface High W Saturati _ Water N _ Sedime _ Drift De _ Algal M	and roots in dicate hydric OGY Idrology Indicators icators (minimum of a Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4)	top of soil in	mineral soil. this profile. red; check all that app Water-St. MLRA Salt Crus Aquatic lu Hydroger Oxidized Presence	Dly) ained Leavent (B11) nvertebrate in Sulfide Control Rhizosphere of Reduce	yes (B9) (cand 4B) es (B13) edor (C1) eres along ed Iron (C	except J Living Ro	Hydric Soi	A loamy mucky mineral a loamy mucky mineral andary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2) 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2) Shallow Aquitard (D3)
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HWT slowly filling.
Remarks:

Saturation Present? (includes capillary fringe)

Saturation at the soil surface, sulfidic odor, the geomorphic position of the point, and a positive FAC-neutral test indicate wetland hydrology at this location.

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

MDT Montana Wetland Assessment Form (revised March 2008)

1. Project Name: Schrieber Lake **2. MDT Project #**: NH 27 (029) **Control #**: 1027007

3. Evaluation Date: 07/12/2022 4. Evaluator(s): J Trilling, S Weyant, K Lauver. M. 5. Wetlands/Site #(s): Schrieber Lake

6. Wetland Location(s): i. Legal: T27N,R30E,13 Hickey Latitude/Longitude: 48.104991, -115.410849 : Center of AA

ii. Approx. Stationing or Mileposts:

iii. Watershed: 1 Approximately Milepost 53.8

Watershed Name, County:

Kootenai, Lincoln

7. a. Evaluating Agency:

CCI for MDT

b. Purpose of Evaluation:

1. Wetlands potentially affected by MDT project
2. Mitigation wetlands; pre-construction

8. Wetland size:

55.650 acres (measured)

3. X Mitigation wetlands; post-construction 9. Assessment area (AA):

4. Other:

10. Classification of Wetland and Aquatic Habitats in AA

HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% of AA
D	AB	NA	PP	25.00
D	EM	NA	PP	10.00
S	EM	NA	SI	10.00
S	EM	NA	PP	30.00
S	SS	NA	PP	20.00
R	UB	NA	PP	5.00

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

Aquatic Bed (AB), Unconsolidated Shore (US), Moss-lichen Wetland (ML), Emergent Wetland (EM), Scrub-Shrub Wetland (SS), Forested Wetland (FO)

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

 $\begin{tabular}{ll} \textbf{Water Regimes:} & Permanent / Perennial (\textbf{PP}), Seasonal / Intermittent (\textbf{SI}), Temporary / Ephemeral (\textbf{TE}) \\ \end{tabular}$

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

RARF

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 f	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.): Highway 2 and USFS roads are adjacent to the AA, land is not cultivated, minimal noxious weeds, and low disturbance.

ii. Prominent noxious, aquatic nuisance, & other exotic vegetation species: Spotted knapweed, Canada thistle, orange hawkweed, field bindweed, and common toadflax.

iii. Provide brief descriptive summary of AA and surrounding land use/habitat: The site is in a relatively flat valley bottom that has historically been used for agriculture and hay production. The valley sides are heavily forested with secondary growth coniferous forest. Nearly the entire AA has permanent/perennial water regime and is dominated by hydrophytic vegetation. PSS wetlands occur along pre-existing creek channels and in the site's southwest corner where a "carr" fen occurs. The fen supports bog birch and has been reported to support sageleaf willow in previous years.

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 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

Comments: Aquatic bed, emergent, scrub-shrub vegetation classes occur onsite.

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):

Secondary habitat (list species)

Primary or critical habitat (list species)

Grizzly Bear(D)

Incidental habitat (list species) North American Wolverine(S)

Canada Lynx(S) Spalding's Catchfly(S)

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

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

Sources for documented use (e.g. observations, records, etc): USFWS IPAC. A young female grizzly was killed by a vehicle on the adjacent US Highway 2 in 2022. USFWS and USFS have observed a number of grizzly bears in the area for several years.

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

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

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

Incidental habitat (list species)

Salix candida (S3/S4), Western toad (S2) Townsend's big-eared bat (S3), hoary bat Westslope cuthroat trout (S2), fisher (S3)

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): MDT BRR. USFS, MTNHP, and MFWP databases and discussions with reg wildlife and fisheries biologists. Western toads were observed by MDT and Kootenai Nat'l

14C. General Wildlife Habitat Rating:

Forest personnel in April 2011.

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

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

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

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

Friday of wildlife yes (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: Good habitat diversity with substantial evidence of wildlife usage.

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 **NA** and proceed to 14E.)

Type of Fishery: Cold Water (CW) X 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	ptimal Adequate		Poor		Optimal		Adequate		Poor		Optimal		Adequate		Poor		
Thermal cover optimal / suboptimal	0	S	0	S	0	S	0	S	0	S	0	Ø	0	S	0	S	0	S
FWP Tier I fish species	1E	.9H	.8H	.7M	.6M	.5M	.9H	.8H	.7M	.6M	.5M	.4M	.7M	.6M	.5M	.4M	.3L	.2L
FWP Tier II or Native Game fish species	.9H	.8H	.7M	.6M	.5M	.5M	.8H	.7M	.6M	.5M	.4M	.4M	.6M	.5M	.4M	.3L	.2L	.2L
FWP Tier III or Introduced Game fish	.8H	.7M	.6M	.5M	.5M	.4M	.7M	.6M	.5M	.4M	.4M	.3L	.5M	.4M	.3L	.2L	.2L	.1L
FWP Non-Game Tier IV or No fish species	.5M	.5M	.5M	.4M	.4M	.3L	.4M	.4M	.4M	.3L	.3L	.2L	.2L	.2L	.2L	.1L	.1L	.1L

Sources used for identifying fish sp. potentially found in AA: MDT, Field observations, FishMT.

- 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: 0.7M

Comments: Brook Trout documented in Schrieber Creek immediately up and downstream of Schrieber Lake by FWP in 2011 (MFISH query). West slope Cutthroat documented upstream, outside the project area. Largemouth bass and bluegill observed north of the site

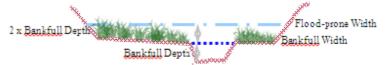
14E. Flood Attenuation: (Applies only to wetlands subject to flooding via in-channel or overbank flow. If wetlands in AA are not flooded from in-channel or overbank flow, mark **NA** and proceed to 14F.)

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

Estimated or Calculated Entrenchment (Rosgen 1994, 1996)		Slightly entrenched - C, D, E stream types			Moderately entrenched – B 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.

25 /	10 =	2.50
Flood-prone	Bankfull	Entrenchment ratio
width	width	(ER)



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

ii. Are ≥10 acres of wetland in the AA subject to flooding AND are man-made features which may be significantly damaged by floods located within 0.5 mile downstream of the AA (circle)? Comments: Stream channels in AA have free access to most of their floodplains. Floodplains are dominated by herbaceous vegetation.

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

Estimated maximum acre feet of water contained in wetlands within the AA that are subject to periodic flooding or ponding	>5 acre feet			1.1 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: Extensive areas of inundation, much greater than 5 acre-feet, observed in 2023 and previous monitoring events.

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

NA and proceed to 14H.)

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

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

Comments: AA has potential to receive minor sedimentation from nearby US Hwy 2 and adjacent hillsides that have been logged.

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

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

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

Comments: Shorelines and banks are well vegetated primarily with reed canary grass, with lesser cover by Carex spp.

14I. Production Export/Food Chain Support:

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

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

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

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

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

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

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

iv. Final Score and Rating: 1.00H

Comments: High level of biological activity, veg component > 5 acres, perennial inundation, and has surface and subsurface outlets.

i. Discharge Indicators				i	i. Recharge	Indicators				
X The AA is a slope wetland					-		ent without u	nderlying imp	eding layer	
X Springs or seeps are known	or observed			v	Wetland contains inlet but no outlet					
X Vegetation growing during do		-			Stream is a kr	nown 'losing'	stream; disc	charge volume	e decreases	
X Wetland occurs at the toe of					Other:					
X AA permanently flooded during		eriods								
Wetland contains an outlet, b			_							
X Shallow water table and the	site is satura	ted to the sur	face							
Other:										
i. Rating (use the information from i	and ii above	and the table	below to arr	ive at [circle]	the function	al points and	rating)			
		Duration	of saturation	n at AA We	tlands <i>FROI</i>	M GROUND	<u>VATER</u>	1		
		<u>DISCH</u>			<u>R THAT IS RI</u>		THE			
	L		<u>GI</u>		TER SYSTEM	<u>'I</u>				
Criteria		P/P		S/I	T		None	_		
Groundwater Discharge or Rechar	rge	1H		.7M	.4M		.1L	_		
Insufficient Data/Information	-ti/tt	: 4 4b	f	N/.	Α					
comments: AA with perennial inunda	alion/salural	ion to the sur	iace.							
4K. Uniqueness:										
Rating (working from top to bottom,	use the mati	rix below to a	rrive at [circle	e] the functio	nal points an	d rating)				
	A A4-:	- f h		AA does no	ot contain pre	viously cited	A A	-44-:		
		s fen, bog, w e (>80 yr-old			and structur			ot contain pre es or associa		
Replacement potential		tland or plant association listed			high or conta on listed as "		structural diversity (#13) is low-			
	as "S	S1" by the MT	TNHP	associati	MTNHP	32 by tile		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	
Madarata disturbance at AA (#10i)	.9H	.8H	.7M	.7M	.5M	.4M	.4M	.3L	.2L	
Moderate disturbance at AA (#121)							.3L	.2L	.1L	
High disturbance at AA (#12i)	.8H	.7M	.6M	.6M	.4M	.3L		.2L		
High disturbance at AA (#12i)				-		-			1 .12	
comments: This wetland complex co	ontains a fen	, is relatively	undisturbed,	and so is fai	irly unique in	the watershe		.21		
High disturbance at AA (#12i) comments: This wetland complex co	ontains a fen	, is relatively onus" points	undisturbed, if AA provide	and so is fai	irly unique in or education	the watershe	d.	1	•	
High disturbance at AA (#12i) comments: This wetland complex co 4L. Recreation/Education Potential Is the AA a known or potential rec	ontains a fen I: (affords "be :./ed. site: (c	, is relatively onus" points	undisturbed, if AA provide	and so is fai	irly unique in or education	the watershe	d.	and proceed to		
High disturbance at AA (#12i) comments: This wetland complex co 4L. Recreation/Education Potential Is the AA a known or potential rec overall summary and rating pa	ontains a fen i: (affords "be :./ed. site: (cage)	, is relatively onus" points ircle) X (i	undisturbed, if AA provide if 'Yes' contin	and so is faint some secretarion are with the e	irly unique in or education evaluation; if	the watershe opportunity) No' then ma	d. k NA a	and proceed to	•	
High disturbance at AA (#12i) comments: This wetland complex co 4L. Recreation/Education Potential Is the AA a known or potential rec	ontains a fen I: (affords "bo ./ed. site: (c age) ne AA: X	, is relatively onus" points ircle) X (i	undisturbed, if AA provide if 'Yes' contin	and so is faint some secretarion are with the e	irly unique in or education evaluation; if	the watershe opportunity) No' then ma	d. k NA a	and proceed to	•	
High disturbance at AA (#12i) comments: This wetland complex co 4L. Recreation/Education Potential Is the AA a known or potential rec overall summary and rating pa . Check categories that apply to the	ontains a fen I: (affords "bo ./ed. site: (c age) ne AA: X	, is relatively onus" points ircle) X (i	undisturbed, if AA provide if 'Yes' contin	and so is faint some secretarion are with the e	irly unique in or education evaluation; if	the watershe opportunity) No' then ma	d. k NA a	and proceed to	•	
High disturbance at AA (#12i) omments: This wetland complex co 4L. Recreation/Education Potential Is the AA a known or potential rec overall summary and rating pa . Check categories that apply to the	ontains a fen I: (affords "be :./ed. site: (c age) ne AA: X	, is relatively onus" points ircle) X (incle) Educational/	undisturbed, if AA provide if 'Yes' contin	and so is faint some secretarion are with the e	irly unique in or education evaluation; if	the watershe opportunity) No' then ma	d. -k NA a onsumptive	and proceed to	•	
High disturbance at AA (#12i) omments: This wetland complex co 4L. Recreation/Education Potential Is the AA a known or potential rec overall summary and rating pa Check categories that apply to the Rating: Known or Potential Recreation or Ed	ontains a fen I: (affords "be L/ed. site: (clage) ne AA: X Jucation Area	, is relatively onus" points ircle) X (incle) Constitutional/	undisturbed, if AA provide if 'Yes' contin	and so is fails recreation the with the early; X Con	irly unique in or education evaluation; if sumptive rec	the watershe opportunity) No' then ma	d. k NA a onsumptive	nd proceed to rec.;	•	
High disturbance at AA (#12i) omments: This wetland complex co AL. Recreation/Education Potential Is the AA a known or potential rec overall summary and rating pa Check categories that apply to the Rating: Known or Potential Recreation or Ed Public ownership or public easem	i: (affords "be c./ed. site: (c age) ne AA: X ducation Area tent with gen	, is relatively onus" points ircle) X (i Educational/i Other:	undisturbed, if AA provide if 'Yes' contin scientific stud access (no	and so is fails recreation the with the early; X Conpermission	irly unique in or education evaluation; if sumptive rec	the watershe opportunity) No' then ma	d. k NA a onsumptive Known .2H	rec.; Potential .15H	•	
High disturbance at AA (#12i) fomments: This wetland complex co 4L. Recreation/Education Potential Is the AA a known or potential rec overall summary and rating pa . Check categories that apply to the i. Rating: Known or Potential Recreation or Ed Public ownership or public easem Private ownership with general pu	i: (affords "be c./ed. site: (cage) ne AA: X ducation Area lent with gen	, is relatively onus" points ircle) X (i Educational/i Other: neral public (no permiss	undisturbed, if AA provide if 'Yes' contin scientific stud access (no page)	and so is fails recreation the with the early; X Conpermission	irly unique in or education evaluation; if sumptive rec	the watershe opportunity) No' then mand .; X Non-co	k NA a onsumptive Known .2H .15H	Potential .15H .1M	•	
High disturbance at AA (#12i) omments: This wetland complex co 4L. Recreation/Education Potential Is the AA a known or potential rec overall summary and rating pa . Check categories that apply to the i. Rating: Known or Potential Recreation or Ed Public ownership or public easem Private ownership with general pu	contains a fend: (affords "becade site: (contains a fend) (age) (a	, is relatively onus" points ircle) X (i Educational/: Other: neral public (no permiss public access	undisturbed, if AA provide if 'Yes' contin scientific stud access (no page 1) sion required s, or requirir	and so is fails recreation the with the eddy; X Conspermission (d)	irly unique in or education evaluation; if sumptive recerequired)	the watershe opportunity) No' then man ; X Non-co	Known .15H .1M	Potential .15H .1M	o the	
High disturbance at AA (#12i) omments: This wetland complex co 4L. Recreation/Education Potential Is the AA a known or potential rec overall summary and rating pa Check categories that apply to the Rating: Known or Potential Recreation or Ed Public ownership or public easem Private ownership with general pu	contains a fend: (affords "becades idea idea idea idea idea idea idea idea	, is relatively onus" points ircle) X (i Educational/ Other: neral public (no permiss ublic access d has a high	undisturbed, if AA provide if 'Yes' contin scientific stud access (no page 1) sion required s, or requiring	and so is fails recreation the with the eddy; X Conspermission and permission and permission are permission are permission are permission are permission and permission are permission and permission are	irly unique in or education evaluation; if sumptive recerequired)	the watershe opportunity) No' then man ; X Non-co	Known .15H .1M	Potential .15H .1M	o the	

freshly cut sticks or newly placed packed mud was observed.

FUNCTION & VALUE SUMMARY & OVERALL RATING FOR WETLAND/SITE #(S): Schrieber Lake

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	М	0.80	1	44.52	
B. MT Natural Heritage Program Species Habitat	Н	0.90	1	50.09	
C. General Wildlife Habitat	E	1.00	1	55.65	*
D. General Fish Habitat	М	0.70	1	38.96	
E. Flood Attenuation	М	0.60	1	33.39	
F. Short and Long Term Surface Water Storage	Н	1.00	1	55.65	*
G. Sediment/Nutrient/Toxicant Removal	Н	1.00	1	55.65	
H. Sediment/Shoreline Stabilization	Н	1.00	1	55.65	
I. Production Export/Food Chain Support	Н	1.00	1	55.65	*
J. Groundwater Discharge/Recharge	Н	1.00	1	55.65	
K. Uniqueness	Н	1.00	1	55.65	*
L. Recreation/Education Potential (bonus points)	Н	0.20	1	11.13	
Totals: Percent of Possible Score		10.20	11.00 93%	567.64	

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
X 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
X 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
X Score of .9 or 1 functional point for General Wildlife Habitat; or
Score of .9 or 1 functional point for General Fish Habitat; or
"High" to "Exceptional" ratings for both General Wildlife Habitat and General Fish/Aquatic Habitat; or
Score of .9 functional point for Uniqueness; or
X Percent of possible score > 65% (round to nearest whole #).
Category III Wetland: (Criteria for Categories I, II, or IV not satisfied)
Category IV Wetland: (Criteria for Categories I or II are not satisfied and all of the following criteria are met; otherwise go to Category III)
"Low" rating for Uniqueness; and
Vegetated wetland component 1 acre (do not include upland vegetated buffer); and
Percent of possible score 35% (round to nearest whole #).

OVERALL ANALYSIS AREA RATING: I

Summary Comments: Overall structurally diverse and productive site. However, the cover of shrubs has been reduced due to the increased water levels.

Table B-1. Schrieber Lake Wetland Mitigation Site. Comprehensive vegetation species list 2015-2023

Scientific Name	Common Name	WMVC Indicator Status ⁽¹⁾
Abies bifolia	Rocky Mountain Alpine fir	FACU
Abies grandis	Grand Fir	FACU
Achillea millefolium	Common Yarrow	FACU
Agrostis capillaris	Colonial Bent	FAC
Agrostis scabra	Rough Bent	FAC
Agrostis stolonifera	Spreading Bent	FACW
Algae, green	Algae, green	N/A
Allium cernuum	Nodding Onion	FACU
Alnus incana	Speckled Alder	FACW
Alopecurus arundinaceus	Creeping Meadow-Foxtail	FAC
Alopecurus pratensis	Field Meadow-Foxtail	FAC
Alyssum alyssoides	Pale Madwort	UPL
Amelanchier alnifolia	Saskatoon Service-Berry	FACU
Antennaria microphylla	Littleleaf Pussytoes	UPL
Antennaria sp.	Pussytoes	N/A
Apocynum androsaemifolium	Spreading Dogbane	FACU
Arctostaphylos uva-ursi	Red Bearberry	FACU
Berberis repens	Creeping Oregon-grape	UPL
Berteroa incana	Hoary Alyssum	UPL
Betula pumila	Bog Birch	OBL
Bromus carinatus	Mountain Brome	UPL
Bromus inermis	Smooth Brome	UPL
Bromus tectorum	Cheatgrass	UPL
Calamagrostis rubescens	Pinegrass	UPL
Campanula rotundifolia	Bluebell-of-Scotland	FACU
Carex aquatilis	Leafy Tussock Sedge	OBL
Carex bebbii	Bebb's Sedge	OBL
Carex geyeri	Geyer's Sedge	UPL
Carex inops	Long-stolon Sedge	UPL
Carex lasiocarpa	Woolly-Fruit Sedge	OBL
Carex nebrascensis	Nebraska Sedge	OBL
Carex simulata	Analogue Sedge	OBL
Carex sp.	Sedge	N/A
Carex utriculata	Northwest Territory Sedge	OBL
Carex vesicaria	Lesser Bladder Sedge	OBL
Carex stipata	Stalk-Grain Sedge	OBL
Centaurea stoebe	Spotted Knapweed	UPL
Cirsium arvense	Canada Thistle	FAC

Scientific Name	Common Name	WMVC Indicator Status ⁽¹⁾
Cirsium vulgare	Bull thistle	FACU
Comarum palustre	Purple Marshlocks	OBL
Convolvulus arvensis	Field Bindweed	UPL
Cornus canadensis	Canadian Bunchberry	FAC
Crataegus douglasii	Black Hawthorn	FAC
Cynoglossum officinale	Gypsy-Flower	FACU
Dactylis glomerata	Orchard Grass	FACU
Deschampsia caespitosa	Tufted Hair Grass	FACW
Eleocharis palustris	Common Spike-Rush	OBL
Elymus glaucus	Blue Wild Rye	FACU
Elymus repens	Creeping Wild Rye	FAC
Elymus trachycaulus	Slender Wild Rye	FAC
Epilobium ciliatum	Fringed Willow Herb	FACW
Equisetum arvense	Field Horsetail	FAC
Festuca rubra	Red Fescue	FAC
Fragaria virginiana	Virginia Strawberry	FACU
Galium triflorum	Fragrant Bedstraw	FACU
Geum macrophyllum	Large-Leaf Avens	FAC
Glyceria grandis	American Manna Grass	OBL
Glyceria striata	Fowl Manna Grass	OBL
Gnaphalium palustre	Western Marsh Cudweed	FACW
Hieracium aurantiacum	Orange Hawkweed	UPL
Hieracium scouleri	Scouler's Woollyweed	UPL
Hypericum perforatum	Common St. John's-Wort	FACU
Juncus nodosus	Knotted Rush	OBL
Juncus tenuis	Lesser Poverty Rush	FAC
Larix occidentalis	Western Larch	FACU
Lemna minor	Common Duckweed	OBL
Lepidium draba	Whitetop	UPL
Leucanthemum vulgare	Ox-Eye Daisy	FACU
Linaria dalmatica	Dalmatian Toadflax	UPL
Linaria vulgaris	Butter-and-eggs	UPL
Linnaea borealis	American Twinflower	FACU
Maianthemum stellatum	Starry False Solomon's-Seal	FAC
Moss	Sphagnum/Aulacomnium moss	N/A
Myriophyllum sibiricum	Siberian Water-Milfoil	OBL
Nassella viridula	Barkworth Green Needlegrass	UPL
Nuphar polysepala	Yellow Pond-Lily	OBL
Onosmodium bejariense var. bejariense	Soft-Hair Marbleseed	UPL

Scientific Name	Common Name	WMVC Indicator Status ⁽¹⁾
Pascopyrum smithii	Western-Wheat Grass	FACU
Penstemon confertus	Yellow Beardtongue	UPL
Penstemon sp.	Beardtongue	N/A
Persicaria amphibia	Water Smartweed	OBL
Phalaris arundinacea	Reed Canary Grass	FACW
Phleum pratense	Common Timothy	FACU
Picea engelmannii	Engleman Spruce	FAC
Pinus contorta	Lodgepole Pine	FAC
Pinus monticola	Western White Pine	FACU
Pinus ponderosa	Ponderosa Pine	FACU
Plantago sp.	Plantain	N/A
Poa compressa	Flat-Stem Blue Grass	FACU
Poa palustris	Fowl Blue Grass	FAC
Poa pratensis	Kentucky Blue Grass	FAC
Poa sp.	Blue Grass	N/A
Potentilla anserina	Silverweed	OBL
Potentilla norvegica	Norwegian Cinquefoil	FAC
Pseudoroegneria spicata	Bluebunch Wheatgrass	UPL
Pseudotsuga menziesii	Douglas-Fir	FACU
Rhamnus alnifolia	Alder-Leaf Buckthorn	FACW
Rosa woodsii	Woods' Rose	FACU
Rumex acetosa	Garden Sorrel	FAC
Rumex acetosella	Common Sheep Sorrel	FACU
Salix bebbiana	Gray Willow	FACW
Salix boothii	Booth's Willow	FACW
Salix candida	Sage Willow	OBL
Salix geyeriana	Geyer's Willow	FACW
Salix lasiandra	Pacific Willow	FACW
Salix sp.	Willow	N/A
Scirpus microcarpus	Red-Tinge Bulrush	OBL
Scutellaria galericulata	Hooded Skullcap	OBL
Shepherdia canadensis	Russet Buffalo-Berry	UPL
Sisymbrium altissimum	Tall Hedge-Mustard	FACU
Symphoricarpos albus	Common Snowberry	FACU
Symphyotrichum spathulatum	Mountain American-Aster	FAC
Taraxacum officinale	Common Dandelion	FACU
Thlaspi arvense	Field Pennycress	UPL
Trifolium aureum	Yellow Clover	UPL
Typha latifolia	Broad-Leaf Cat-Tail	OBL

Scientific Name	Common Name	WMVC Indicator Status ⁽¹⁾
Urtica dioica	Stinging Nettle	FAC
Utricularia minor	Lesser Bladderwort	OBL
Vaccinium sp.	Huckleberry	N/A
Verbascum thapsus	Great Mullein	FACU

¹ 2020 NWPL (USACE 2020)

New species identified in 2023 are **bolded.**

APPENDIX C PROJECT AREA PHOTOGRAPHS

MDT Wetland Mitigation Monitoring Schrieber Lake Lincoln County, Montana



Photo Point: 1 – Photo 1 Bearing: 242 degrees

Location: Northwest Boundary Year: 2015



Photo Point: 1 – Photo 1 Bearing: 242 degrees

Location: Northwest Boundary Year: 2023



Photo Point: 1 – Photo 2 Bearing: 200 degrees

Location: Northwest Boundary Year: 2015



Photo Point: 1 – Photo 2 Bearing: 200 degrees

Location: Northwest Boundary Year: 2023



Photo Point: 1 – Photo 3 Bearing: 164 degrees

Location: Northwest Boundary Year: 2015



Photo Point: 1 – Photo 3 Bearing: 164 degrees

Location: Northwest Boundary



Photo Point: 2 – Photo 1 Bearing: 323 degrees

Location: Near Corral Year: 2015



Photo Point: 2 – Photo 1 Bearing: 323 degrees

Location: Near Corral Year: 2023



Photo Point: 2 – Photo 2 Bearing: 205 degrees

Location: Near Corral Year: 2015



Photo Point: 2 – Photo 2 Bearing: 205 degrees

Location: Near Corral Year: 2023



Photo Point: 2 – Photo 3 Bearing: 162 degrees

Location: Near Corral Year: 2015



Photo Point: 2 – Photo 3 Bearing: 162 degrees

Location: Near Corral



Photo Point: 2 – Photo 4 Bearing: 104 degrees

Location: Near Corral Year: 2015



Photo Point: 2 – Photo 4 Bearing: 104 degrees

Location: Near Corral Year: 2023



Photo Point: 2 – Photo 5 Bearing: 69 degrees

Location: Near Corral Year: 2015



Photo Point: 2 – Photo 5 Bearing: 69 degrees

Location: Near Corral Year: 2023



Photo Point: 3 Bearing: 183 degrees

Location: West of Corrals Year: 2015



Photo Point: 3 Bearing: 183 degrees

Location: West of Corrals



Photo Point: 4 Bearing: 287 degrees

Location: East corner of Cell 10 Year: 2015



Photo Point: 4 Bearing: 287 degrees

Location: East corner of Cell 10 Year: 2023



Photo Point: 5 – Photo 1 Bearing: 143 degrees

Location: Northwest corner of carr Year: 2015



Photo Point: 5 – Photo 1 Bearing: 143 degrees

Location: Northwest corner of carr Year: 2023



Photo Point: 5 – Photo 2 Bearing: 35 degrees

Location: Northwest corner of carr Year: 2015



Photo Point: 5 – Photo 2 Bearing: 35 degrees

Location: Northwest corner of carr Year: 2023



Photo Point: 5 – Photo 3 Bearing: 359 degrees

Location: Corner of carr Year: 2015



Photo Point: 5 – Photo 3 Bearing: 359 degrees

Location: Corner of carr Year: 2023



Photo Point: 6 – Photo 1 Bearing: 150 degrees

Location: South end of Cell 1 Year: 2015



Photo Point: 6 – Photo 1 Bearing: 150 degrees

Location: South end of Cell 1 Year: 2023



Photo Point: 6 – Photo 2 Bearing: 103 degrees

Location: South end of Cell 1 Year: 2015



Photo Point: 6 – Photo 2 Bearing: 103 degrees

Location: South end of Cell 1

Year: 2023



Photo Point: 6 – Photo 3 Bearing: 52 degrees

Location: South end of Cell 1 Year: 2015



Photo Point: 6 – Photo 3 Bearing: 52 degrees

Location: South end of Cell 1 Year: 2023



Photo Point: 7 – Photo 1 Location: South end of Transect 2 Bearing: 228 degrees Year: 2015



Photo Point: 7 – Photo 1 Location: South end of Transect 2 Bearing: 228 degrees Year: 2023



Photo Point: 7 – Photo 2 Location: South end of Transect 2 Bearing: 299 degrees Year: 2015



Photo Point: 7 – Photo 2 Location: South end of Transect 2 Bearing: 299 degrees Year: 2023



Photo Point: 7 – Photo 3 Location: South end of Transect 2 Bearing: 355 degrees Year: 2015



Photo Point: 7 – Photo 3 Location: South end of Transect 2 Bearing: 355 degrees Year: 2023



Photo Point: 8 – Photo 1 Bearing: 320 degrees

Location: Interior of site Year: 2015



Photo Point: 8 – Photo 1 Bearing: 320 degrees

Location: Interior of site Year: 2023



Photo Point: 8 – Photo 2 Bearing: 49 degrees

Location: Interior of site Year: 2015



Photo Point: 8 – Photo 2 Bearing: 49 degrees

Location: Interior of site Year: 2023



Photo Point: 8 – Photo 3 Bearing: 79 degrees

Location: Interior of site Year: 2015



Photo Point: 8 – Photo 3 Bearing: 79 degrees

Location: Interior of site Year: 2023



Photo Point: 9 – Photo 1 Bearing: 323 degrees

Location: Upland island center of site Year: 2015



Photo Point: 9 – Photo 1 Bearing: 323 degrees

Location: Upland island center of site Year: 2023



Photo Point: 9 – Photo 2 Bearing: 120 degrees

Location: Upland island center of site Year: 2015



Photo Point: 9 – Photo 2 Bearing: 120 degrees

Location: Upland island center of site Year: 2023



Photo Point: 10 Bearing: 39 degrees

Location: Overlook Year: 2015



Photo Point: 10 Bearing: 39 degrees

Location: Overlook Year: 2023

Schrieber Lake: Vegetation Transect Photographs



Transect 1: Start Bearing: 251 degrees

Location: T-1 Year: 2015



Transect 1: Start Bearing: 251 degrees

Location: T-1 Year: 2023



Transect 1: End Bearing: 71 degrees

Location: T-1 Year: 2015



Transect 1: End Bearing: 71 degrees

Location: T-1 Year: 2023



Transect 2: Start Bearing: 152 degrees

Location: T-2 Year: 2015



Transect 2: Start Bearing: 152 degrees

Location: T-2 Year: 2023

Schrieber Lake: Vegetation Transect Photographs



Transect 2: End Bearing: 332 degrees

Location: T-2 Year: 2015



Transect 2: End Bearing: 332 degrees

Location: T-2 Year: 2023



Transect 3: Start Bearing: 175 degrees

Location: T-3 Year: 2015



Transect 3: Start Bearing: 175 degrees

Location: T-3 Year: 2023



Transect 3: End Bearing: 355 degrees

Location: T-3 Year: 2015



Transect 3: End Bearing: 355 degrees

Location: T-3 Year: 2023



Data Point: DP01w Year: 2023

Location: Veg Com 3



Data Point: DP01u Year: 2023

Location: Veg Com 1



Data Point: DP02w Year: 2023

Location: Veg Com 3



Data Point: DP02u

Location: Veg Com 1



Data Point: DP03w Year: 2023

Location: Veg Com 3



Data Point: DP03u Year: 2023

Location: Veg Com 1



Data Point: DP04b-w

Year: 2023

Location: Veg Com 2



Data Point: DP04-w Year: 2023

Location: Veg Com 3



Data Point: DP05w

Year: 2023



Data Point: DP04u

Year: 2023



Location: Veg Com 5

Location: Veg Com 1

Data Point: DP05u Year: 2023





Data Point: DP06w Year: 2023

Location: Veg Com 3



Data Point: DP06u Year: 2023

Location: Veg Com 1



Data Point: DP07w Year: 2023

Location: Veg Com 3



Data Point: DP07u Year: 2023

Location: Veg Com 5



Data Point: DP08w Year: 2023

Location: Veg Com 8



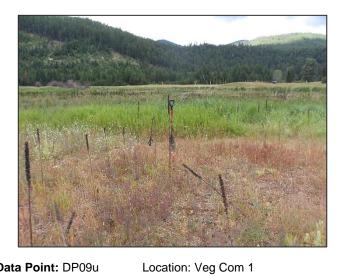
Data Point: DP08u Year: 2023

Point: DP08u Location: Veg Com 1



Data Point: DP09w Year: 2023

Location: Veg Com 8



Data Point: DP09u Year: 2023



Cross-Section: SC1-1Bearing: 300° – upstream

Location: Schrieber Creek Year: 2016



Cross-Section: SC1-1 Bearing: 300° – upstream

Location: Schrieber Creek Year: 2023



Cross-Section: SC1-1 Bearing: 30° – Left Bank

Location: Schrieber Creek Year: 2016



Cross-Section: SC1-1 Bearing: 30° – Left Bank

Location: Schrieber Creek Year: 2023



Cross-Section: SC1-2Bearing: 280° – upstream

Location: Schrieber Creek Year: 2016



Cross-Section: SC1-2Bearing: 280° – upstream

Location: Schrieber Creek



Cross-Section: SC1-2 Bearing: 10° – Left Bank

Location: Schrieber Creek Year: 2016



Cross-Section: SC1-2
Bearing: 10° – Left Bank

Location: Schrieber Creek Year: 2023



Cross-Section: SC2A-1Bearing: 315° – downstream

Location: Schrieber Creek Year: 2016



Cross-Section: SC2A-1Bearing: 315° – downstream

Location: Schrieber Creek Year: 2023



Cross-Section: SC2A-1 Bearing: 45° – Left Bank

Location: Schrieber Creek Year: 2016



Cross-Section: SC2A-1 Bearing: 135° – Left Bank

Location: Schrieber Creek Year: 2023



Cross-Section: SC2A-2Bearing: 185° – downstream

Location: Schrieber Creek Year: 2016



Cross-Section: SC2A-2Bearing: 185° – downstream

Location: Schrieber Creek Year: 2023



Cross-Section: SC2A-2 Bearing: 275° – Right Bank

Location: Schrieber Creek Year: 2016



Cross-Section: SC2A-2
Bearing: 275° –Right Bank

Location: Schrieber Creek Year: 2023



Cross-Section: SC2B-1Bearing: 175° – downstream

Location: Schrieber Creek Year: 2016



Cross-Section: SC2B-1Bearing: 175° – downstream

Location: Schrieber Creek Year: 2023



Cross-Section: SC2B-1 Bearing: 265° - Right Bank

Location: Schrieber Creek Year: 2016



Location: Schrieber Creek Cross-Section: SC2B-1 Bearing: 265° - Right Bank Year: 2023



Cross-Section: SC3-1 Bearing: 240° - Upstream

Location: Schrieber Creek Year: 2016



Cross-Section: SC3-1 Bearing: 240° - Upstream Year: 2023



Cross-Section: SC3-1

Bearing: 60° - Leftbank

Location: Schrieber Creek Year: 2023

Cross-Section: SC3-1 Bearing: 330° - Left Bank

Location: Schrieber Creek Year: 2016



Cross-Section: SC3-2Bearing: 160° – downstream

Location: Schrieber Creek Year: 2016



Cross-Section: SC3-2
Bearing: 160° – downstream

Location: Schrieber Creek Year: 2023



Cross-Section: SC3-2 Bearing: 70° – Left Bank

Location: Schrieber Creek Year: 2016



Cross-Section: SC3-2 Bearing: 70° –Left Bank

Location: Schrieber Creek Year: 2023



Cross-Section: SC7-1Bearing: 110° – downstream

Location: Schrieber Creek Year: 2016



Cross-Section: SC7-1Bearing: 110° – downstream

Location: Schrieber Creek Year: 2023

Schrieber Lake: Cross-Section Photographs



Cross-Section: SC7-1 Bearing: 20° – Left Bank

Location: Schrieber Creek Year: 2016



Cross-Section: SC7-1 Bearing: 20° – Left Bank

Location: Schrieber Creek Year: 2023



Cross-Section: CC1A-1Bearing: 50° – Upstream

Location: Coyote Creek Year: 2016



Cross-Section: CC1A-1Bearing: 50° – Upstream

Location: Coyote Creek Year: 2023



Cross-Section: CC1A-1
Bearing: 320° – Right Bank

Location: Coyote Creek Year: 2016



Cross-Section: CC1A-1 Bearing: 230° – Rightbank

Location: Coyote Creek

Year: 2023

Schrieber Lake: Cross-Section Photographs



Cross-Section: CC1A-2Bearing: 85° – Upstream

Location: Coyote Creek Year: 2016



Cross-Section: CC1A-2 Bearing: 85° – Upstream

Location: Coyote Creek Year: 2023



Cross-Section: CC1A-2 Bearing: 355° – Right Bank

Location: Coyote Creek Year: 2016



Cross-Section: CC1A-2 Bearing: 180° – Rightbank

Location: Coyote Creek Year: 2023



Cross-Section: CC1B-1Bearing: 200° – Downstream

Location: Coyote Creek Year: 2016



Cross-Section: CC1B-1
Bearing: 200° – Downstream

Location: Coyote Creek Year: 2023

Schrieber Lake: Cross-Section Photographs



Cross-Section: CC1B-1 Bearing: 110° – Left Bank

Location: Coyote Creek Year: 2016



Cross-Section: CC1B-1
Bearing: 110° – Left Bank

Location: Coyote Creek

ank Year: 2023

APPENDIX D

Surveyed Stream Cross Sections

MDT Wetland Mitigation Monitoring Schrieber Lake Lincoln County, Montana

