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: 2022

Years Monitored: 8th 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 12, 2022

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 completed in 2022.

Specific recommendations for any additional corrective actions: The MDT has an ongoing weed-control program and will assess the need for additional weed treatments in 2023.

Anticipated Wetland Credit Acres: 13.40

Wetland Credit Acres Generated to Date: 14.81

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 2022 achievement status for the Schrieber Lake site is provided in Table 1.

Table 1. Summary of Performance Standards

Wetland Performance Standards								
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 parameter 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 aerial 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 aerial 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 2022.					
	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.	Y	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. The upland buffer area was dominated by predominately non-native grass species. Total aerial cover of vegetation was estimated 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.	Y	State-listed noxious weed species across the site have been monitored and mapped during each post-construction monitoring event. MDT administers an ongoing weed-control program.
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	Stream Perform	nance	Standa	ards
Performance Standards	Success Criteria	Achi	eria eved /N	Discussion
			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.		Y	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 aerial cover of non- weed species by the end of the monitoring period.	Υ	Υ	All riparian vegetation transects exhibited 50 percent or greater aerial cover of non- weed species along both Schrieber and Coyote Creeks.
Discussion Duffers	Combined aerial cover of riparian and streambank vegetation communities is 70 percent or greater.		Y	Combined aerial 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	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 2022.

Coyote and Schrieber Creek Channel Restoration Success	Success will be evaluated in terms of revegetation success. For the purpose of identification, bank areas extend a distance of 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 sating tables from Winward A	Y/N	Υ	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
Success	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.			

- (a) SC = Schrieber Creek.
- (b) CC = Coyote Creek.

Summary Data

Wetland Delineation - The total jurisdictional wetland and aquatic habitat delineated at the Schrieber Lake mitigation site in 2022 was 55.53 acres, a decrease of 0.05 acres since 2021 due to a reduction in open water (Table 2; see maps in Appendix A). Total delineated wetlands across the site increased by 1.43 acres to 42.33 acres in 2022. Open water accounted for an estimated 12.20 acres of the site, including areas within Cells 1-10 and the preservation area northwest of Schrieber Lake (4.20 acres), and Schrieber Lake (8.00 acres). The extensive wetland development at this site is the result of the excavation of wetland cells, construction of channel plugs, and the restoration of 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 has changed the site's hydrologic regime, resulting in an expansion of perennial deep-water inundation observed within wetland vegetation communities. Since the appearance of the beaver dam in 2020, open water, in addition to Schrieber Lake, has reduced from 6.24 acres in 2020 to 4.20 acres in 2022. This decrease in open water is due to hydrophytic vegetation species colonizing recently inundated areas. Shifts in species cover and dominance were observed within several wetland vegetation communities and are expected to continue as increased hydrology persists across the site.

Table 2. Upland, Wetland, & Aquatic Habitat Acreage Delineated From 2015 Through 2022

Habitat Type	2015 Acres	2016 Acres	2017 Acres	2018 Acres	2019 Acres	2020 Acres	2021 Acres	2022 Acres
Uplands	52.60	52.60	52.60	52.60	52.60	49.47	49.12	49.17
Wetlands								
USFS wetlands (no credit)	1.25	1.25	1.25	1.25	1.25	1.66	1.66	1.66
MDT wetlands	37.65	37.65	37.65	37.65	37.65	34.43	35.43	36.77
Riparian Buffer (no wetland credit)	3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90
Total Delineated Wetlands	42.84	42.84	42.84	42.84	42.84	39.99	40.90	42.33
Open Water								
Schrieber Lake* (no credit)	8.26	8.26	8.26	8.26	8.26	8.00	8.00	8.00
Open Water* (Cells 1-10 & Preservation Area northwest of Schrieber Lake)	N/A	N/A	N/A	N/A	N/A	6.24	5.68	4.20
Streams								
Schrieber & Coyote Creeks (no wetland credit)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Total Wetland and Aquatic Habitat	52.10	52.10	52.10	52.10	52.10	55.23	55.58	55.53
Project Area	104.70	104.70	104.70	104.70	104.70	104.70	104.70	104.70

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

Vegetation — A total of 119 plant species have been identified at the site from 2015 through 2022, with nine new species identified during the 2022 monitoring event. Six wetland, five upland, and one open water community types were identified and mapped at the mitigation site in 2022 (Figure A-3, Appendix A). Dominant plant species observed within each community are listed on the Wetland Mitigation Site Monitoring form (Appendix B). Upland Type (UT) 14 — *Alopecurus pratensis* was identified for the first time in 2022 in the northern "pan handle" of the site. This UT replaced some of U 1 due to shifts in species cover, from a dominance of creeping wild rye (*Elymus repens*) and smooth brome (*Bromus inermis*) to a more mesic composition and dominated by field meadow-foxtail (*Alopecurus pratensis*).

The vegetation community types, including one open water community type, identified on the site in 2022 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 2 Betula pumila/Rhamnus alnifolia
- Wetland Type 3 *Phalaris arundinacea/Carex* spp.
- Wetland Type 4 Carex simulata/Persicaria amphibia
- Wetland Type 6 Salix bebbiana/Phalaris arundinacea
- Wetland Type 8 Carex spp.
- Wetland Type 10 Typha latifolia
- 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 that has impounded surface water within Wetland Type 3 continued in 2022. Inundation levels within Wetland Type 3 were an average of 1.5-3 feet, nearly the same as in 2021. 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*). 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 - fencarr shrubland.

Vegetation cover was measured along three belt transects (T-1, T-2, and T-3) in 2022 (Figure A-2, Appendix A). Photographs of the transect endpoints are provided in Appendix C. In 2022, 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. The expansion of perennial surface water noted in 2022 was primarily observed within the wetland communities along all three transects (i.e., Wetland Types 3, 4, and 6) in areas that exhibited greater than 5% emergent vegetation and were too small (i.e., less than 0.1-acre in size) to classify as Open Water Type 11. This expansion was captured by increasing its cover class within the associated wetland community. In Tables 3 through 5, the "% transect length comprising open water" summarizes the length of transect occupied by Open Water Type 11) and does not include the perennial surface water expansion observed within wetland 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" value is analogous to perennial surface water within the wetland communities found along the transects.

Table 3 summarizes the data for T-1 from 2016 through 2022. T-1 is 284 feet long and intersects Wetland Type 3 and Open Water Type 11. Hydrophytic vegetation cover accounted for 60 percent of the transect in 2022, a 15 percent decrease since 2021, due to the perennial inundation present along the transect. Unvegetated surface water, 0.5-2.5 feet deep, accounted for the remaining 40 percent of the transect in 2022.

Table 3. Data Summary for T-1 From 2016 Through 2022 at the Schrieber Lake Site

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

Table 4 summarizes the data for T-2 from 2016 through 2022. T-2 is 280 feet long and intersects Wetland Types 3 and 6. Hydrophytic vegetation communities accounted for 100 percent of the transect in 2022. Hydrophytic vegetation cover accounted for 80 percent of the transect in 2022, a five percent decrease since 2021 due to the perennial inundation present along the transect. Unvegetated surface water, 2-2.5 feet deep, accounted for the remaining 20 percent of the transect in 2022.

Table 4. Data Summary for T-2 From 2016 Through 2022 at the Schrieber Lake Site

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

Table 5 summarizes the data for T-3 from 2016 through 2022. T-3 is 584 feet long and intersects Wetland Types 3 and 4. Hydrophytic vegetation communities accounted for 100 percent of the transect in 2022. Hydrophytic vegetation cover decreased from 90 to 85 percent of the transect in 2022 due to the perennial inundation present along the transect. Unvegetated surface water, 0.5-2 feet deep, accounted for the remaining 15 percent of the transect in 2022.

Table 5. Data Summary for T-3 From 2016 Through 2022 at the Schrieber Lake Site

Monitoring Year	2016	2017	2018	2019	2020	2021	2022
Transect Length (feet)	584	584	584	584	584	584	584
Vegetation Community Transitions Along Transect	2	2	2	2	1	1	1
Vegetation Communities Along Transect	3	3	3	3	2	2	2
Hydrophytic Vegetation Communities Along Transect	2	2	2	2	2	2	2
Total Vegetative Species	11	10	12	9	6	6	6
Total Hydrophytic Species	10	8	10	7	6	6	6
Total Upland Species	1	2	2	2	0	0	0
Estimated % Total Vegetative Cover	100	100	100	100	95	90	85
Estimated % Unvegetated Surface Water	0	0	0	0	5	10	15
% Transect Length Comprising Hydrophytic Vegetation Communities	94	94	94	97	100	100	100
% Transect Length Comprising Upland Vegetation Communities	6	6	6	3	0	0	0
% Transect Length Comprising Open Water	0	0	0	0	0	0	0
% Transect Length Comprising Mudflat	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), and field bindweed (*Convolvulus arvensis*). The most common noxious weed species observed on site was Canada thistle (Figure A-3, Appendix A). MDT has an ongoing weed control program for their mitigation sites and treated noxious weed infestations at this site between June 28th and July 1st, 2021.

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 at the site.

Hydrology – During the 2022 investigation, the average depth of surface water across the site was estimated at 2.0 feet, with a range of depths from 0.25 to 5 feet. The deepest standing water is located within many of the excavated cells and within the creek channels. Approximately 80 percent of the wetlands were inundated during the 2022 site visit. The surface-water depth at the emergent vegetation and open-water boundary was estimated at 2.0 feet. In 2022, the beaver dam initially documented in 2019 at the outlet of Schrieber Lake was still present and impounding water. MDT is working with MFWP to remove the beaver to reduce the depth of surface water. Schrieber Lake and the remaining open water areas represented 8.00 acres and 4.20 acres of open water habitat, respectively, during the 2022 monitoring event. These areas are depicted as Open Water Type 11 in Figure A-3 in Appendix A.

The majority of wetland habitat exhibited standing surface water in 2022 as it did in 2021, and average water depths across the site decreased slightly from 2021, 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 2022 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 2022 (Appendices A and B). Wetland test pits were characterized by soil textures ranging from loamy sand to clay hemic. 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 2022 (Appendix B). The Assessment Area (AA) includes all delineated wetlands, including the creditable wetlands (36.77 acres), wetlands within the riparian buffers of Schrieber and Coyote Creeks (3.90 acres), Schrieber Lake and remaining open water areas (12.20 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 (1.66 acres). The wetlands in the AA received a Category I rating with 92.7% of the total possible points in 2022. 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.

Wildlife – Twelve bird species were identified in 2022 at the Schrieber Lake site. In addition to the 12 bird species, four northern Columbia spotted frogs, four white-tailed deer, and a Richardson's ground squirrel were observed (Appendix B). Mountain lion and raccoon tracks were also observed.

Photographs – Ten photo points were initially established in the project area in 2015. Photographs were taken at all ten photo point locations during the 2022 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 2022 data were compared to the previous surveys to assess stream channel stability. In 2022, the banks of the constructed channels exhibited stable conditions and were generally well-vegetated with deeprooted plant species, except for Schrieber Creek Reach 1 (SC1). The stream monitoring survey indicates that little to no channel morphological changes occurred between 2021 and 2022. The nine cross-sections within the 2022 wetland boundary, exhibited surface water elevations lower than or equal to those surveyed in 2021 except SC7-1, which exhibited an approximately 0.5-foot surface water elevation increase. Surface water elevations across the rest of the transects decreased by 0.1 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 2022, while vegetation cover increased along this reach, it was otherwise consistent with 2021 observations, which included a dominance by shallow-rooted spreading bent (*Agrostis stolonifera*) and 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, and increased vegetation cover observed in 2022 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 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 6.

Data collected during the 2022 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 currently 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, along with its status in meeting the success criteria and generating the anticipated stream mitigation credits. To date, the site has generated 34,349.67 stream credits, which is 2,392.20 credits less than the original projection.

Table 6. 2022 Riparian and Stream Mitigation Credits for the Schrieber Lake Site

Channel Segment	Reach	Side	Predicted Credits	2022 Credits
	4.4	Α	4,141.63	4,141.63
C	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
		А	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
Called allows Consul	2.0	А	576.65	576.65
Schrieber Creek	2B	В	576.65	576.65
		Α	3,964.83	3,964.83
	3	В	3,964.83	3,964.83
	7	А	2,934.00	2,934.00
	7	В	2,934.00	2,934.00
Total			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 creating 3.06 wetland acres, reestablishing 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 7 summarizes the estimated wetland credits based on the pending USACE-approved credit ratios and the wetland delineation completed in July 2022. The 2022 wetland delineation identified 36.77 acres of creditable wetlands and 4.20 acres of creditable 'open water' within the mitigation site.

Creditable wetland acreage included 5.60 acres of created wetland, 1.10 acres of re-established wetlands, 4.69 acres of enhanced wetlands, and 25.38 acres of preserved wetlands, with 2.94 acres of upland buffer around the perimeter of the delineated wetland. In accordance with 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 2.30 acres of created open water, 1.32 acres of restored open water, and 0.58 acres of preserved open water. Schrieber Lake has never received mitigation credit at this site and is therefore excluded from Table 7. The 2022 estimated credit acres for this site have exceeded the proposed credit acres. To date, a total of 14.81 credit acres have been developed at this site. Figure A-4 (Appendix A) shows the location of wetlands based on credit type.

Table 7. Summary of Wetland Mitigation Credits at the Schrieber Lake Site in 2015, and 2020 through 2022

Mitigation Type	Total Proposed Acreage	Ratio	Proposed Credit Acres	2015 Delineated Acreage	2015 Credit Acres	2020 Delineated Acreage	2020 Credit Acres	2021 Delineated Acreage	2021 Credit Acres	2022 Delineated Acreage	2022 Credit Acres
Creation	3.06	1:1	3.06	4.80	4.80	4.69	4.69	5.06	5.06	5.60	5.60
Creation 'Open Water'(b)	N/A	TBD	N/A			2.56	TBD	2.54	TBD	2.30	TBD
Restoration (Re- establishment)	2.53	1.5:1	1.69	2.42	1.62	1.14	0.76	1.14	0.76	1.10	0.73
Restoration 'Open Water' (b)	N/A	TBD	N/A			1.28	TBD	1.28	TBD	1.32	TBD
Enhancement areas- Carr Shrubland expansion	4.53	3:1	1.51	4.77	1.59	4.69	1.56	4.69	1.56	4.69	1.56
Enhancement 'Open Water' (b)	N/A	TBD	N/A			0.08	TBD	0.08	TBD	0	N/A
Preservation- Existing Fen- Carr-Carex Areas	25.60	4:1	6.40	25.66	6.42	24.11	6.03	24.46	6.12	25.38	6.35
Preservation 'Open Water' (b)	N/A	TBD	N/A			2.13		1.61	TBD	0.58	TBD
Upland Buffer (50 feet) ^(a)	3.81	5:1	0.76	8.42	1.68	3.81	0.76	3.81	0.76	2.94	0.59
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	44.46	13.78	44.65	14.24	43.89	14.81

⁽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 2022 functional unit credits summary is summarized in Table 8. A total of 145.25 functional unit credits were generated at the Schrieber Lake site after applying the appropriate mitigation ratios to the 2022 wetland acreage and multiplying that value by the points generated from the assessment area.

⁽b) Creditable Open Water acreage (4.20 acres) 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).

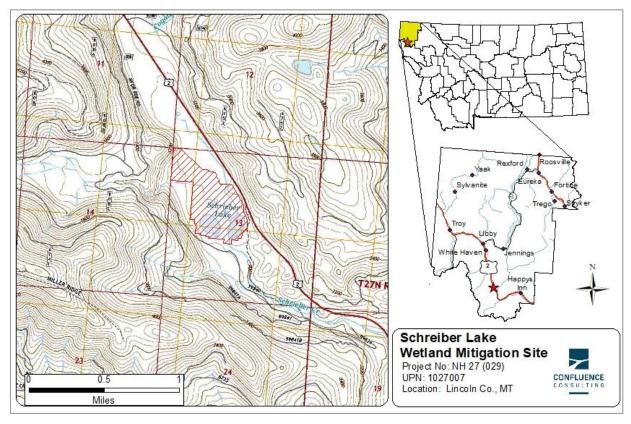
Table 8. Functional Unit Credits Summary for Schrieber Lake

Mitigation Type	2022 Delineated Acreage	Ratio	2022 Mitigation Credit Acres	MWAM Actual Points ^a	Functional Unit Credits
Creation	5.60	1:1	5.60	10.20	57.12
Creation 'Open Water'	2.30	TBD	TBD	10.20	TBD
Restoration (Re-establishment)	1.10	1.5:1	0.73	10.20	7.45
Restoration 'Open Water'	1.32	TBD	TBD	10.20	TBD
Enhancement areas- Carr Shrubland expansion	4.69	3:1	1.56	10.20	15.91
Preservation-Existing Fen-Carr- Carex Areas	25.38	4:1	6.35	10.20	64.77
Preservation 'Open Water'	0.58	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

Maps, Plans, Photos

Figure 1. Site Location Map



Project Area Maps/Figures: See Appendix A (Figure A-2 – 2022 Monitoring Activity Locations; Figure A-3 – 2022 Mapped Site Features; Figure A-4 – 2022 Wetland Credit Areas; Figure A-5 – 2022 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 eighth 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).

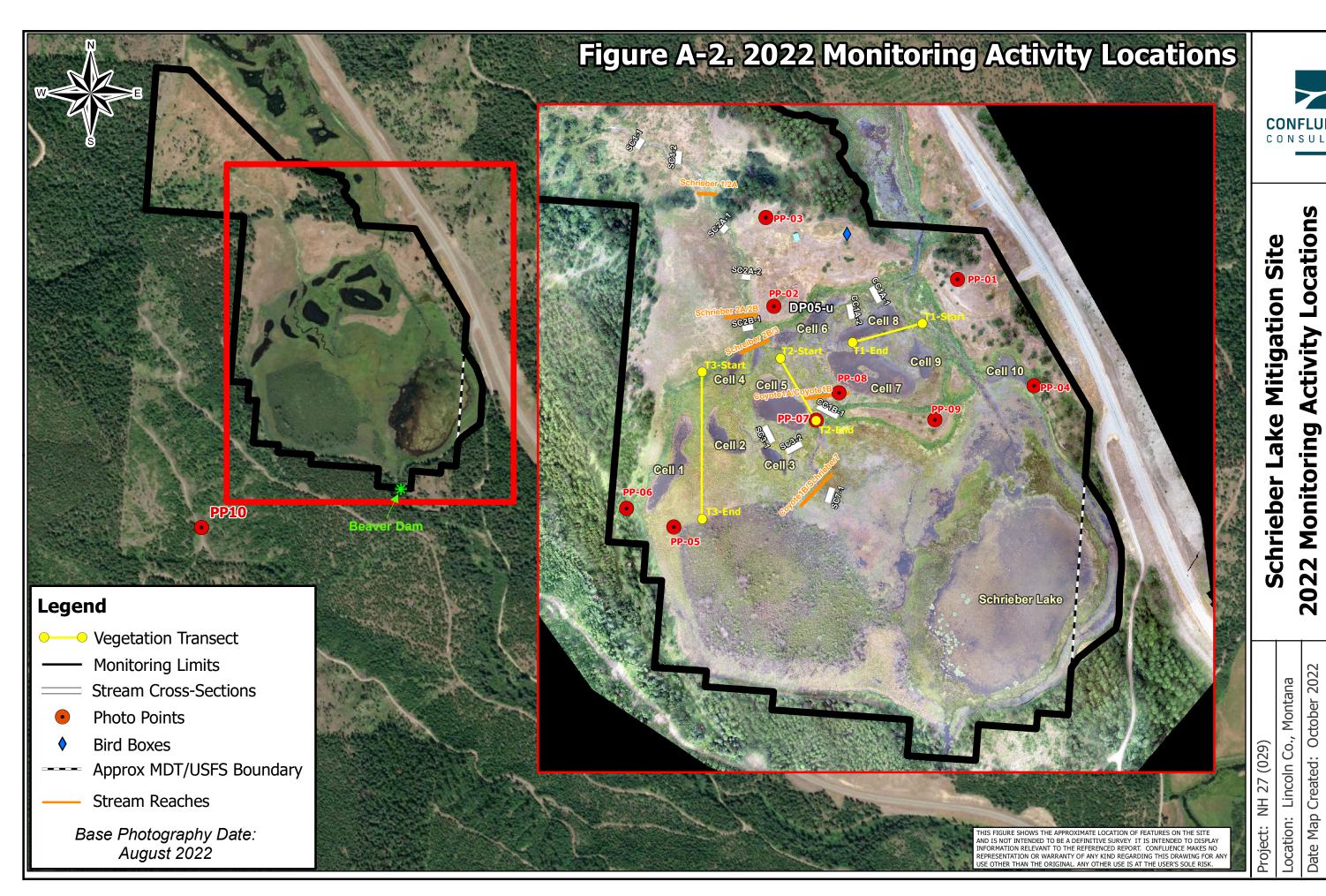
Woody plant survival is not expected to meet the established performance standard. Reach SC-1 along Schrieber Creek is an ephemeral reach that is taking longer for deep-rooted vegetation to establish but is expected to meet this success criteria in future monitoring events. No remedial actions are recommended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

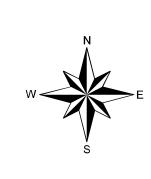
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APPENDIX A PROJECT AREA MAPS

MDT Wetland Mitigation Monitoring Schrieber Lake Lincoln County, Montana





Vegetation Community Types

- 1 Elymus/Bromus
- **Betula/Rhamnus**
- (3) Phalaris/Carex
- (4) Carex/Persicaria
- S Pseudostuga/Larix
- 6 Salix/Phalaris
- (8) Carex spp.
- (9) Craetagus/Symphoricarpus
- 10 Typha/Open Water
- (11) Open Water/Aquatic Macrophytes
- 13 Alopecurus/Phalaris
- (14) Alopecurus pratensis

Noxious Weeds

Convolvulus arvensis

Cirsium arvense

Centaurea stoebe

Hieracium aurantiacum

Linaria vulgaris

Leucanthemum vulgare

Cover Class

T = Trace (<1% cover)

L = Low (1-5% cover)

M = Moderate (6-25% cover)

H = High (26-100% cover)

Legend

Monitoring Limits

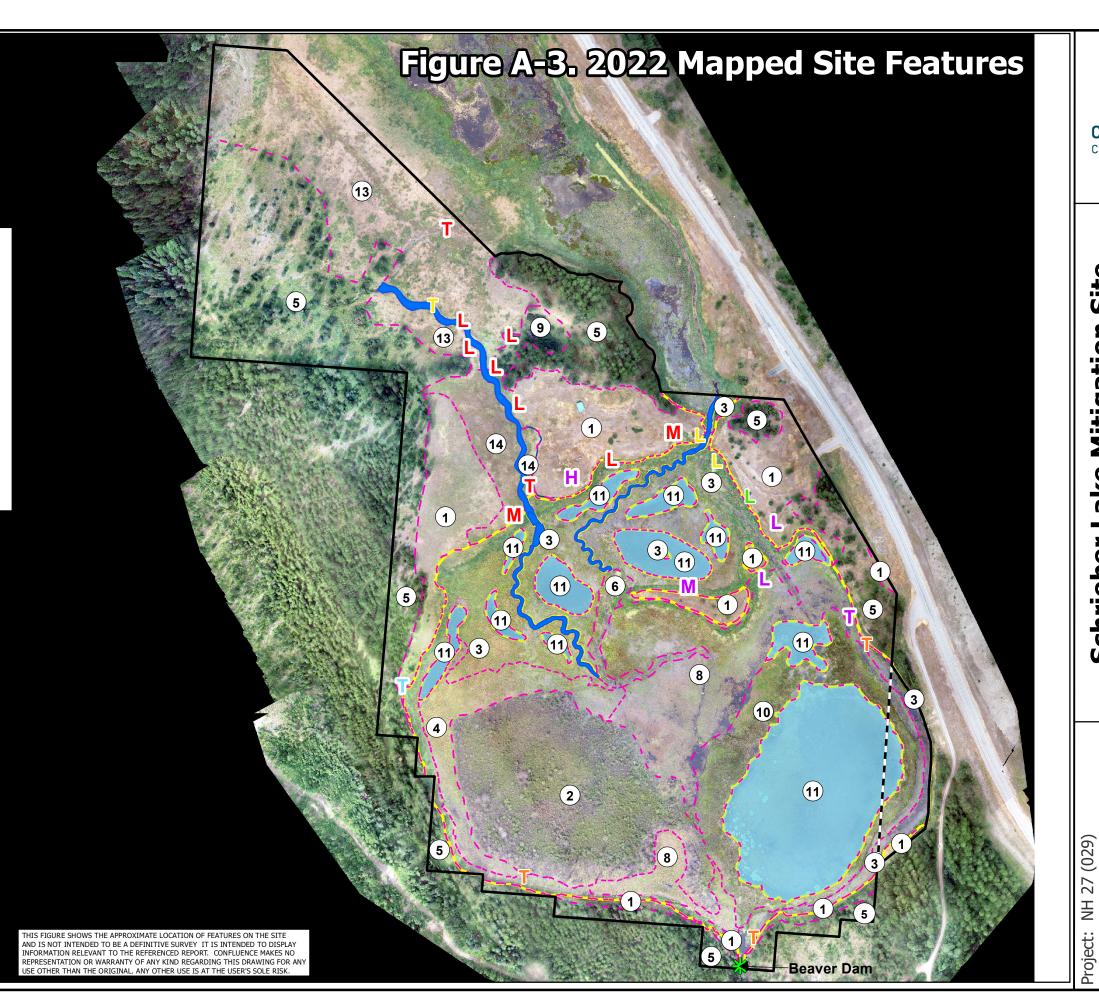
Wetland Limits

Vegetation Community

WUS (Open Water)(1)

WUS (Stream Channel)

Approx MDT/USFS Boundary ----Base Photography Date: August 2022

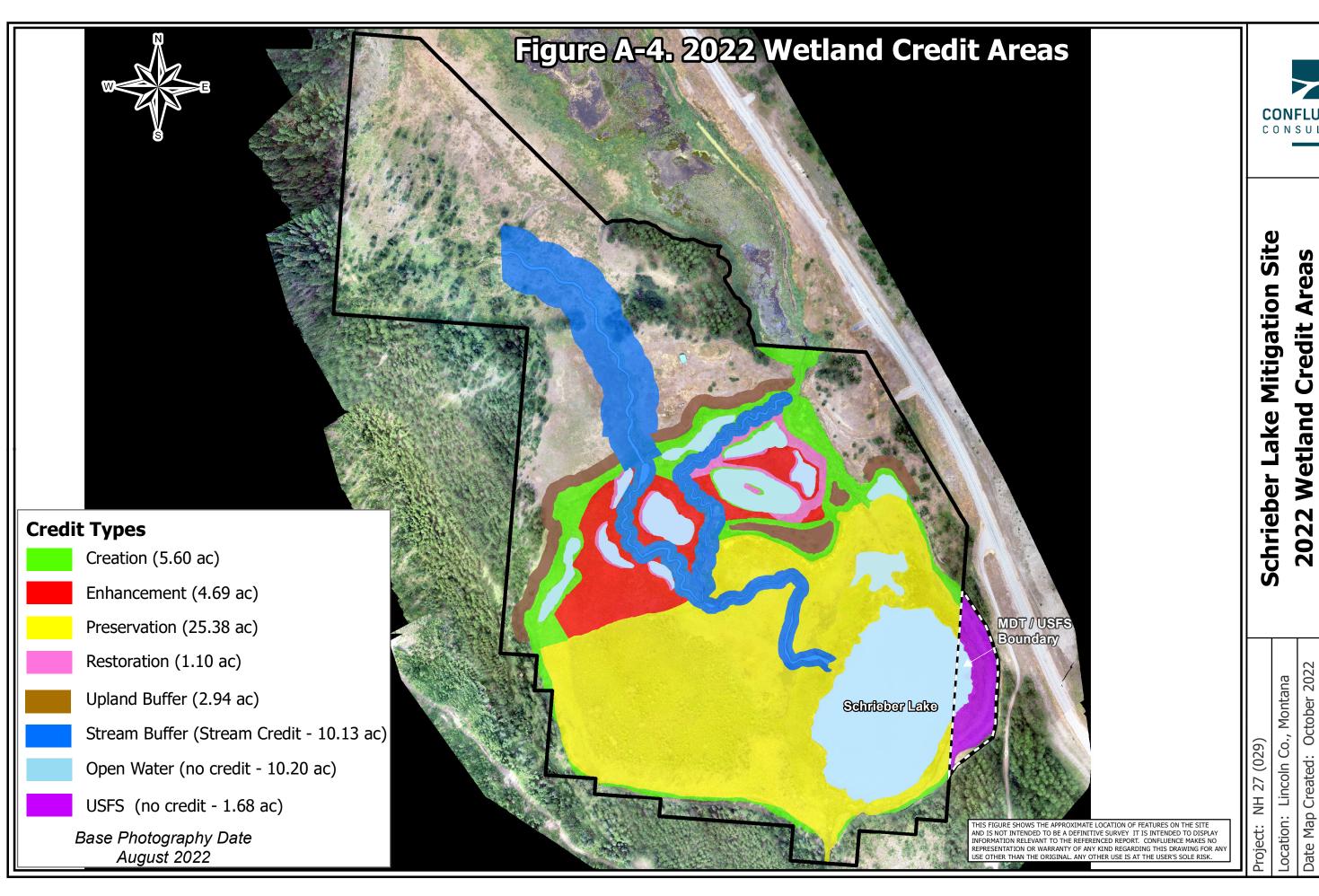




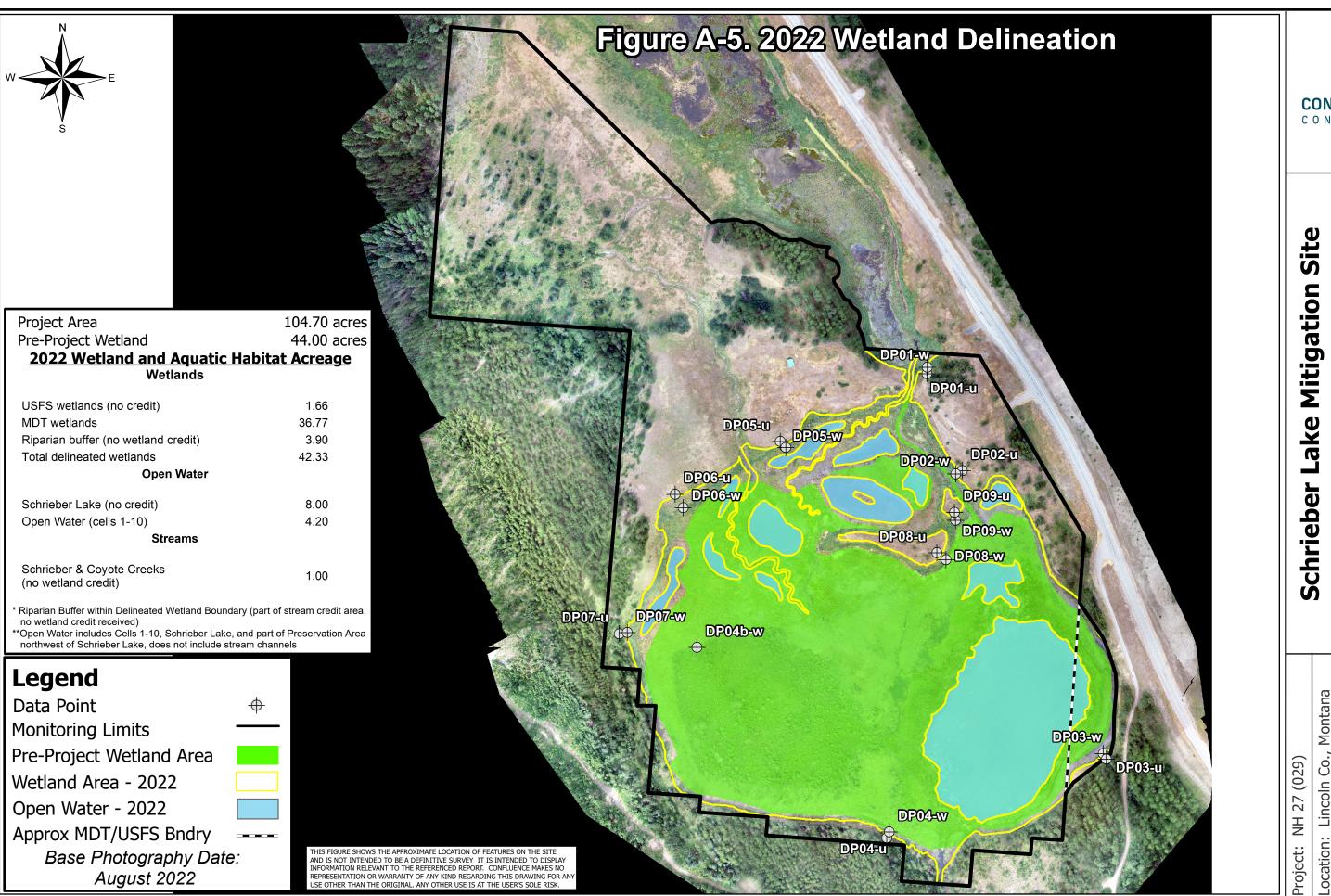
Mapped 2022

Date Map Created: October 2022 Lincoln Co., Montana

R. McEldowney



Date Map Created: October 2022





Schrieber Lake Mitigation Site 2022 Wetland Delineation

October 2022

Created:

R. McEldowney

Project Manager:

APPENDIX B MONITORING FORMS

MDT Wetland Mitigation Monitoring Schrieber Lake Lincoln County, Montana

MDT WETLAND MITIGATION SITE MONITORING FORM

Project Site: Schneber Lake Assessment Date/Time <u>//112/2</u> 0
Person(s) conducting the assessment: <u>J. Trilling, S. Weyant. W. Fouts</u>
Weather: 75 degrees, cloudy, clear Location: Highway 2, Swamp Creek East
MDT District: Missoula Milepost: 53.8
Legal Description: T_27N_R30W_Section(s)_13
Initial Evaluation Date: 5/18/2015 Monitoring Year: 8 #Visits in Year: 1
Size of Evaluation Area: 105 (acres)
Land use surrounding wetland: US Highway 2, US Forest Service, forested watershed, Weyerhaeuser lands to the south of the site.
HYDROLOGY
Surface Water Source: Schrieber Creek, Coyote Creek, precipitation, groundwater
nundation: Average Depth: 2 (ft) Range of Depths: 0.1-5 (ft)
Percent of assessment area under inundation:80 %
Depth at emergent vegetation-open water boundary:2 (ft)
f assessment area is not inundated then are the soils saturated within 12 inches of surface: No
Other evidence of hydrology on the site (ex. – drift lines, erosion, stained vegetation, etc <u>:</u> Surface water, saturation, high water table, hydrogen sulfide odor, geomorphic position, and FAC neutral test
Groundwater Monitoring Wells
Record depth of water surface below ground surface, in feet.
Additional Activities Checklist: Map emergent vegetation-open water boundary on aerial photograph. Observe extent of surface water during each site visit and look for evidence of past surface water levations (drift lines, erosion, vegetation staining, etc.) Use GPS to survey groundwater monitoring well locations, if present.
Vater depth refers to wetland cells, not including Schreiber Lake. 80% inundation does not include he uplands in the northern "panhandle" of the project area. Beaver dam at outlet of Schrieber ake observed in 2019 through 2022 has created significant impact on water depths across site. Depths ranged from .1-5 feet. Deepest water in channels, excavated depressions, and Schrieber ake.

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: 12.44

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

Comments:

Upland community at edges of wetland boundaries across the site. Some of this CT on the east and west sides of the stream channel was replaced by new CT 14 in 2022 due to Alopecurus pratensis becoming the dominant species those areas.

Community # 2 Community Type: Betula pumila / Rhamnus alnifolia Acres: 10.7

Species	Cover class	Species	Cover class
Betula pumila	4	Carex spp.	3
Comarum palustre	1	Open Water	3
Persicaria amphibia	2	Phalaris arundinacea	2
Rhamnus alnifolia	2	Salix bebbiana	1
Salix boothii	1	Salix candida	1
Salix geyeriana	1		

Comments:

In 2022, many shrubs within the Carr preservation area were observed as dead or stressed from the perennial 2-3ft inundation level caused by the 2019-2022 beaver dam at the southern project boundary.

Community # 3 Community Type: Phalaris arundinacea / Carex spp. Acres: 13.47

Species	Cover class	Species	Cover class
Agrostis capillaris	1	Alopecurus arundinaceus	1
Alopecurus pratensis	1	Carex aquatilis	2
Carex lasiocarpa	2	Carex nebrascensis	1
Carex simulata	1	Carex utriculata	3
Carex vesicaria	1	Comarum palustre	1
Deschampsia caespitosa	0	Geum macrophyllum	0
Juncus tenuis	0	Lemna minor	1
Open Water	4	Persicaria amphibia	2
Phalaris arundinacea	4	Symphyotrichum spathulatur	n 0
Typha latifolia	1		

Comments:

In 2022 inundation levels were slightly lower than in 2021 with an average of 2-3 feet. The reed canary grass is continuing to decline in cover, although this decline appears to have slowed from 2021. The areas previously occupied by reed canary grass are converting to open water, Persicaria amphibia, and Carex species. In addition, this community increased in size due to the wetland boundary slightly expanding around the northern and western perimeter.

Community # 4 Community Type: Carex spp. / Persicaria amphibia Acres: 2.98

Species	Cover class	Species	Cover class
Carex aquatilis	3	Carex lasiocarpa	3
Carex nebrascensis	1	Carex simulata	1
Carex utriculata	4	Carex vesicaria	1
Comarum palustre	1	Geum macrophyllum	1
Open Water	3	Persicaria amphibia	3
Phalaris arundinacea	1	Symphyotrichum spathulatun	n 1

Comments:

Wetland community in southwestern portion of project area. This areas was inundated with 1-1.5 feet of water.

Community # 5 Community Type: Pseudotsuga menziesii / Larix occidentalis Acres: 12.73

Species	Cover class	Species	Cover class
bies grandis	2	Agrostis capillaris	1
opecurus arundinaceus	1	Alopecurus pratensis	1
nelanchier alnifolia	1	Arctostaphylos uva-ursi	2
rberis repens	1	Bromus inermis	2
amagrostis rubescens	2	Campanula rotundifolia	0
ex geyeri	2	Centaurea stoebe	1
nus glaucus	1	Elymus repens	1
acium aurantiacum	0	Larix occidentalis	2
nstemon confertus	0	Pinus contorta	2
eudotsuga menziesii	3	Rosa woodsii	1
mphoricarpos albus	2		

Comments:

Upland forested community at edges of wetland boundaries.

Community # 6 Community Type: Salix bebbiana / Phalaris arundinacea Acres: 0.81

Species	Cover class	Species	Cover class
Alnus incana	0	Crataegus douglasii	0
Open Water	4	Persicaria amphibia	1
Phalaris arundinacea	4	Salix bebbiana	2

Comments:

Many shrubs observed as stunted and dying due to deep perennial inundation, located along the restored confluence of Coyote and Schreiber Creeks.

Community # 8 Community Type: Carex spp. / Acres: 9.08

Species	Cover class	Species	Cover class
Carex aquatilis	1	Carex atherodes	1
Carex lasiocarpa	2	Carex utriculata	4
Carex vesicaria	1	Open Water	3
Persicaria amphibia	1	Phalaris arundinacea	2
Salix bebbiana	1	Salix candida	1
Scirpus microcarpus	1		

Comments:

In 2022, this community was inundated with an average of 2 feet of ponded water.

Community #	6	Community Typ	oe:	Crataegus douglasii / Symphoricarpos albus	Acres:	0.74
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Achillea millefolium 0	Alopecurus arundinaceus	1
		•
Alopecurus pratensis 2	Cirsium arvense	1
Crataegus douglasii 5	Cynoglossum officinale	0
Dactylis glomerata 0	Elymus trachycaulus	1
Galium triflorum 0	Phalaris arundinacea	2
Symphoricarpos albus 4	Taraxacum officinale	0
Urtica dioica 0		

Comments:

Upland community type in the northern portion of project area.

Community # 10 Community Type: Typha latifolia / Open Water Acres: 5.76

Species	Cover class	Species	Cover class
Aquatic macrophytes	1	Comarum palustre	2
Myriophyllum sibiricum	1	Nuphar polysepala	0
Open Water	4	Phalaris arundinacea	1
Typha latifolia	5		

Comments:

Wetland community type that surrounds Schrieber Lake. This CT increased in size because it absorbed some open water areas northwest of Schrieber Lake.

Community # 11 Community Type: Open Water / Aquatic macrophytes Acres: 12.17

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: 11.61

Species	Cover class	Species	Cover class
Alopecurus arundinaceus	2	Alopecurus pratensis	4
Bare Ground	2	Bromus inermis	3
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: 2.21

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:

New 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.

Total Vegetation Community Acreage

94.7

VEGETATION TRANSECTS

Site: Schrieber Lake	Da	ate: 7/12/2022	
Transect Number	r: <u> </u>	ss Direction from St	art: <u>251</u>
Interval Data: Ending Station	93 Community Type:	Phalaris arundinacea / Car	rex spp.
Species	Cover class	Species	Cover class
Carex lasiocarpa	2	Carex utriculata	1
Lemna minor	1	Open Water	2
Persicaria amphibia	1	Phalaris arundinacea	4
Ending Station	101 Community Type:	Open Water / Aquatic mac	rophytes
Species	Cover class	Species	Cover class
Aquatic macrophytes	1	Open Water	5
Persicaria amphibia	2	Typha latifolia	1
Ending Station	284 Community Type:	Phalaris arundinacea / Car	rex spp.
Species	Cover class	Species	Cover class
Carex lasiocarpa	2	Carex utriculata	3
Lemna minor	0	Open Water	4
Persicaria amphibia	2	Phalaris arundinacea	3
Typha latifolia	1		

Transect Notes:

Difficult to move through. Reed canary grass decreased in cover in 2022, and observed as absent, dead, dying, or floating mats in many areas along transect. Water depth .5-2.5 feet deep. Overall cover of the transect decreased where significant open water occurs. Boats were used to access transect.

Transect Numbe	r: <u>2</u> Compas	ss Direction from St	tart: ¹⁵²
Interval Data:			
Ending Station	260 Community Type:	Phalaris arundinacea / Ca	rex spp.
Species	Cover class	Species	Cover class
Carex lasiocarpa	3	Carex utriculata	3
Carex vesicaria	2	Lemna minor	1
Open Water	3	Persicaria amphibia	3
Phalaris arundinacea	1		
Ending Station	280 Community Type	Salix bebbiana / Phalaris a	arundinacea

Litaling Station	200 Community Type.	Calix Debbiaria / 1 rialario ararialitacca		
Species	Cover class	Species	Cover class	
Open Water	2	Persicaria amphibia	1	
Phalaris arundinacea	1	Saliy hebbiana	0	

Transect Notes:

This transect was innundated with 2-2.5 feet of water in 2022. Phalaris arundinacea was significantly reduced in cover in 2022 due to the prolonged innundation. This transect was waded through in 2022.

Transect Number: 3 Compass Direction from Start: 175

Interval Data:

Ending Station	484 Community Type:	Phalaris arundinacea / Ca	rex spp.
Species	Cover class	Species	Cover class
Carex aquatilis	3	Carex lasiocarpa	4
Carex utriculata	2	Persicaria amphibia	2
Phalaris arundinacea	4	Typha latifolia	0
Ending Station	584 Community Type:	Carex spp. / Persicaria an	nphibia
Species	Cover class	Species	Cover class
Carex aquatilis	3	Carex lasiocarpa	3
Carex utriculata	3	Open Water	3
Persicaria amphibia	3	Phalaris arundinacea	4

Transect Notes:

Phalaris arundinacea was slightly reduced in cover in 2022. This transect was innundated with 0-2 feet of water in 2022.

PLANTED WOODY VEGETATION SURVIVAL

Schrieber Lake

Planting Type #Planted #Alive Notes

Various Species

Comments

MDT planted 1,500 woody plants in the riparian buffer along Schrieber Creek, Coyote Creek, and around some wetland excavations. In 2020-2022, 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. MDT staff (contacted July 2017) indicated that some of the woody plantings along the Schrieber Creek corridor were likely adversely affected by weed spraying activities at the site.

1500

Schrieber Lake

WILDLIFE

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 2022.	

Species	#Observed	Behavior	Habitat	
Brewer's Blackbird	12			
Canada Goose	10			
Eastern Kingbird	2			
Great Blue Heron	1			
Killdeer	5			
Mallard	4			
Marsh Wren	1			
Osprey	2			
Red-winged Blackbird	15			
Rock Wren	2			
Ruddy Duck	6			
Wilson's Snipe	2			
Bird Comments				
An abundance of bird sp	oecies was obse	rved at this site.		

BEHAVIOR CODES

BP = One of a breeding pair BD = Breeding display F = Foraging FO = Flyover L = Loafing N = Nesting

HABITAT CODES

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

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

Mammals and Herptiles

Species	# Observed	Tracks	Scat	Burrows	Comments
Columbia Spotted Frog	4	No	No	No	Many frogs were heard but not observed
Mountain Lion	1	Yes	No	No	
Raccoon	2	Yes	No	No	
Richardson's Ground Squirrel	5	No	No	No	
White-tailed Deer	4	No	No	No	

Wildlife Comments:

A diversity of bird and wildlife species utilize the site.

PHOTOGRAPHS

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

Photograph Checklist:

	One photograph for each of the four cardinal directions surrounding the wetland.
	At least one photograph showing upland use surrounding the wetland. If more than one upland
exists	then take additional photographs.
	At least one of the country of the least of the least of the country of the count

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	48.107415	-115.410029		
DP01-w	48.10633	-115.409342		
DP02-u	48.103407	-115.406738		
DP02-w	48.102323	-115.410111		
DP03-u	48.105426	-115.409653		
DP03-w	48.105361	-115.409498		
DP04b-w	48.105876	-115.409417		
DP04-u	48.105794	-115.409391		
DP04-w	48.104214	-115.413387		
DP05-u	48.106495	-115.412299		
DP05-w	48.106436	-115.412202		
DP06-u	48.105844	-115.413923		
DP06-w	48.105707	-115.413779		
DP07-u	48.104299	-115.41465		
DP07-w	48.104318	-115.414524		
DP08-u	48.107346	-115.410028		
DP08-w	48.106294	-115.409446		
DP09-u	48.103346	-115.406682		
DP09-w	48.102388	-115.410077		
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
V	Map emergent vegetation/open water boundary on aerial photos.
✓ lines	Observe extent of surface water. Look for evidence of past surface water elevations (e.g. drift vegetation staining, erosion, etc).
iii ics,	, vegetation staining, erosion, etc).
	Photos
	One photo from the wetland toward each of the four cardinal directions
	One photo showing upland use surrounding the wetland. One photo showing the buffer around the wetland
<u></u>	One photo from each end of each vegetation transect, toward the transect
	Vocatation
	Vegetation
✓ Ma	ap vegetation community boundaries
✓ Co	mplete Vegetation Transects
	Soils
⊻ As	ssess soils
	Wetland Delineations
✓	Delineate wetlands according to applicable USACE protocol (1987 form or
Suppl ⊻	lement)
	Delineate wetland – upland boundary onto aerial photograph.
Wetla	and Delineation Comments
	ne total wetland and aquatic habitat delineated at the Schrieber Lake mitigation site in 2022 was
	5.53 acres, a decrease of 0.05 acres since 2021 (Table 2; see maps in Appendix A). Schrieber Lake cupied 8.00 acres and remaining 'open water' areas represented a total of 4.20 acres.
	Functional Assessments
✓	Complete and attach full MDT Montana Wetland Assessment Method field
forms	
Funct	tional Assessment Comments:
CI	assified 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 and appears to be actively maintained. The beaver dam is still impounding water throughout the lower elevations of the site 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	City/County: Lincoln Sampling Date: 7/12/2022
	State: Montana Sampling Point: DP01-u
	Section, Township, Range: S 13 T 27N R 30W
	Local relief (concave, convex, none): convex Slope (%): 10
	48.107346 Long: -115.410028 Datum: NAD 83
Soil Man Unit Name: 108: Andic dystric eutrocrepts, lacustrine to	erraces-andic dystrocrepts, gla NWI classification:Not mapped
Are climatic / hydrologic conditions on the site typical for this time of y	
	ly disturbed? Are "Normal Circumstances" present? Yes No No No No No No No N
Are Vegetation, Soil, or Hydrology naturally p	
	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No	Is the Sampled Area within a Wetland? Yes No _ Wetland? Yes No _ Wetland?
Wetland Hydrology Present? Yes No	- Within a vvenance: 163 NO
Remarks: Upland sample point located in northeast corner of project are	ea
VEGETATION - Use scientific names of plants	
Trac Stretum Plet size (20 Feet Redive) Absolute Domial	i Dominance resi worksneer
// Cover. Specie	Number of Dominant Species
Picea engelmannii 10 Pinus contorta 1	that are OBL, FACW or FAC: 3 (A)
Pinus contorta 1 ☐ Pseudotsuga menziesii 4 ✓	FACU Total Number of Dominant Species Across All Strata: 6 (B)
1 3cudotsuga menziesii 4	
Sapling/Shrub Stratum Plot size (15 Foot Radius)	That Are OBL, FACW, or FAC: 50 % (A/B)
	FACU Prevalence Index worksheet
Arctostaphylos uva-ursi 3 ✓ Pseudotsuga menziesii 2 ✓	Total % Cover of: Multiply by:
1 Soudotodga Misharosii	OBL species 0 X 1 0 FACW species 0 X 2 0
	FAC species 47 X 3 141
	FACU species 9 X 4 36
Herbaceous Stratum Plot size (5 Foot Radius)	UPL species 0 X 50
Agrostis capillaris 4	FAC Column Totals 56 (A) 177 (B)
Alopecurus pratensis 1	FAC FAC Prevalence Index = B/A = 3.16071
Elymus repens 15 Elymus trachycaulus 10	FAC Hydrophytic Vegetation Indicators
Poa pratensis 6	FAC 1 - Rapid Test for Hydrophytic Vegetation
	2 - Dominance Test is >50%
	3 - Prevalence Index is <= 3.0
	 4 - Morphological Adaptations (Provide supporting data in remarks or on separate sheet.
	5 - Wetland Non-Vascular Plants
	Problematic Hydrophytic Vegetation (Explain)
Woody Vine Stratum Plot size (30 Foot Radius)	Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5.
Percent Bare Ground 61	Hydrophytic Vegetation Yes □ NO ✓ Present?
Remarks: Most of the bare ground at this point is covered in litter. This US Army Corps of Engineers	data point hosts an upland plant community. Western Mountains, Valleys, and Coasts - Version 2.0

SOIL										Sampling Point: DP01-u	
Profile Des	cription: (Describe	to the de	oth n	eeded to docum	ent the i	ndicator	or confir	m the absence		
Depth	-	Matrix			Redox	Feature		_			
(inches)	Color	(moist)	%		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-02	10YR	2/2	100						Loam		
02-08	10YR	2/1	90	N	2.5/0	10			Loam	Charcoal, burned wood	
08-16	10YR	4/1	100					S	andy Loam	Bottom of pit	
					duced Matrix, CS					cation: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators	: (Appli	cable to al	LRF	Rs, unless other	wise not	ed.)			ors for Problematic Hydric Soils ³ :	
Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)					Sandy Redox (S Stripped Matrix (Loamy Mucky M Loamy Gleyed M Depleted Matrix Redox Dark Sur Depleted Dark S Redox Depressi	(S6) ineral (F Matrix (F2 (F3) face (F6) surface (F)	t MLRA 1	2 cm Muck (A10) Red Parent Material (TF2)		
Restrictive	Layer (if p	resent):									
Туре:					-						
Depth (in	nches):				_				Hydric Soil	l Present? Yes 🖳 No 🔽	
TANDON O	NCV										
HYDROLC Wetland Hy		dicators	•								
-				d: ch	eck all that apply)			Seco	ndary Indicators (2 or more required)	
	Water (A1		ono roquire	- u, u.i	Water-Stair		es (B9) (e	excent		Vater-Stained Leaves (B9) (MLRA 1, 2	
	ater Table (, 2, 4A, a		хосрі	*	4A, and 4B)	
	ion (A3)	(/ (2)			☐ Salt Crust (a 4 <i>D</i> ,			Orainage Patterns (B10)	
\equiv	Marks (B1)				Aquatic Inv	•	s (B13)			Ory-Season Water Table (C2)	
	nt Deposits	(B2)		Hydrogen Sulfide Odor (C1)						Saturation Visible on Aerial Imagery (CS	
	posits (B3)				Oxidized R			Livina Ro		Seomorphic Position (D2)	
	at or Crust				Presence o		-	-	` ' —	Shallow Aquitard (D3)	
	posits (B5)	()			Recent Iron		,	•		FAC-Neutral Test (D5)	
Surface Soil Cracks (B6)					Stunted or					Raised Ant Mounds (D6) (LRR A)	
_	ion Visible	. ,	Imagery (E	37)	Other (Expl		•	7 (_	rost-Heave Hummocks (D7)	
	y Vegetate						,			, ,	
Field Obser	rvations:										
Surface Wat	ter Present	? `	res 🗌	No	Depth (inc	hes):					
Water Table			/es 🗌	No _							
Saturation P	Present?	•		No _					land Hydrolog	y Present? Yes No	
			n gauge, m	onito	ring well, aerial p	hotos, pr	evious ins	spections)	, if available:		
Remarks: No evidenc	e of wetla	nd hydro	ology obse	erved	 .						

Project/Site: Schrieber Lake	City/County: Lincoln		Sampling Date:	7/12/2022
Applicant/Owner: MDT		State: Montana		
Investigator(s): S Weyant, W Fouts	_ Section, Township, Ran	ge: S 13 T 2	27N R 30W	
Landform (hillslope, terrace, etc.): Valley bottom, depression				e (%):5
Subregion (LRR): LRR E Lat:				
Soil Map Unit Name: 108-Andic dystric eutrocrepts, lacustrine te				
Are climatic / hydrologic conditions on the site typical for this time of y				
Are Vegetation, Soil, or Hydrology significantly				No 🗌
Are Vegetation, Soil, or Hydrology naturally pr				
SUMMARY OF FINDINGS – Attach site map showing				tures, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No				
Hydric Soil Present? Yes Ves No	Is the Sampled within a Wetland	Area	No	
Wetland Hydrology Present? Yes Ves No Ves	- Within a vveuant	ur res	NO	
Remarks: Wetland sample point located approximately 3 feet in elevation	on lower than DP01-u			
victional sumple point located approximately offeet in dievate	of that by or-a.			
VEGETATION - Use scientific names of plants				
Tree Stratum Plot size (30 Foot Radius) Absolute Domiai % Cover: Specie		Dominance Test work	ksheet	
% cover. openic	o. Otatas	Number of Dominant S that are OBL, FACW o	Species1	(A)
		Total Number of Domin Species Across All Stra	1	(B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)		Percent of Dominant S That Are OBL, FACW,		% (A/B)
		Prevalence Index wo		to be been
		Total % Cover of OBL species	5 X 1	iply by:
				90
		FAC species	6 X3	18
B		FACU species	0 X 4	0
Herbaceous Stratum Plot size (5 Foot Radius)		UPL species	0 X 5	0
Alopecurus pratensis 5	FAC	Column Totals 5	6 (A)	113 (B)
Cirsium arvense 1	FAC OBL	Prevalence Index	c = B/A = 2.0178	86
Phalaris arundinacea 45	FACW	Hydrophytic Vegetati		
			st for Hydrophytic V	egetation/
			ce Test is >50%	
		✓ 3 - Prevalenc	ce Index is <= 3.0	
			gical Adaptations (F ata in remarks or or	
			Non-Vascular Plants	•
				_
			Hydrophytic Vegeta	, , ,
Woody Vine Stratum Plot size (30 Foot Radius)		Indicators of hydric sil a present, unless disturbe		
Percent Bare Ground 44		Hydrophytic Vegetation Present?	es 🗹 NO 🗆]
Remarks: A prevalence index below three and a poisitive dominance te		te of a hydrophytic veg		

SOIL											Sampling Point: DP01-w
Profile Desc	cription: (D	escribe	to the de	pth ne	eded to docu	ment the	indicator o	or con	firm the ab	sence	of indicators.)
Depth	-	Matrix			Redo	x Feature					
(inches)	Color (r	noist)	%	C	olor (moist)	%	Type ¹	Loc			Remarks
0-03									Organi	С	2 inches of litter at the surface
03-12	10YR	2/2	100						Peat (Fib	ric)	High OM content
12-15	10YR	2/2	100						Sand		Bottom of pit
						-					
					uced Matrix, C			d Sand		² Loc	cation: PL=Pore Lining, M=Matrix.
		(Appli	cable to a		s, unless othe		ed.)		In	_	ors for Problematic Hydric Soils ³ :
Histosol	` '				Sandy Redox (m Muck (A10)
	pipedon (A2	()		_	Stripped Matrix	` '					l Parent Material (TF2)
_	istic (A3)				Loamy Mucky I			MLRA	<u>ا</u> (1 ک	= -	y Shallow Dark Surface (TF12)
	en Sulfide (A				Loamy Gleyed		2)		L	_ Oth	er (Explain in Remarks)
	d Below Dar		ce (A11)		Depleted Matrix						
_	ark Surface	. ,		Щ	Redox Dark Su	rface (F6))		³ lı		ors of hydrophytic vegetation and
	Mucky Miner			Ш	Depleted Dark	Surface (F	- 7)			wetla	and hydrology must be present,
Sandy 0	Gleyed Matri	ix (S4)			Redox Depress	sions (F8)				unles	ss disturbed or problematic.
Restrictive	Layer (if pro	esent):									
Туре:											
Depth (in	ches):								Hydr	ic Soil	Present? Yes 🔽 No 🗌
Remarks:											sand matrix is made up of almost
HYDROLO	GY										
Wetland Hy											
		mum of	one require	ed; che	eck all that appl					$\overline{}$	ndary Indicators (2 or more required)
	Water (A1)						es (B9) (ex	cept		w	Vater-Stained Leaves (B9) (MLRA 1, 2,
	ater Table (A	\2)				1, 2, 4A, a	and 4B)				4A, and 4B)
Saturati	on (A3)				Salt Crust	, ,				_	rainage Patterns (B10)
Water M	larks (B1)				Aquatic In	vertebrate	es (B13)				ry-Season Water Table (C2)
Sedime	nt Deposits	(B2)			<u>✓</u> Hydrogen	Sulfide O	dor (C1)			_ <u></u> s	aturation Visible on Aerial Imagery (C9)
Drift De	posits (B3)				Oxidized F	Rhizosphe	res along L	iving	Roots (C3)	G	Geomorphic Position (D2)
Algal Ma	at or Crust (I	B4)			Presence	of Reduce	ed Iron (C4))		s	hallow Aquitard (D3)
☐ Iron Der	posits (B5)				Recent Iro	n Reducti	on in Tilled	Soils	(C6)	☐ F.	AC-Neutral Test (D5)
☐ Iron Deposits (B5) ☐ Recent Iron Reduction in Tilled Soils ☐ Surface Soil Cracks (B6) ☐ Stunted or Stressed Plants (D1) (LRI									Raised Ant Mounds (D6) (LRR A)		
	ion Visible o		Imagery (i	37)	Other (Ex		-	, (, ,		rost-Heave Hummocks (D7)
	y Vegetated				outlot (EX		, marito,				rest rieuve riuminesite (B7)
Field Obser				(50)							
Surface Wat		,	res 🗆	No	✓ Depth (in	ches).					
Water Table				No _		ches):		-			
Saturation P				No _	` `		^	- _w	letland Hyd	drolog:	y Present? Yes 🔽 No 🔲
(includes ca			- CS <u>V</u>	140 _	Deptii (iii	Cites)		- "	vetiana myc	il olog	y riesent: Tes <u>E</u> No <u> </u>
			n gauge, m	nonitor	ing well, aerial	photos, pr	evious insp	ection	ns), if availa	ble:	
Remarks:											
Remarks: Evidence of	f wetland h	vdrolog	v nresent	in sa	turation to the	soil surf	ace a wat	ter ta	ble denth '	5 inch	es from the soil surface, and
sulfidic odo				Ja	taradon to the	. 5011 5011	acc, a wa		alo dopui (55 Hom the con carrace, and
a.o ouoi	3 3011										

Project/Site: Schrieber Lake	City/County: Lincoln	Sampling Date:7/12/2022
Applicant/Owner: MDT		State: Montana Sampling Point: DP02-u
		ge: S 13 T 27N R 30W
Landform (hillslope, terrace, etc.): Terrace		
		Long:115.409342 Datum: NAD 83
Soil Map Unit Name: 105: Aquic udifluvents, poorly draine		
		NWI classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this ti	· — —	
Are Vegetation, Soil, or Hydrology sign		
Are Vegetation, Soil, or Hydrology nat		
SUMMARY OF FINDINGS – Attach site map sh		cations, transects, important features, etc.
	✓ Is the Sampled	Δrea
Hydric Soil Present? Wes No Wetland Hydrology Present? Yes No	within a Wetland	
Remarks:		
Upland point located approximately 2 feet higher than	DP02-w.	
VEGETATION - Use scientific names of plants	S	
Total Otto total District (OC Fret Deslive)	Domiant Indicator Species? Status	Dominance Test worksheet
Pinus contorta 2	✓ FAC	Number of Dominant Species that are OBL, FACW or FAC: 2 (A)
Pinus ponderosa 1	✓ FACU	Total Number of Dominant Species Across All Strata: 4 (B)
		Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)		Prevalence Index worksheet
		Total % Cover of: Multiply by:
		OBL species 0 X 1 0
		FACW species 0 X 2 0
		FAC species 65 X 3 195
Herbaceous Stratum Plot size (5 Foot Radius)		FACU species 22 X 4 <u>88</u> UPL species 5 X 5 25
Agrostis stolonifera 5 Alopecurus pratensis 3	FAC FAC	Column Totals 92 (A) 308 (B)
Bromus inermis 5	□ UPL	Prevalence Index = B/A = 3.34783
Elymus glaucus 20	FACU	Hydrophytic Vegetation Indicators
Phleum pratense 10	FAC	1 - Rapid Test for Hydrophytic Vegetation
Poa pratensis 45	✓ FAC	☐ 2 - Dominance Test is >50%
Verbascum thapsus 1	FACU	3 - Prevalence Index is <= 3.0
		 4 - Morphological Adaptations (Provide supporting data in remarks or on separate sheet.
		5 - Wetland Non-Vascular Plants
		Problematic Hydrophytic Vegetation (Explain)
Woody Vine Stratum Plot size (30 Foot Radius)		Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5.
Percent Bare Ground 11		Hydrophytic Vegetation Present? NO ✓
Remarks: This data point is dominated by upland vegetation. LIS Army Corps of Engineers		Western Mountains, Valleys, and Coasts - Version 2.0

SOIL							Sampling Point: DP02-u
Profile Des	cription: (Describ	e to the depth	needed to docur	nent the indicator o	or confirm t	he absence	
Depth	Matrix		Redo	x Features			
(inches)	Color (moist)	%	Color (moist)	% Type ¹	_Loc ²	Texture	Remarks
0-16	10YR 3/2	100			Sar	idy Loam	Bottom of pit, Fine roots
				S=Covered or Coated	d Sand Grai		cation: PL=Pore Lining, M=Matrix.
	Indicators: (Appl	ICADIE TO AII LE	_	-			ors for Problematic Hydric Soils ³ :
Histoso	ы (А1) Epipedon (A2)	<u> </u>	Sandy Redox (S Stripped Matrix				m Muck (A10) d Parent Material (TF2)
	Histic (A3)	늗	= ''	(So) Mineral (F1) (except	MI DA 1\	_	y Shallow Dark Surface (TF12)
Hydrog	en Sulfide (A4)	<u> </u>	Loamy Gleyed	Matrix (F2)	WILKA I)		er (Explain in Remarks)
	ed Below Dark Surfa	ace (A11) \sqsubseteq	Depleted Matrix			3	
	Dark Surface (A12)	<u> </u>	Redox Dark Su				ors of hydrophytic vegetation and
	Mucky Mineral (S1) Gleyed Matrix (S4)	<u> </u>	Depleted Dark : Redox Depress	` '			and hydrology must be present, ss disturbed or problematic.
	Layer (if present):		_ Redux Depless	ions (Fo)		unies	ss disturbed of problematic.
Type:	Layer (ii present).						
	b\.		_			Hudaia Call	Present? Yes No _ ✓
Remarks:	nches):					nyuric Soii	Present: res No
HYDROLO Wetland Hy	OGY ydrology Indicators	ş.					
-	icators (minimum of		check all that apply	v)		Seco	ndary Indicators (2 or more required)
	e Water (A1)			ined Leaves (B9) (ex	cept		Vater-Stained Leaves (B9) (MLRA 1, 2
	/ater Table (A2)			1, 2, 4A, and 4B)		*	4A, and 4B)
	ion (A3)		☐ Salt Crust				Orainage Patterns (B10)
$\overline{}$	Marks (B1)			vertebrates (B13)			Ory-Season Water Table (C2)
	ent Deposits (B2)			Sulfide Odor (C1)			Saturation Visible on Aerial Imagery (CS
	eposits (B3)			Rhizospheres along L	_iving Roots		Geomorphic Position (D2)
	lat or Crust (B4)			of Reduced Iron (C4)	-		Shallow Aquitard (D3)
	posits (B5)			n Reduction in Tilled			AC-Neutral Test (D5)
	Soil Cracks (B6)			Stressed Plants (D1		R	Raised Ant Mounds (D6) (LRR A)
Inundat	tion Visible on Aeria	I Imagery (B7)	Other (Exp	olain in Remarks)		F	rost-Heave Hummocks (D7)
Sparsel	ly Vegetated Conca	ve Surface (B8)				
Field Obse	rvations:						
Surface Wa	ter Present?	Yes No	Depth (inc	ches):	_		
Water Table	e Present?	Yes No		ches):			
Saturation F	Present? apillary fringe)	Yes No		ches):		ıd Hydrolog	y Present? Yes No
		m gauge, monit	toring well, aerial բ	ohotos, previous insp	pections), if	available:	
Remarks:							
	e of wetland hydr	ology observe	ed. The soil profi	le was dry through	out the pro	ofile.	
	 	0,	[, .9. .	- 1		

Project/Site: Schrieber Lake	City/County: Lincoln	Sampling Date:7/12/2	2022
Applicant/Owner: MDT		State: Montana Sampling Point: DP02-w	
	Section, Township, Rang	ge: S 13 T 27N R 30W	
Landform (hillslope, terrace, etc.): Toeslope			2
		Long:115.409446 Datum: NAD 8	
Soil Map Unit Name: 105: Aquic udifluvents, poorly drained			
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes 🗹 No	(If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "N	ormal Circumstances" present? Yes 🔽 No	
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If nee	ded, explain any answers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map showin	g sampling point lo	cations, transects, important features,	, etc.
Hydrophytic Vegetation Present? Yes No			
Hydric Soil Present? Yes V No V	Is the Sampled A		
Wetland Hydrology Present? Yes <u>✓</u> No Remarks:	·	160 160	
Wetland sample point located on the east side of wetland cell	19.		
VEGETATION - Use scientific names of plants			
Tree Stratum Plot size (30 Foot Radius) Absolute % Cover: Specie		Dominance Test worksheet	
% Cover. Specie	s: Status	Number of Dominant Species that are OBL, FACW or FAC: 1 (A)	
		Total Number of Dominant Species Across All Strata: 1 (B)	
Sapling/Shrub Stratum Plot size (15 Foot Radius)		Percent of Dominant Species That Are OBL, FACW, or FAC:	/B)
<u>Japinig/Giriab Gratain</u>		Prevalence Index worksheet	
		Total % Cover of: Multiply by:	_
		OBL species 0 X 1 0 FACW species 87 X 2 174	_
		FAC species 8 X 3 24	
		FACU species 0 X 4 0	
Herbaceous Stratum Plot size (5 Foot Radius)		UPL species 0 X 50	
Agrostis stolonifera 2	FAC	Column Totals 95 (A) 198	(B)
Alopecurus pratensis 4 ☐ Phalaris arundinacea 87 ✓	FAC FACW	Prevalence Index = B/A = 2.08421	
Phalaris arundinacea 87 Phleum pratense 2	FACV	Hydrophytic Vegetation Indicators	
		1 - Rapid Test for Hydrophytic Vegetation	on
		✓ 2 - Dominance Test is >50%	
		✓ 3 - Prevalence Index is <= 3.0	
		 4 - Morphological Adaptations (Provide supporting data in remarks or on separa sheet. 	ate
		5 - Wetland Non-Vascular Plants	
		Problematic Hydrophytic Vegetation (Ex	(nicin)
			. ,
Woody Vine Stratum Plot size (30 Foot Radius)		Indicators of hydric sil and wetland hydrology mus present, unless disturbed or problematic for #3, 4,	
		Hydrophytic Vegetation Yes ✓ NO	_
Percent Bare Ground 5		Present?	
Remarks: A prevalence index below three indicates the presence of a h	nydrophytic plant commi	unity at this data point.	
US Army Corps of Engineers	1	Nestern Mountains, Valleys, and Coasts - Version 2	2.0
OO AITHY COIPS OF ENGINEERS	V	rvestern mountains, valleys, and Coasts - version .	∠.∪

SOIL											Sampling Point: DP02-w
Profile Des	cription: (Describe	to the de	pth neede	d to docur	nent the in	ndicato	r or con	firm the ab	sence o	of indicators.)
Depth		Matrix			Redo	x Features	;				
(inches)	Color	(moist)	%	Color	(moist)	%	Type ¹	Loc	² Text	ure	Remarks
01-03	10YR	2/1	100						Loam		
03-08	10YR	8/2	95	10YR	8/8	5	С	PL	Silt Loa	m	
08-16	10YR	2/1	100			-			Loam		Bottom of pit
¹ Type: C=C Hydric Soil								ted San			ation: PL=Pore Lining, M=Matrix.
Histoso Histic E Black H Hydroge Deplete Thick D Sandy N	I (A1) Ipipedon (A Iistic (A3) en Sulfide (Id Below Da Iark Surface Mucky Mine Gleyed Mat	2) A4) ark Surface (A12) eral (S1) rix (S4)		Sandali Strip	dy Redox (Soped Matrix my Mucky M my Gleyed leted Matrix ox Dark Sulleted Dark Sox Depress	S5) (S6) Mineral (F1) Matrix (F2) ((F3) rface (F6) Surface (F) (exce	pt MLRA	A 1)	2 cm Red Very Othe	Muck (A10) Parent Material (TF2) Shallow Dark Surface (TF12) r (Explain in Remarks) rs of hydrophytic vegetation and hydrology must be present, statuthed or problematic.
Type:											
Depth (in Remarks:	nches):								Hydri	ic Soil I	Present? Yes 🔽 No 🔲
HYDROLC	ncv										
Wetland Hy		dicatore									
_				ad: check a	all that annly	v)				Second	dary Indicators (2 or more required)
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) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface					Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen	ned Leave 1, 2, 4A, a (B11) vertebrates Sulfide Od Rhizospher of Reduced n Reduction	or (C1) es along d Iron (C on in Till	g Living C4) ed Soils	, ,	□ Wa □ Dr. □ Dr. □ Dr. □ Sa □ Sh □ Sh	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) ainage Patterns (B10) y-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) ecomorphic Position (D2) allow Aquitard (D3) aC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
Field Obser Surface Wat Water Table Saturation P (includes ca	ter Present Present? Present? pillary fring	Y Y e)		No		ches): ches):		<u>5</u> v			Present? Yes 🔽 No 🗌
Describe Re	ecorded Dat	ta (stream	n gauge, m	onitoring v	vell, aerial p	ohotos, pre	vious ir	rspection	ns), if availal	ole:	
Remarks: Evidence of soil surface		hydrolog	y present	in the po	int's geom	orphic po	esition,	a positi	ve FAC-ne	eutral te	est, and saturation within 5" of the

Project/Site: Schrieber Lake	City/County: Lincoln Sampling Date:7/12/202
	State: Montana Sampling Point: DP03-u
	Section, Township, Range: S 13 T 27N R 30W
	Local relief (concave, convex, none): CONVEX Slope (%):
	48.103346 Long: -115.406682 Datum: NAD 83
	e terraces-Andic dystrocrepts, gl NWI classification:Not mapped
•	
Are climatic / hydrologic conditions on the site typical for this time of	
	antly disturbed? Are "Normal Circumstances" present? Yes 🔽 No 🗔
	y problematic? (If needed, explain any answers in Remarks.)
	ving sampling point locations, transects, important features, et
Hydrophytic Vegetation Present? Yes ☐ No ✓ Hydric Soil Present? Yes ☐ No ✓	
Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	
Remarks:	
This sample point is located in the southeast corner of the	project area, near Schrieber Lake.
VEGETATION - Use scientific names of plants	_
Total Otto Access Districts (OO Fact Destina)	miant Indicator pcies? Status Dominance Test worksheet
Picea engelmannii 20	Number of Dominant Species that are OBL, FACW or FAC: 3 (A)
Pseudotsuga menziesii 5	FACU Total Number of Dominant
	Species Across All Strata: 6 (B)
	Percent of Dominant Species That Are OBL, FACW, or FAC: 50 % (A/B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)	Prevalence Index worksheet
Amelanchier alnifolia 2	FACUTotal % Cover of: Multiply by:
Pseudotsuga menziesii 5	
Rosa woodsii 2	FACU FACU FACW species 0 X 2 0
Symphoricarpos albus 10 🔽	17.6 species 31 % 3273
Herbaceous Stratum Plot size (5 Foot Radius)	FACU species 26 X 4 104 UPL species 4 X 5 20
Achillea millefolium 1	FACU Column Totals 121 (A) 397 (E
Alopecurus arundinaceus 5	¬ FAC
Alopecurus pratensis 15	Prevalence Index = B/A = 3.28099
Centaurea stoebe 3	UPL Hydrophytic Vegetation Indicators
Cirsium arvense 1	FAC 1 - Rapid Test for Hydrophytic Vegetation
Elymus repens 50	
Fragaria virginiana 1	FACU 3 - Prevalence Index is <= 3.0
Penstemon confertus 1	UPL 4 - Morphological Adaptations (Provide supporting data in remarks or on separate sheet.
	5 - Wetland Non-Vascular Plants
	Problematic Hydrophytic Vegetation (Explai
Woody Vine Stratum Plot size (30 Foot Radius)	Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5.
Percent Bare Ground 18	Hydrophytic Vegetation Present? NO ✓
Remarks: The vegetation community at this data point is dominated to the vegetation community at this data point is dominated. LIS Army Corps of Engineers	by upland species. Western Mountains, Valleys, and Coasts - Version 2.0.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Profile Description: (Description: (Description: Section of the profile of the profil
Color (moist)
0-0-7
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Location: PL=Pore Lining, M=Matrix
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. The Coate Sand Grains Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. The Coate Sand Grains The Coate Sand Grai
**Type: C=Concentration, D=Depletion. RM=Reduced Matrix, CS=Covered or Costed Sand Grains. **Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils Red Problematic Hydric Soils Indicators for Problematic Hydric Soils Indicators Hydrophytic vegetation and wetland Hydrology Depleted Below Dark Surface (F6) Indicators of Hydrophytic vegetation and wetland Hydrology must be present, unless disturbed or problematic. Problematic Hydric Soil Present? Problematic Hydric Soil Present? Present Hydric Soil Present Hydric Hydric Soil Present Hydric Present Hydric Present Hydric Soil Present Hydric Soil Present Hydric Present
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)
Histosol (A1)
Type:
Hydric Soil Present? Yes No No Remarks: No hydric soil indicators observed. Hydric Soil indicators observed. Hydroic Soil indicators observed.
Remarks: No hydric soil indicators observed. Applicators Deposits (B3) Depth (inches):
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required; check all that apply) □ Surface Water (A1) □ Water-Stained Leaves (B9) (except □ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) □ A4A, and 4B) □ A4A, and 4B) □ Drainage Patterns (B10) □ Dray-Season Water Table (C2) □ Saturation Visible on Aerial Imager (B10) □ Drainage Patterns (B10) □ Dr
Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Saturation (A3) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Sediment Deposits (B3) Surface Soil Crust (B4) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water (A1) Water-Stained Leaves (B9) (except Water-Stained Leaves (B9) (MLRA 4A, and 4B) A4A, and 4B) Drainage Patterns (B10) Drainage Patterns (B
Surface Water (A1)
High Water Table (A2) Saturation (A3) Salt Crust (B11) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imager Dry-Season Water Table (C2) Saturation Present? Yes □ No ☑ Depth (inches): □ Saturation Present? Yes □ No ☑ Depth (inches): □ Wetland Hydrology Present? Yes □ No (includes capillary fringe)
Salturation (A3)
Water Marks (B1)
□ Sediment Deposits (B2) □ Hydrogen Sulfide Odor (C1) □ Saturation Visible on Aerial Imager □ Drift Deposits (B3) □ Oxidized Rhizospheres along Living Roots (C3) □ Geomorphic Position (D2) □ Algal Mat or Crust (B4) □ Presence of Reduced Iron (C4) □ Shallow Aquitard (D3) □ Iron Deposits (B5) □ Recent Iron Reduction in Tilled Soils (C6) □ FAC-Neutral Test (D5) □ Surface Soil Cracks (B6) □ Stunted or Stressed Plants (D1) (LRR A) □ Raised Ant Mounds (D6) (LRR A) □ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Remarks) □ Frost-Heave Hummocks (D7) □ Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes □ No ☑ Depth (inches): □ Wetland Hydrology Present? Yes □ No ☑ Depth (inches): □ No [includes capillary fringe)
□ Drift Deposits (B3) □ Oxidized Rhizospheres along Living Roots (C3) □ Geomorphic Position (D2) □ Algal Mat or Crust (B4) □ Presence of Reduced Iron (C4) □ Shallow Aquitard (D3) □ Iron Deposits (B5) □ Recent Iron Reduction in Tilled Soils (C6) □ FAC-Neutral Test (D5) □ Surface Soil Cracks (B6) □ Stunted or Stressed Plants (D1) (LRR A) □ Raised Ant Mounds (D6) (LRR A) □ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Remarks) □ Frost-Heave Hummocks (D7) □ Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes □ No ☑ Depth (inches): □ Wetland Hydrology Present? Yes □ No ☑ Depth (inches): □ No [includes capillary fringe)
□ Algal Mat or Crust (B4) □ Presence of Reduced Iron (C4) □ Shallow Aquitard (D3) □ Iron Deposits (B5) □ Recent Iron Reduction in Tilled Soils (C6) □ FAC-Neutral Test (D5) □ Surface Soil Cracks (B6) □ Stunted or Stressed Plants (D1) (LRR A) □ Raised Ant Mounds (D6) (LRR A) □ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Remarks) □ Frost-Heave Hummocks (D7) □ Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes □ No ☑ Depth (inches): □ Wetland Hydrology Present? Yes □ No ☑ Depth (inches): □ No [includes capillary fringe)
□ Iron Deposits (B5) □ Recent Iron Reduction in Tilled Soils (C6) □ FAC-Neutral Test (D5) □ Surface Soil Cracks (B6) □ Stunted or Stressed Plants (D1) (LRR A) □ Raised Ant Mounds (D6) (LRR A) □ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Remarks) □ Frost-Heave Hummocks (D7) □ Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes □ No ☑ Depth (inches): □ Water Table Present? Yes □ No ☑ Depth (inches): □ Wetland Hydrology Present? Yes □ No ☑ Includes capillary fringe)
Surface Soil Cracks (B6)
□ Inundation Visible on Aerial Imagery (B7) □ Other (Explain in Remarks) □ Frost-Heave Hummocks (D7) □ Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes □ No ✔ Depth (inches): □ Water Table Present? Yes □ No ✔ Depth (inches): □ Wetland Hydrology Present? Yes □ No
Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes □ No ☑ Depth (inches):
Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes Depth (inches): (includes capillary fringe) Wetland Hydrology Present? Yes No
Water Table Present? Yes \(\bigcup \) No \(\bigcup \) Depth (inches): \(\bigcup \) Saturation Present? \(\text{Yes} \) No \(\bigcup \) Depth (inches): \(\bigcup \) Wetland Hydrology Present? Yes \(\bigcup \) No \(\bigcup \) (includes capillary fringe)
Water Table Present? Yes Nov Depth (inches): Saturation Present? Yes No _v Depth (inches): (includes capillary fringe) Wetland Hydrology Present? Yes No
Saturation Present? Yes No Pepth (inches): Wetland Hydrology Present? Yes No No Includes capillary fringe)
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks:
No evidence of wetland hydrology observed.

Project/Site: Schrieber Lake	City/County: Lincoln	Sampling	Date: 7/12/2022
Applicant/Owner: MDT		State: Montana Sampling	
Investigator(s): S Weyant	Section, Township, Rang	ge: S 13 T 27N F	
Landform (hillslope, terrace, etc.): Toeslope/bank			
Subregion (LRR): LRR E Lat:	48.103407	Long:115.406738	Datum: NAD 83
Soil Map Unit Name: 108: Andic Dystric Eutrocrepts, lacustrine te	rraces-Andic Dystrocr	repts, gNWI classification:PEM	
Are climatic / hydrologic conditions on the site typical for this time of ye	ar? Yes 🔽 No 🗵	(If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "N	Iormal Circumstances" present? Y	es 🔽 No 🔲
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? (If nee	ded, explain any answers in Rema	rks.)
SUMMARY OF FINDINGS – Attach site map showing	sampling point lo	cations, transects, importa	ant features, etc.
Hydrophytic Vegetation Present? Yes No No No No No No No N			
Hydric Soil Present? Yes ✓ No □	Is the Sampled A		
Wetland Hydrology Present? Yes ✓ No Remarks:			
This point is located approximately 0.75 feet above the lake su	ırface.		
VEGETATION - Use scientific names of plants		_	
Tree Stratum Plot size (30 Foot Radius) Absolute Domiant % Cover: Species		Dominance Test worksheet	
— Opedes	: Glatus	Number of Dominant Species that are OBL, FACW or FAC:	2 (A)
		Total Number of Dominant Species Across All Strata:	2 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)		Percent of Dominant Species That Are OBL, FACW, or FAC:	100 % (A/B)
Supringismus Statum Fiscoles (10 Fiscoles)		Prevalence Index worksheet	
		Total % Cover of:	Multiply by:
		OBL species 0 X 1 FACW species 15 X 2	30
		FAC species 85 X 3	255
		FACU species 0 X 4	0
Herbaceous Stratum Plot size (5 Foot Radius)		UPL species 0 X 5	0
Alopecurus pratensis 60 🗸	FAC	Column Totals 100 (A) 285 (B)
Cirsium arvense 25 Phalaris arundinacea 15	FAC FACW	Prevalence Index = B/A =	2.85
Titalans arunumacea	TACV	Hydrophytic Vegetation Indicat	ors
		1 - Rapid Test for Hydro	phytic Vegetation
		2 - Dominance Test is >	50%
		✓ 3 - Prevalence Index is	<= 3.0
		4 - Morphological Adapt supporting data in rema	\
		sheet. 5 - Wetland Non-Vascul	ar Plants
		Problematic Hydrophytic	
		Indicators of hydric sil and wetland	
Woody Vine Stratum Plot size (30 Foot Radius)		present, unless disturbed or proble	
		Hydrophytic Vegetation Yes ✓ N	o 🗆
Percent Bare Ground 0		Present?	_ -
Remarks: A hydrophytic vegetation community is indicated by a prevaler	nce index below three	and a positive dominance test.	
US Army Corps of Engineers		Western Mountains, Valleys, and C	oasts - Version 2.0

SOIL											s	ampling Point	DP03-w
Profile Des	cription: (Describe	to the de	pth need	ed to docun	nent the i	ndicato	or or co	nfirm t	he absence			
Depth		Matrix				x Feature:		1 .					
(inches)		(moist)	%		r (moist)	<u>%</u>	Type			Texture		Remarks	
0-17	10YR	2/2	93	10YR	4/6	7	С	PL		Fibric			
17-22	10YR	3/1	80	10YR	4/6	20	С	M	Si	It Loam	Bottom	of pit	
			_										
							-						
Type: C=C	oncentratio	on D=Dei	oletion RN	/I=Reduce	ed Matrix, CS	======================================	or Coa	— —— ated Sai		ns ² l o	cation: PI =	Pore Lining, N	√=Matrix
					ınless other							lematic Hyd	
✓ Histoso	l (A1)			Sar	ndy Redox (S	S5)				2 cr	m Muck (A1	0)	
	pipedon (A	(2)		_	pped Matrix	. ,					l Parent Ma		
	listic (A3)	(A A)			ımy Mucky N			pt MLR	RA 1)	_	•	ark Surface (TF12)
	en Sulfide (ed Below Da		so (A11)		ımy Gleyed I oleted Matrix)			Oth	er (Explain i	n Remarks)	
	ark Surface		ZE (⊼11)	= :	dox Dark Sui	. ,				3Indicate	ors of hydroi	ohytic vegetat	ion and
	Mucky Mine				oleted Dark S		7)					y must be pre	
	Gleyed Mat			Red	dox Depress	ions (F8)	100			unles	s disturbed	or problemati	ic.
Restrictive	Layer (if p	resent):											
Type:													
Depth (in	nches):									Hydric Soil	Present?	Yes	No <u></u>
HYDROLC)GV												
Wetland Hy		dicators	<u> </u>										
_				ed; check	all that apply	y)				Seco	ndary Indica	tors (2 or moi	re required)
Surface	Water (A1)	•		Water-Stai	ned Leave	es (B9)	(except	Secondary Indicators (2 or more required) pt				
High W						1, 2, 4A, a					4A, and 4		, , , , ,
✓ Saturati					Salt Crust	(B11)					rainage Pat	terns (B10)	
Water N	Marks (B1)				Aquatic Inv	/ertebrate	s (B13)				-	Nater Table (
_	nt Deposits				Hydrogen :								I Imagery (C9
	posits (B3)			<u> </u>	☐ Oxidized R	-		-	Roots	_	1 1	Position (D2)	
	at or Crust			<u> </u>	Presence		,	•	(00)		hallow Aqui	` '	
	posits (B5)			<u> </u>	Recent Iron Stunted or						AC-Neutral	, ,	LDD A\
	Soil Crack ion Visible		lmagen, (l	B7)	Other (Exp			(D1) (L	KK A)			lounds (D6) (l Hummocks (I	-
	ly Vegetate				J Other (Exp	nani ili Ne	iliaiks)				iosi-rieave	Hummocks (L	<i>31)</i>
Field Obser	•			()									
Surface Wa	ter Present	? Y	∕es _□	No	Depth (inc	ches):							
Water Table	Present?	١	res 🔽	No	Depth (inc	ches):		11_					
Saturation F			res 🔽	No	Depth (inc	ches):		0	Wetlan	d Hydrolog	y Present?	Yes <u> </u>	No
(includes ca Describe Re			n dalide m	onitorina	well aerial r	photos pro	avious i	nenectic	ne) if	availahle.			
Describe 10	,0014C4 D4	ta (Stream	r gaage, n	iomiomig	wen, acriai p	motos, pr	3 110 43 1	поросия), ii	avallable.			
Remarks:													
Evidence of									dor be	eginning at	10" from th	e soil surfac	ce, a water
table depth	of 11" fro	m the so	il surface	e, and sat	uration at t	he soil s	urface.						

Project/Site: Schrieber Lake	City/County: Lincoln		Sampling Date: 7/12/202	22
Applicant/Owner: MDT		_{State:} Montana	_ Sampling Point: DP04b-w	
Investigator(s): S Weyant	Section, Township, Ran	ge: S 13 T	27N R 30W	
Landform (hillslope, terrace, etc.): Valley bottom			Slope (%):	0
Subregion (LRR): LRR E Lat:				
Soil Map Unit Name: 105: Aquic udifluvents, poorly drained		NWI classific		
Are climatic / hydrologic conditions on the site typical for this time of you				
Are Vegetation, Soil, or Hydrology significantly			•	\neg
Are Vegetation, Soil, or Hydrology naturally pr		eded, explain any answe		
SUMMARY OF FINDINGS – Attach site map showing			ŕ	etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: This point is boated poor the ord of constation transport 2	Is the Sampled A	Area d? Yes <u>\</u>	☑ No □	
This point is located near the end of vegetation transect 3.				
VEGETATION - Use scientific names of plants				
Tree Stratum Plot size (30 Foot Radius) Absolute Domiar % Cover: Species		Dominance Test wo	rksheet	
		Number of Dominant that are OBL, FACW		
		Total Number of Dom Species Across All S		
Sapling/Shrub Stratum Plot size (15 Foot Radius)		Percent of Dominant That Are OBL, FACW)
Betula pumila 27	OBL	Prevalence Index w		
Salix lasiandra 5	FACW	Total % Cover of OBL species	of: <u>Multiply by:</u> 97 X 1 97	_
		FACW species	5 X 2 10	
		FAC species	0 X3 0	
Harton and Otratum Plataire (5 - Foot Positive)		FACU species	0 X 4 <u>0</u>	
Herbaceous Stratum Plot size (5 Foot Radius)	0.01	UPL species	0 X 50	
Carex vesicaria 50	OBL	Column Totals	102 (A)107	(B)
Persicaria amphibia 10 Detentilla anserina 10	OBL OBL	Prevalence Inde	ex = B/A = 1.04902	
1 Oterruna arracima	OBL .	Hydrophytic Vegeta	tion Indicators	
		✓ 1 - Rapid Te	est for Hydrophytic Vegetation	
		2 - Dominar	nce Test is >50%	
		✓ 3 - Prevaler	nce Index is <= 3.0	
			ogical Adaptations (Provide data in remarks or on separate	;
			Non-Vascular Plants	
				- ! \
			Hydrophytic Vegetation (Expl	,
Woody Vine Stratum Plot size (30 Foot Radius)			and wetland hydrology must be bed or problematic for #3, 4, 5.	
Percent Bare Ground 30		Hydrophytic Vegetation Present?	Yes ☑ NO □	
Remarks:				
Much of the shrub cover at this point is made up of dead ster interior. A prevalence index below three and a positive domin site.				;

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SOIL		Sampling Point: DP04b-w
Profile Description: (Describe to the de	epth needed to document the indicator or confi	
Depth <u>Matrix</u>	Redox Features	_
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture Remarks
1		
Type: C=Concentration, D=Depletion, R Hydric Soil Indicators: (Applicable to a	M=Reduced Matrix, CS=Covered or Coated Sand	Grains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	2 cm Muck (A10)
Histic Epipedon (A2)	Stripped Matrix (S6)	Red Parent Material (TF2)
Black Histic (A3)	Loamy Mucky Mineral (F1) (except MLRA	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Matrix (F3)	Other (Explain in Remarks)
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):	Tredox Depressions (1 0)	diffess distarbed of problematic.
Type:		
Depth (inches):		Hydric Soil Present? Yes <u>✓</u> No _
Remarks:		
IYDROLOGY		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one require	red; check all that apply)	Secondary Indicators (2 or more required)
✓ Surface Water (A1)	Water-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
✓ High Water Table (A2)	MLRA 1, 2, 4A, and 4B)	4A, and 4B)
Saturation (A3)	Salt Crust (B11)	Drainage Patterns (B10)
	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Water Marks (B1)		Saturation Visible on Aerial Imagery (C9)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	
Drift Deposits (B3)	Oxidized Rhizospheres along Living R	
Algal Mat or Crust (B4)	Presence of Reduced Iron (C4)	L Shallow Aquitard (D3)
Iron Deposits (B5)	Recent Iron Reduction in Tilled Soils (
Surface Soil Cracks (B6)	L Stunted or Stressed Plants (D1) (LRR	A) Laised Ant Mounds (D6) (LRR A)
Inundation Visible on Aerial Imagery	(B7) Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface	e (B8)	
Field Observations:		
Surface Water Present? Yes	No Depth (inches): 24	
Water Table Present? Yes <u>✓</u>		
Saturation Present? Yes	,	etland Hydrology Present? Yes 🔽 No 🔲
(includes capillary fringe)	_ 140 Deptil (iliciles) VVE	and hydrology Flesent: Tes E
	monitoring well, aerial photos, previous inspections	s), if available:
Remarks:	nt in a saturation and a high water table at the	soil surface 25 inches of water above the
	hic position and a positive FAC-neutral test.	, son surface, 20 inches of water above the
zamaco, ao mon ao mo ono o geomorp	poolaon and a poolaro i Mo-nodial tost.	

Project/Site: Schrieber Lake	City/County: Lincoln Sampling Date: 7/12/2022
	State: Montana Sampling Point: DP04-u
	Section, Township, Range: S 13 T 27N R 30W
	Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): LRR E	48.102323 Long: -115.410111 Datum: NAD 83
Soil Map Unit Name: 105: Aquic udifluvents, poorly drained	Long. Not manned
	NWI classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of	
	y disturbed? Are "Normal Circumstances" present? Yes 🗹 No 🔲
Are Vegetation, Soil, or Hydrology naturally p	
	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes □ No ✔ Hydric Soil Present? Yes □ No ✔	Is the Sampled Area
Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	within a Wetland? Yes No
Remarks:	-
This point is located between 0.5' and .75' above DP04-w.	
VEGETATION - Use scientific names of plants	
<u>Tree Stratum</u> Plot size (30 Foot Radius) Absolute Domia % Cover: Specie	
	Number of Dominant Species ——
Abies grandis 10 Picea engelmannii 23	FACU that are OBL, FACW or FAC: 3 (A) FAC Total Number of Deminent
Pinus ponderosa 2	Total Number of Dominant FACU Species Across All Strata: 6 (B)
Tillus portuoiosa 2	
Capling/Church Stratum Diet size // F Foot Podius)	That Are OBL, FACW, or FAC: 50 % (A/B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)	Prevalence Index worksheet
Abies grandis 10	FACU Total % Cover of: Multiply by:
Alnus incana 10 Picea engelmannii 5	FAC OBL species 0 X 1 0 FACW species 10 X 2 20
Picea engelmannii 5 Symphoricarpos albus 5	TACW species 10 X2 Z0
Symphonical poet alibate	FACU FACU FACU species 69 X 3 207 FACU species 30 X 4 120
Herbaceous Stratum Plot size (5 Foot Radius)	UPL species 56 X 5 280
Achillea millefolium 1	FACU Column Totals 165 (A) 627 (B)
Alopecurus arundinaceus 1	FAC
Bromus inermis 8	UPL Prevalence Index = B/A = 3.8
Campanula rotundifolia 2	FACU Hydrophytic Vegetation Indicators 1 - Rapid Test for Hydrophytic Vegetation
Equisetum arvense 8	FAC
Festuca rubra 32	<u>FAC</u>
Hieracium aurantiacum 3	UPL 3 - Prevalence Index is <= 3.0
Linaria dalmatica 45 🗸	UPL 4 - Morphological Adaptations (Provide supporting data in remarks or on separate sheet.
	☐ 5 - Wetland Non-Vascular Plants
	Problematic Hydrophytic Vegetation (Explain)
Woody Vine Stratum Plot size (30 Foot Radius)	Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5.
Percent Bare Ground 0	Hydrophytic Vegetation Present? NO ✓ Present?
Remarks: The vegetation community at this point is dominated by upla LIS Army Corps of Engineers	Mestern Mountains, Valleys, and Coasts - Version 2.0

SOIL									S	ampling Point	DP04-u
Profile Des	cription: (Describe	to the dep	oth needed to d	ocument the i	ndicator or o	confirm	the absence			
Depth		Matrix			Redox Features						
(inches)	Color	(moist)	%	Color (moist	.) %	Type ¹ l	_oc ²	<u>Texture</u>		Remarks	
0-08	10YR	4/1	100				S	Silt Loam			
08-16	2.5Y	7/1	100				Pote	ential Loam	Botton	of pit	
	-										
	-			-					-		
				=Reduced Matri			and Gra			Pore Lining, N	
Hydric Soil	Indicators	: (Appli	cable to all	LRRs, unless	otherwise note	ed.)		Indicato	ors for Prol	olematic Hydr	ric Soils³:
Histoso	I (A1)			Sandy Red	lox (S5)				m Muck (A1		
Histic E	pipedon (A	2)		Stripped M	atrix (S6)			L Red	l Parent Ma	terial (TF2)	
Black H	listic (A3)			Loamy Mu	cky Mineral (F1) (except MI	LRA 1)	Ver	y Shallow D	ark Surface (1	F12)
Hydrog	en Sulfide ((A4)		Loamy Gle	yed Matrix (F2)		Oth	er (Explain	in Remarks)	
Deplete	ed Below Da	ark Surfa	ce (A11)	Depleted N	/latrix (F3)						
Thick D	ark Surface	e (A12)		Redox Dar	k Surface (F6)			³ Indicato	ors of hydro	phytic vegetat	ion and
	Mucky Mine				ark Surface (F	7)		wetla	nd hydrolog	gy must be pre	esent,
	Gleyed Mat				ressions (F8)	,				or problemati	
Restrictive										•	
Type:	, , ,										
Depth (in	nches):							Hydric Soil	Present?	Yes	No 🔽
Remarks:											
to be the re		'									
HYDROLC)GY										
Wetland Hy	= =			al. ala a al. all the at				0		(0	··i1\
			one require	d; check all that		·			•	tors (2 or mor	• •
	Water (A1) ater Table (Stained Leave		ept	V		ed Leaves (B9)) (MLRA 1, 2,
Saturati		(A2)			₋RA 1, 2, 4A, a ¢rust (B11)	11u 4b)		Пг	4 A, and 4 Prainage Pa	נסו tterns (B10)	
$\overline{}$	//arks (B1)			_	ic Invertebrate:	s (B13)				Water Table (0	C2)
	nt Deposits	(B2)			gen Sulfide Oc				-	sible on Aeria	
	posits (B3)				zed Rhizospher		ng Root			Position (D2)	3 3 4 7
	at or Crust				nce of Reduce	-	Ü	` ' —	hallow Aqu		
	posits (B5)	()			nt Iron Reduction		oils (C6)		AC-Neutral		
	Soil Crack	s (B6)			ed or Stressed					/lounds (D6) (l	RR A)
			Imagery (B		(Explain in Re					Hummocks (E	-
			/e Surface (<i>'</i>	(Explain in Ne	ilaiks)			10St-Heave	Hullillocks (L	,,,
Field Obser				,							
Surface Wa	ter Present	? '	Yes	No Dept	h (inches):						
Water Table	Present?	•	Yes		h (inches):						
Saturation F			Yes	No <u> </u>	h (inches):		Wetla	nd Hydrolog	y Present?	Yes	_ No <u></u> ✓
(includes ca Describe Re			n gauge, m	onitoring well, a	erial photos, pre	evious inspec	tions), it	f available:			
Remarks:	hservatio	n nit wa	s noted to	be moist belov	v 8 inches hu	t no wetlan	d hydro	logy indicate	ore were o	hearvad	
Jon III IIIe C	JUSCI VALIUI	ıı pır wa	S HOLEU IU	PC HIOIST DEION	v o mones, bu	THE WELIAIT	a riyulu	nogy mulcal	JIS WEIE U	JJCI VEU.	

Project/Site: Schrieber Lake	City/County Lincoln	Sampling [_{Date:} 7/12/2022
Applicant/Owner: MDT	ony/obumy.	State: Montana Sampling F	
	Section Township Range	state: sampling F	
Landform (hillslope, terrace, etc.): Floodplain			
Subregion (LRR): LRR E Lat:			
Are climatic / hydrologic conditions on the site typical for this time of year			
Are Vegetation, Soil, or Hydrology significantly			es 🔽 No 🔲
Are Vegetation, Soil, or Hydrology naturally pro			
SUMMARY OF FINDINGS – Attach site map showing	sampling point loca	ations, transects, importa	int features, etc.
Hydrophytic Vegetation Present? Yes ✓ No □		· · ·	
Hydric Soil Present? Yes No	Is the Sampled Arc		\neg
Wetland Hydrology Present? Yes Ves No Ves	within a Wetland?	Yes <u> </u>	<u> </u>
Remarks: This point is located in the southeast section of the project area.	a		
	-		
VEGETATION - Use scientific names of plants			
Tree Stratum Plot size (30 Foot Radius) Absolute Domiant % Cover: Species		Dominance Test worksheet	
// Cover. Species		Number of Dominant Species	1 (4)
		that are OBL, FACW or FAC:	1 (A)
		Total Number of Dominant Species Across All Strata:	1 (B)
		Percent of Dominant Species	100 % (A/B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)		That Are OBL, FACW, or FAC:	70 (A(B)
		Prevalence Index worksheet Total % Cover of:	Multiply by:
		OBL species 97 X 1	97
		FACW species 3 X 2	6
		FAC species 0 X 3	0
Herbaceous Stratum Plot size (5 Foot Radius)		FACU species 0 X 4 UPL species 0 X 5	0
Persicaria amphibia 97	ODI		
Phalaris arundinacea 3	FACW	Column Totals 100 (A)	103 (B)
		Prevalence Index = B/A =	1.03
		Hydrophytic Vegetation Indicate ✓ 1 - Rapid Test for Hydro	
		✓ 2 - Dominance Test is >	. , .
		✓ 3 - Prevalence Index is	
		4 - Morphological Adapt	
		supporting data in remainsheet.	\
		5 - Wetland Non-Vascula	ar Plants
		Problematic Hydrophytic	Vegetation (Explain)
Woody Vine Stratum Plot size (30 Foot Radius)		ndicators of hydric sil and wetland present, unless disturbed or proble	
Percent Bare Ground 0	,	Hydrophytic Vegetation Present? Ves ✓ NO	о П
Remarks:			
A prevalence index below three indicates the presence of a hy	drophytic plant commur	nity at this data point.	
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CO / Milly Corpo of Engineers	***************************************	Social Mountains, valleys, and Ot	24310 V 0131011 Z.U

SOIL											S	ampling Poir	nt: DP04-w
Profile Des	cription: (Describe	to the de	oth nee	ded to docu	ment the	indicator o	r con	firm the ab	sence			
Depth		Matrix			Red	ox Feature			_				
(inches)		(moist)	%	Co	lor (moist)	%	Type ¹	Loc ²				Remarks	3
0-04	10YR	3/2	100						Silt Loa	ım	Many re	oots	
04-16	2.5Y	6/2	100						Loam	1	Possib	le ash, bot	tom of pi
¹ Type: C=C	· ————————————————————————————————————	on D=De			ced Matrix, C	S=Covere		I Sanc			ation: PI =	Pore Lining,	M=Matrix
								Curic				lematic Hy	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Black Histic (A3) Hydrogen Sulfide (A4) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) (except MLRA) Loamy Mucky Mineral (F1) (except MLRA) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Restrictive Layer (if present):						 Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, 							
				<u> </u>	edox Depres	sions (F8))			unless	s disturbed	or problema	itic.
	Layer (if p	resent):											
Type:	\.								l li cele	ia Cail	D	Yes	Na [
Depth (in Remarks:	iches):								Hydr	10 2011	Present?	res <u> </u>	No
IVDBOLO	NCV												
HYDROLO		al: 4											
Wetland Hy				d oboc	ck all that app	do)				Cocon	danı Indiaa	tors (2 or mo	ara raguiras
Surface High W. Saturati Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel	water (A1 ater Table (ion (A3) Marks (B1) Int Deposits posits (B3) at or Crust posits (B5) Soil Crack ion Visible of) (A2) (B2) (B4) s (B6) on Aerial	lmagery (E	- - - - - - - - - - - - - - -	Water-Standard Water-	ained Leavan, 1, 2, 4A, t (B11) nivertebrate Sulfide Control Rhizospheron Reduction	es (B13) Odor (C1) eres along Li ed Iron (C4) tion in Tilled d Plants (D1)	iving I Soils	(C6)	Dr Dr Sa Sa St St FA	ater-Staine 4A, and 4 rainage Pat ry-Season Valuration Via eomorphic nallow Aqui AC-Neutral aised Ant M	d Leaves (B B) terns (B10) Water Table sible on Aeri Position (D2 tard (D3)	9) (MLRA 1 (C2) (al Imagery)
Field Obser													
Surface Wat					_	nches):	4.4	-					
Water Table				No		nches):	9	-			_		
Saturation F (includes ca			∕es <u></u>	No	L Depth (in	nches):	9	- W	etland Hyd	drology	Present?	Yes <u> </u>	No
Describe Re	corded Dat	ta (strear	n gauge, m	onitorin	ıg well, aerial	photos, p	revious insp	ection	ıs), if availa	ble:			
Domarks:													
Remarks: Evidence of surface, as										face a	nd saturat	ion within §	9" of the so

Project/Site: Schrieber Lake	City/County: Lincoln	Sampli	ing Date: 7/12/2022
		_{State:} Montana _{Sampli}	
		S 13 T 27N	-
Landform (hillslope, terrace, etc.): Hillside			
Subregion (LRR): LRR E	48.106495 Lo	ong: -115.4122	299 _{Datum:} NAD 83
		NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of y			
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Nor	rmal Circumstances" present?	Yes <u>V</u> No
Are Vegetation, Soil, or Hydrology naturally pr	roblematic? (If neede	ed, explain any answers in Re	marks.)
SUMMARY OF FINDINGS - Attach site map showing	g sampling point loca	ations, transects, impo	ortant features, etc.
Hydrophytic Vegetation Present? Yes No			
Hydric Soil Present? Yes No	Is the Sampled Ard within a Wetland?		o 🔽
Wetland Hydrology Present? Yes No _ ✓ Remarks:			<u> </u>
Upland sample point located outside wetland cell 6.			
VEGETATION - Use scientific names of plants			
Tree Stratum Plot size (30 Foot Radius) Absolute % Cover: Specie		Dominance Test worksheet	
// Cover. Specie		Number of Dominant Species that are OBL, FACW or FAC:	
		Total Number of Dominant Species Across All Strata:	4 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)		Percent of Dominant Species That Are OBL, FACW, or FAC	
Berberis repens 3	UPL	Prevalence Index workshee	
Symphoricarpos albus 10	EACH	Total % Cover of: OBL species 0 X	Multiply by:
		FACW species 0 X	
		FAC species 60 X 3	3 180
Harbana Chartura Distaire (5 Feet Dedice)		FACU species 25 X	
Herbaceous Stratum Plot size (5 Foot Radius)	540	UPL species 19 X	
Alopecurus pratensis 25 Alyssum alyssoides 1	FAC UPL	Column Totals 104	(A) <u>375</u> (B)
Pascopyrum smithii 15	FACU	Prevalence Index = B/A	= 3.60577
Phleum pratense 35	FAC	Hydrophytic Vegetation Indi	
Stipa viridula 15	UPL	2 - Dominance Test	ydrophytic Vegetation
		3 - Prevalence Index	
		4 - Morphological Ac supporting data in re sheet.	emarks or on separate
		5 - Wetland Non-Vas	scular Plants
		☐ Problematic Hydroph	hytic Vegetation (Explain)
Woody Vine Stratum Plot size (30 Foot Radius)		ndicators of hydric sil and wetl present, unless disturbed or pr	land hydrology must be
Percent Bare Ground 9		Hydrophytic Vegetation Yes Present?	NO 🗹
Remarks:			
The vegetation community at this point is dominated by uplar	nd species.		
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Profile Des								Sampling Point: DP05-u
	cription: (De	scribe to th	e depth n	eeded to docum	ent the indicator o	r confirm the	e absence	
Depth	M	latrix		Redox	Features			
(inches)	Color (mo	oist) (%	Color (moist)	<u>%</u> Type ¹	Loc ²	Texture	Remarks
0-05	10YR 2	2/2 1	00			Sand	y Loam	Fine roots
05-15	10YR 3	3/1 1	00			Sand	y Loam	Bottom of pit
					 =Covered or Coated	Sand Grains		ation: PL=Pore Lining, M=Matrix.
	-	Applicable	to all LRF	Rs, unless otherv	-			rs for Problematic Hydric Soils ³ :
Histoso	, ,		片	Sandy Redox (S	•			n Muck (A10)
	Epipedon (A2)		ዙ	Stripped Matrix (_	Parent Material (TF2)
	Histic (A3) jen Sulfide (A4))	븜	Loamy Mucky M Loamy Gleyed M	ineral (F1) (except l latrix (F2)	MLRA 1)		Shallow Dark Surface (TF12) er (Explain in Remarks)
	ed Below Dark		11) 🗂	Depleted Matrix			0	(Explain in Nomarko)
	Dark Surface (A		'''	Redox Dark Surf	. ,		3Indicato	rs of hydrophytic vegetation and
	Mucky Mineral			Depleted Dark S				nd hydrology must be present,
_	Gleyed Matrix			Redox Depression				s disturbed or problematic.
Restrictive	Layer (if pres	sent):		· · · · · · · · · · · · · · · · · · ·				
Type:				_				
Depth (ir	nches):						lvdric Soil	Present? Yes 🔲 No 🗹
HYDROLO Wetland Hy								
-	yarology inaic	ators:						
Primary Indi			equired; ch	neck all that apply)		Secon	dary Indicators (2 or more required)
$\overline{}$	icators (minimu		equired; ch			cept		
Surface	icators (minimu Water (A1)	um of one re	equired; ch	Water-Stain	ed Leaves (B9) (ex	cept		dary Indicators (2 or more required) ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
Surface	icators (minimu	um of one re	equired; ch	Water-Stain	ed Leaves (B9) (exe , 2, 4A, and 4B)	cept	w	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
Surface High W Saturat	icators (minimule Water (A1) /ater Table (A2 tion (A3)	um of one re	equired; ch	Water-Stain MLRA 1 Salt Crust (ned Leaves (B9) (ex o , 2, 4A, and 4B) B11)	cept	w	ater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10)
Surface High W Saturat Water M	icators (minimule Water (A1) /ater Table (A2 tion (A3) Marks (B1)	um of one re	equired; ch	Water-Stain MLRA 1 Salt Crust (I	ned Leaves (B9) (exe , 2, 4A, and 4B) B11) ertebrates (B13)	cept		later-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2)
Surface High W Saturat Water M	icators (minimule Water (A1) /ater Table (A2 tion (A3)	um of one re	equired; ch	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve	ned Leaves (B9) (ex o , 2, 4A, and 4B) B11)		W D D S	later-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2)
Surface High W Saturat Water M Sedime	icators (minimu e Water (A1) /ater Table (A2 tion (A3) Marks (B1) ent Deposits (B	um of one re	equired; ch	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve	ned Leaves (B9) (exc , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1)			later-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (CS
Surface High W Saturat Water M Sedime Drift De Algal M	icators (minimule Water (A1) /ater Table (A2 tion (A3) Marks (B1) ent Deposits (B eposits (B3)	um of one re	equired; ch	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve	ned Leaves (B9) (exc , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along Li	ving Roots (D D S S G S S S S S S S S S S S S S S S	later-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (CS eomorphic Position (D2)
Surface High W Saturat Water M Sedime Drift De Algal M	icators (minimule Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B eposits (B3) lat or Crust (B4	um of one re) 2)	equired; ch	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve	ned Leaves (B9) (exe , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along Li f Reduced Iron (C4)	ving Roots (Soils (C6)	W Di Di Si Si Si Fi	rater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (Cs eomorphic Position (D2) nallow Aquitard (D3)
Surface High W Saturat Water M Sedime Drift De Algal M Iron De Surface	icators (minimule Water (A1) /ater Table (A2) /ion (A3) Marks (B1) /ent Deposits (B3) /iat or Crust (B4) //eposits (B5)	um of one re) 2) 4)		Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S	ned Leaves (B9) (exc , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along Li f Reduced Iron (C4) Reduction in Tilled	ving Roots (Soils (C6)	D D D S S S S S S S S S S S S S S S S S	rater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) raturation Visible on Aerial Imagery (C9 recomorphic Position (D2) rallow Aquitard (D3) AC-Neutral Test (D5)
Surface High W Saturat Water M Sedime Drift De Algal M Iron De Surface	icators (minimule Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B3) lat or Crust (B4) eposits (B5) e Soil Cracks (B5)	um of one re) 2) 4) B6) Aerial Image	ery (B7)	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S	need Leaves (B9) (exc , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along Li f Reduced Iron (C4) Reduction in Tilled Stressed Plants (D1)	ving Roots (Soils (C6)	D D D S S S S S S S S S S S S S S S S S	rater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) raturation Visible on Aerial Imagery (C9 reomorphic Position (D2) rallow Aquitard (D3) AC-Neutral Test (D5) raised Ant Mounds (D6) (LRR A)
Surface High W Saturat Water M Sedime Drift De Algal M Iron De Surface	icators (minimule Water (A1) /ater Table (A2) ition (A3) Marks (B1) ent Deposits (B3) lat or Crust (B4) eposits (B5) e Soil Cracks (E1) ition Visible on A ly Vegetated C	um of one re) 2) 4) B6) Aerial Image	ery (B7)	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S	need Leaves (B9) (exc , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along Li f Reduced Iron (C4) Reduction in Tilled Stressed Plants (D1)	ving Roots (Soils (C6)	D D D S S S S S S S S S S S S S S S S S	rater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) raturation Visible on Aerial Imagery (C9 reomorphic Position (D2) rallow Aquitard (D3) AC-Neutral Test (D5) raised Ant Mounds (D6) (LRR A)
Surface High W Saturat Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel	icators (minimule Water (A1) /ater Table (A2) ition (A3) Marks (B1) ent Deposits (B3) lat or Crust (B4) eposits (B5) e Soil Cracks (E1) ition Visible on A ly Vegetated C	um of one re) 2) 4) B6) Aerial Image	ery (B7) face (B8)	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rt Presence of Recent Iron Stunted or S Other (Expl.	need Leaves (B9) (exc , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along Li f Reduced Iron (C4) Reduction in Tilled Stressed Plants (D1)	ving Roots (Soils (C6) (LRR A)	D D D S S S S S S S S S S S S S S S S S	rater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) raturation Visible on Aerial Imagery (C9 reomorphic Position (D2) rallow Aquitard (D3) AC-Neutral Test (D5) raised Ant Mounds (D6) (LRR A)
Surface High W Saturat Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel	icators (minimule Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B3) dat or Crust (B4) eposits (B5) e Soil Cracks (B5) e Soil Cracks (B5) ly Vegetated C rvations:	um of one re) (2) (4) (86) Aerial Imago	ery (B7) face (B8)	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rf Presence of Recent Iron Stunted or S Other (Expl	ned Leaves (B9) (exe , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along Li f Reduced Iron (C4) Reduction in Tilled Stressed Plants (D1) ain in Remarks)	ving Roots ((Soils (C6)	D D D S S S S S S S S S S S S S S S S S	rater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) raturation Visible on Aerial Imagery (C9 reomorphic Position (D2) rallow Aquitard (D3) AC-Neutral Test (D5) raised Ant Mounds (D6) (LRR A)
Surface High W Saturat Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel Field Obset Surface Water Table Saturation F	icators (minimule Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B3) lat or Crust (B4) eposits (B5) e Soil Cracks (B5) e Soil Cracks (B5) ly Vegetated C rvations: ter Present? Present?	um of one re) (2) (4) (B6) Aerial Image concave Sur	ery (B7) face (B8)	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence or Recent Iron Stunted or S Other (Expl.	ned Leaves (B9) (exc , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along Li f Reduced Iron (C4) Reduction in Tilled Stressed Plants (D1) ain in Remarks)	ving Roots ((Soils (C6) (LRR A)	W Di Si Si Si Fi Ri Fr	rater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) raturation Visible on Aerial Imagery (C9 reomorphic Position (D2) rallow Aquitard (D3) AC-Neutral Test (D5) raised Ant Mounds (D6) (LRR A)
Surface High W Saturat Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel Field Obser Surface Wa Water Table Saturation F (includes ca	icators (minimule Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B3) dat or Crust (B4) eposits (B5) e Soil Cracks (B5) e Soil Cracks (B5) e Posits (B5) e Present? eresent? eresent?	um of one re) 2) 4) Aerial Image concave Sur Yes Yes Yes	ery (B7) face (B8) No _ No _ No _	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rf Presence of Recent Iron Stunted or S Other (Expl.	ned Leaves (B9) (executed Leaves (B9) (executed Leaves (B13) and 4B) B11) B11) B11) B11) B11) B12 B13 B14 B15 B15 B16 B17 B17 B17 B18 B18 B18 B19 B19 B19 B19 B19	ving Roots ((Soils (C6) (LRR A)	C3) G G Si G Fr G F	rater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) raturation Visible on Aerial Imagery (Caeomorphic Position (D2) rallow Aquitard (D3) AC-Neutral Test (D5) raised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
Surface High W Saturat Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel Field Obser Surface Wa Water Table Saturation F (includes ca	icators (minimule Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B3) dat or Crust (B4) eposits (B5) e Soil Cracks (B5) e Soil Cracks (B5) e Posits (B5) e Present? eresent? eresent?	um of one re) 2) 4) Aerial Image concave Sur Yes Yes Yes	ery (B7) face (B8) No _ No _ No _	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rf Presence of Recent Iron Stunted or S Other (Expl.	ned Leaves (B9) (exc , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along Lif f Reduced Iron (C4) Reduction in Tilled Stressed Plants (D1) ain in Remarks)	ving Roots ((Soils (C6) (LRR A)	C3) G G Si G Fr G F	rater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) raturation Visible on Aerial Imagery (C9 reomorphic Position (D2) rallow Aquitard (D3) AC-Neutral Test (D5) raised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
Surface High W Saturat Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel Field Obset Surface Wa Water Table Saturation F (includes ca	icators (minimule Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B3) dat or Crust (B4) eposits (B5) e Soil Cracks (B5) e Soil Cracks (B5) e Posits (B5) e Present? eresent? eresent?	um of one re) (2) (4) (B6) Aerial Image concave Sur Yes Yes Yes stream gauge	ery (B7) face (B8) No _ No _ No _ ge, monito	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Expl.	ned Leaves (B9) (exc , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along Lif f Reduced Iron (C4) Reduction in Tilled Stressed Plants (D1) ain in Remarks)	ving Roots ((Soils (C6) (LRR A)	C3) G G Si G Fr G F	rater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) raturation Visible on Aerial Imagery (C9 recomorphic Position (D2) rallow Aquitard (D3) raC-Neutral Test (D5) raised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
Surface High W Saturat Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel Field Obset Surface Wa Water Table Saturation F (includes ca Describe Re	icators (minimule Water (A1) /ater Table (A2) /ater Table (A2) /ater Table (A2) /ater Table (A3) Marks (B1) /ent Deposits (B3) /ent Deposits (B3) /ent Or Crust (B4) /eposits (B5) /eposits (B5) /eposits (B5) /eposits (B5) /eposits (B5) /eposits (B6) /epos	um of one re) (2) (4) (B6) Aerial Image concave Sur Yes Yes Yes stream gauge	ery (B7) face (B8) No _ No _ No _ ge, monito	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Expl.	ned Leaves (B9) (exc , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along Lif f Reduced Iron (C4) Reduction in Tilled Stressed Plants (D1) ain in Remarks)	ving Roots ((Soils (C6) (LRR A)	C3) G G Si G Fr G F	rater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) raturation Visible on Aerial Imagery (C9 recomorphic Position (D2) rallow Aquitard (D3) raC-Neutral Test (D5) raised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
Surface High W Saturat Water M Sedime Drift De Algal M Iron De Surface Inundat Sparsel Field Obsel Surface Wa Water Table Saturation F (includes ca Describe Re	icators (minimule Water (A1) /ater Table (A2) /ater Table (A2) /ater Table (A2) /ater Table (A3) Marks (B1) /ent Deposits (B3) /ent Deposits (B3) /ent Or Crust (B4) /eposits (B5) /eposits (B5) /eposits (B5) /eposits (B5) /eposits (B5) /eposits (B6) /epos	um of one re) (2) (4) (B6) Aerial Image concave Sur Yes Yes Yes stream gauge	ery (B7) face (B8) No _ No _ No _ ge, monito	Water-Stain MLRA 1 Salt Crust (I Aquatic Inve Hydrogen S Oxidized Rh Presence of Recent Iron Stunted or S Other (Expl.	ned Leaves (B9) (exc , 2, 4A, and 4B) B11) ertebrates (B13) sulfide Odor (C1) nizospheres along Lif f Reduced Iron (C4) Reduction in Tilled Stressed Plants (D1) ain in Remarks)	ving Roots ((Soils (C6) (LRR A)	C3) G G Si G Fr G F	rater-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) raturation Visible on Aerial Imagery (Caeomorphic Position (D2) rallow Aquitard (D3) AC-Neutral Test (D5) raised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)

Project/Site: Schrieber Lake City.	/County: Lincoln Sampling Date: 7/12/2022
Applicant/Owner: MDT	State: Montana Sampling Point: DP05-w
Investigator(s): J Trilling Sec	tion, Township, Range: S 13 T 27N R 30W
Landform (hillslope, terrace, etc.): Toeslope Loc	
Subregion (LRR): LRR E Lat:	
Soil Map Unit Name: 105: Aquic udifluvents, poorly drained	NWI classification:PEM
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes ✓ No ☐ (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distr	
Are Vegetation, Soil, or Hydrology naturally probler	
	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes No No No No No No No N	Is the Sampled Area within a Wetland? Yes No
Remarks: Wetland sample point located near center of project area.	
VEGETATION - Use scientific names of plants	
Tree Stratum Plot size (30 Foot Radius) Absolute Domiant	Indicator Dominance Test worksheet
Flot size (30 Foot Radius) % Cover: Species?	Number of Dominant Species that are OBL, FACW or FAC: 2 (A)
	Total Number of Dominant Species Across All Strata: 2 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)	Percent of Dominant Species That Are OBL, FACW, or FAC: 100 % (A/B)
	Prevalence Index worksheet
	Total % Cover of: Multiply by: OBL species 30 X 1 30
	FACW species 60 X 2 120
	FAC species 0 X 3 0
Herbacous Stratum Plot size / F Foot Padius	FACU species 0 X 4 0 UPL species 0 X 5 0
Herbaceous Stratum Plot size (5 Foot Radius) Carex utriculata 30 ✓ 0	
	BL (A) (B) ACW
Thatana di anamada	Prevalence Index = B/A = 1.66667
	Hydrophytic Vegetation Indicators
	✓ 1 - Rapid Test for Hydrophytic Vegetation
	✓ 2 - Dominance Test is >50%
	✓ 3 - Prevalence Index is <= 3.0
	4 - Morphological Adaptations (Provide supporting data in remarks or on separate sheet.
	☐ 5 - Wetland Non-Vascular Plants
	Problematic Hydrophytic Vegetation (Explain)
Woody Vine Stratum Plot size (30 Foot Radius)	Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5.
Percent Bare Ground 10	Hydrophytic Vegetation Present? NO □
Remarks: A prevalence index below three and a positive dominance test indepoint.	licate the presence of a hydrophytic plant community at this data

B-37

SOIL											Sampling Point: DP05-w
Profile Des	scription: (Describe	to the de	oth n	eeded to docu	ment the	indicator	or confir	rm the abs	sence	
Depth		Matrix			Redo	x Featur			_		
(inches)	Color	(moist)	%		Color (moist)	%	Type ¹	_Loc ²	Textu	ıre	Remarks
0-06	10YR	2/1	100					Silt	t Loam-fib	orous	
06-16	10YR	2/1	100					L	oam-fibro	ous	Bottom of pit
	_										
									_		
	_								_		
¹ Type: C=0	 Concentratio	on, D=De	 pletion, RM	-Red	duced Matrix, C	S=Cover	ed or Coate	ed Sand C	 Grains.	Loc	ation: PL=Pore Lining, M=Matrix.
Hydric Soi	I Indicators	: (Appli	cable to all	LRF	Rs, unless othe	rwise no	ted.)		Inc		rs for Problematic Hydric Soils ³ :
Histoso	ol (A1)				Sandy Redox (S5)] 2 cm	ı Muck (A10)
Histic E	Epipedon (A	.2)			Stripped Matrix						Parent Material (TF2)
	Histic (A3)				Loamy Mucky I	. ,	-1) (except	MLRA 1	1) 🗀		Shallow Dark Surface (TF12)
	gen Sulfide ((A4)			Loamy Gleyed	,					r (Explain in Remarks)
Deplete	ed Below Da	ark Surfa	ce (A11)		Depleted Matri	x (F3)					
Thick [Dark Surface	e (A12)			Redox Dark Su	ırface (F6	5)		³ In	dicator	rs of hydrophytic vegetation and
Sandy	Mucky Mine	eral (S1)			Depleted Dark	Surface	(F7)				nd hydrology must be present,
	Gleyed Mat				Redox Depress	sions (F8)			unless	s disturbed or problematic.
Restrictive	Layer (if p	resent):									
Type:					_						
Depth (i	nches):								Hydrid	c Soil	Present? Yes 🔽 No 🔲
HYDROLO	OGY										
Wetland H										_	
	,		one require	d; ch	eck all that appl	•					dary Indicators (2 or more required)
	e Water (A1				Water-Sta	ined Lea	ves (B9) (e	xcept		W	ater-Stained Leaves (B9) (MLRA 1, 2,
	/ater Table ((A2)			MLRA	1, 2, 4A,	and 4B)				4A, and 4B)
<u></u> Saturat	tion (A3)					. ,			-		ainage Patterns (B10)
Water I	Marks (B1)				Aquatic In	vertebrat	es (B13)				y-Season Water Table (C2)
Sedime	ent Deposits	s (B2)			_ ⊻ Hydrogen	Sulfide C	Odor (C1)		-	Sa	aturation Visible on Aerial Imagery (C9
Drift De	eposits (B3)				Oxidized F	Rhizosph	eres along	Living Ro	oots (C3)	✓ Ge	eomorphic Position (D2)
Algal M	lat or Crust	(B4)			Presence	of Reduc	ed Iron (C4	l)		sr	nallow Aquitard (D3)
Iron De	eposits (B5)				Recent Iro	n Reduc	tion in Tilled	d Soils (C	C6)	FA	AC-Neutral Test (D5)
Surface	e Soil Crack	s (B6)			Stunted or	r Stresse	d Plants (D	1) (LRR /	A)	Ra	aised Ant Mounds (D6) (LRR A)
	tion Visible		Imagery (B	(7)	Other (Ex		-	, (_	ost-Heave Hummocks (D7)
_	ly Vegetate			•			,		-		(= 1,
Field Obse			- 2200 (· /							
	ater Present	2 \	res 🗆	Nο	Depth (in	chee).					
Water Table				No _			•	_			
				_			^	_ ,a.e.	flood Heel	rol	Procent2 Ves V
Saturation I	Present? apillary fring		Yes <u></u> ✓	No _	Depth (in	cnes):		_ vve	tland Hydi	rology	Present? Yes 🔽 No 🔲
			n gauge, m	onito	ring well, aerial	photos, p	revious ins	pections)), if availab	le:	
Remarks:											
	s deomorn	hic nosit	ion satura	ation	to the soil sur	face a d	denth to th	e water	table of t	hree ii	nches, and a hydrogen sulfide
odor inidca				ati OH	to the son sur	iau u , a (acpui to ti	ic water	CADIC OI L	 11	nonce, and a frydrogen sullide
Sasi iiliada	wolland	, a . 0 10	9J.								

Project/Site: Schrieber Lake	City/C	county: Lincoln		Sampling Da	te: 7/12/2022
Applicant/Owner: MDT		•	State: Montana		
Investigator(s): J Trilling	Section	on, Township, Rang	_	_ ' '	
Landform (hillslope, terrace, etc.): Terrace	 Local	I relief (concave, co	nvex. none); flat		Slope (%): 5
Subregion (LRR): LRR E					
Soil Map Unit Name: 105: Aquic udifluvents, poorly drained				ification:Not ma	
Are climatic / hydrologic conditions on the site typical for this time	of year? Y				
Are Vegetation, Soil, or Hydrology signific					✓ No □
Are Vegetation, Soil, or Hydrology natura			ded, explain any ansv		
SUMMARY OF FINDINGS – Attach site map show					
Hydrophytic Vegetation Present? Yes No					
Hydric Soil Present? Yes No		Is the Sampled A within a Wetland		□ No ✓	
Wetland Hydrology Present? Yes No		within a vvenand	. 163		<u>'</u>
Remarks: Upland sample point located on the east side of the proje	ctarea ne	ear the start of ve	netation transect 3		
Cpranta campro ponin recalled on and cast state or and project	or a. oa,			'	
VEGETATION - Use scientific names of plants					
Table Street up - Plot size (20 Feet Bedius) Absolute Do		ndicator	Dominance Test w	vorksheet	
<u>Tree Stratum</u> Plot size (30 Foot Radius) % Cover: Sp	ecies? S	itatus	Number of Dominar	nt Species	1 (A)
			Total Number of Do Species Across All		2 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)			Percent of Dominar That Are OBL, FAC		50 % (A/B)
<u>Japinigishirab Gtrataini</u>			Prevalence Index	worksheet	
			Total % Cove		Multiply by:
			OBL species FACW species	0 X 1 5 X 2	10
			FAC species	25 X 3	75
			FACU species	0 X 4	0
<u>Herbaceous Stratum</u> Plot size (5 Foot Radius)			UPL species	65 X 5	325
Alopecurus pratensis 25	✓ FAC	<u> </u>	Column Totals	95 (A)	410 (B)
	✓ UPI	-	Prevalence Inc	dex = B/A = 4.	31579
Phalaris arundinacea 5	FAC	CW L	Hydrophytic Veget		
				Test for Hydroph	
			2 - Domina	ance Test is >50	1%
			3 - Prevale	ence Index is <=	3.0
				ological Adaptati g data in remarks	
			sheet.	,	·
			5 - Wetlan	d Non-Vascular	Plants
			Problemat	ic Hydrophytic V	egetation (Explain)
Woody Vine Stratum Plot size (30 Foot Radius)			Indicators of hydric s present, unless distu		
Doroent Bors Crewed 5			Hydrophytic Vegetation Present?	Yes NO	V
Percent Bare Ground 5 Remarks:			. 1636/11:		
The vegetation community at this data point is dominated	d by upland	d species.			
US Army Corps of Engineers		V	Vestern Mountains, V	/allevs_and Coa	sts - Version 2.0

Profile Description: (Describe to the depth needed to document the indicator o	Sampling Point: DP06-u
• • • • • • • • • • • • • • • • • • • •	
Depth Matrix Redox Features	
(inches) Color (moist) % Color (moist) % Type ¹	Loc ² Texture Remarks
0-10 10YR 2/2 100	Clay Loam
10-16 10YR 8/1 98 10YR 4/6 2 C M	M Sandy Clay Loam Bottom of pit
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Histic Epipedon (A2) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) (except Loamy Gleyed Matrix (F2) Depleted Matrix (F3)	MLRA 1)
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,
Sandy Gleyed Matrix (S4) Redox Depressions (F8)	unless disturbed or problematic.
Restrictive Layer (if present):	
Type:	
Depth (inches):	Hydric Soil Present? Yes <u>✓</u> No <u></u>
HYDROLOGY Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	
rumary indicators (minimum of one required: check all that apply)	Secondary Indicators (2 or more required)
	Secondary Indicators (2 or more required) Water-Stained Leaves (R9) (MIRA 1.2
Surface Water (A1) Water-Stained Leaves (B9) (ex	ccept Water-Stained Leaves (B9) (MLRA 1, 2
Surface Water (A1) High Water Table (A2) Water-Stained Leaves (B9) (ex MLRA 1, 2, 4A, and 4B)	water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water-Stained Leaves (B9) (ex MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10)
□ Surface Water (A1) □ Water-Stained Leaves (B9) (ex □ High Water Table (A2) MLRA 1, 2, 4A, and 4B) □ Saturation (A3) □ Salt Crust (B11) □ Water Marks (B1) □ Aquatic Invertebrates (B13)	water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
□ Surface Water (A1) □ Water-Stained Leaves (B9) (ex □ High Water Table (A2) MLRA 1, 2, 4A, and 4B) □ Saturation (A3) □ Salt Crust (B11) □ Water Marks (B1) □ Aquatic Invertebrates (B13) □ Sediment Deposits (B2) □ 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 (Ca
□ Surface Water (A1) □ Water-Stained Leaves (B9) (ex ☐ High Water Table (A2) ☐ Salt Crust (B11) ☐ Squartion (A3) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Sediment Deposits (B2) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along L	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Civing Roots (C3) Geomorphic Position (D2)
Surface Water (A1) □ Water-Stained Leaves (B9) (ex □ High Water Table (A2) MLRA 1, 2, 4A, and 4B) □ Saturation (A3) □ Salt Crust (B11) □ Water Marks (B1) □ Aquatic Invertebrates (B13) □ Sediment Deposits (B2) □ Hydrogen Sulfide Odor (C1) □ Drift Deposits (B3) □ Oxidized Rhizospheres along L □ Algal Mat or Crust (B4) □ 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 (C3) Living Roots (C3) Shallow Aquitard (D3)
□ Surface Water (A1) □ Water-Stained Leaves (B9) (ex □ High Water Table (A2) MLRA 1, 2, 4A, and 4B) □ Saturation (A3) □ Salt Crust (B11) □ Water Marks (B1) □ Aquatic Invertebrates (B13) □ Sediment Deposits (B2) □ Hydrogen Sulfide Odor (C1) □ Drift Deposits (B3) □ Oxidized Rhizospheres along L □ Algal Mat or Crust (B4) □ Presence of Reduced Iron (C4) □ Iron Deposits (B5) □ Recent Iron Reduction in Tilled	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Caliving Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Soils (C6) FAC-Neutral Test (D5)
Surface Water (A1) High Water Table (A2) Saturation (A3) Salt Crust (B11) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Water-Stained Leaves (B9) (ex MLRA 1, 2, 4A, and 4B) Aquatic Invertebrates (B13) Aquatic Invertebrates (B13) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stunted or Stressed Plants (D1	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3) Living Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Soils (C6) FAC-Neutral Test (D5) () (LRR A) Raised Ant Mounds (D6) (LRR A)
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) (ex MLRA 1, 2, 4A, and 4B) ☐ Salt Crust (B11) ☐ Aquatic Invertebrates (B13) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along L ☐ Presence of Reduced Iron (C4) ☐ Iron Deposits (B5) ☐ Recent Iron Reduction in Tilled	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Caliving Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Soils (C6) FAC-Neutral Test (D5)
Surface Water (A1) High Water Table (A2) Saturation (A3) Salt Crust (B11) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) (ex MLRA 1, 2, 4A, and 4B) Aquatic Invertebrates (B13) Aquatic Invertebrates (B13) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stunted or Stressed Plants (D1	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3) Living Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Soils (C6) FAC-Neutral Test (D5) () (LRR A) Raised Ant Mounds (D6) (LRR A)
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) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Surface Soil Cracks (B8) Water-Stained Leaves (B9) (ex MLRA 1, 2, 4A, and 4B) Aquatic Invertebrates (B13) Aquatic Invertebrates (B13) Aquatic Invertebrates (B13) Aquatic Invertebrates (B13) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations:	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3) Living Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Soils (C6) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9) (ex MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stunted or Stressed Plants (D1 Other (Explain in Remarks) Field Observations: Surface Water Present? Yes No Popth (inches):	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) □ Soils (C6) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7)
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) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Water-Stained Leaves (B9) (ex MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stunted or Stressed Plants (D1 Other (Explain in Remarks) Field Observations: Surface Water Present? Yes No Pepth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3) Living Roots (C3) Geomorphic Position (D2) Shallow Aquitard (D3) Soils (C6) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
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) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Water-Stained Leaves (B9) (ex MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Doxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stunted or Stressed Plants (D1) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes No Depth (inches): Saturation Present? Yes Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (Citiving Roots (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ Soils (C6) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7) Wetland Hydrology Present? Yes □ No ▼
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) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water Table Present? Yes No Depth (inches): Saturation Present? Yes Depth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C3 Living Roots (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ Soils (C6) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7) □ Wetland Hydrology Present? Yes □ No ▼
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) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Water A1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Stunted or Stressed Plants (D1 Other (Explain in Remarks) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective includes capillary fringe)	Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Saturation Visible on Aerial Imagery (C3 Living Roots (C3) □ Geomorphic Position (D2) □ Shallow Aquitard (D3) □ Soils (C6) □ FAC-Neutral Test (D5) □ Raised Ant Mounds (D6) (LRR A) □ Frost-Heave Hummocks (D7) □ Wetland Hydrology Present? Yes □ No ▼

Project/Site: Schrieber Lake City/Co	unty: Lincoln Sampling Date:7/12/2022
Applicant/Owner: MDT	State: Montana Sampling Point: DP06-w
Investigator(s): J Trilling Section	
Landform (hillslope, terrace, etc.): Terrace Local r	, remain, range.
Subregion (LRR): LRR E Lat:	
Soil Map Unit Name: 105: Aquic udifluvents, poorly drained	
	NWI classification: Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year? Ye	
Are Vegetation, Soil, or Hydrology significantly disturbed	
Are Vegetation, Soil, or Hydrology naturally problemati	ic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing samp	oling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	le the Complet Area
Trydric contricaciti:	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present? Yes <u>✓</u> No <u> </u>	
Sample point located near the start of vegetation transect 3, in wetlar	nd cell 4.
Campie point located floar and start of regulation transcott of in floation	
VEGETATION - Use scientific names of plants	
Troc Stratum Plot size (20 Foot Padius)	icator Dominance Test worksheet
70 GOVER. Openies: Ote	Number of Dominant Species that are OBL, FACW or FAC: (A)
	Total Number of Dominant Species Across All Strata: 1 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)	Percent of Dominant Species That Are OBL, FACW, or FAC: 100 % (A/B)
,	Prevalence Index worksheet
	Total % Cover of: Multiply by: OBL species 0 X 1 0
	OBL species 0 X 1 0 190 190 190 190 190 190 190 190 190
	FAC species 4 X 3 12
	FACU species 0 X 4 0
Herbaceous Stratum Plot size (5 Foot Radius)	UPL species 1 X 55
Alopecurus pratensis 4 FAC	Column Totals 100 (A) 207 (B)
Bromus inermis 1 UPL	Prevalence Index = B/A = 2.07
Phalaris arundinacea 95 FAC	Hydrophytic Vegetation Indicators
	✓ 1 - Rapid Test for Hydrophytic Vegetation
	✓ 2 - Dominance Test is >50%
	✓ 3 - Prevalence Index is <= 3.0
	 4 - Morphological Adaptations (Provide supporting data in remarks or on separate
	sheet.
	☐ 5 - Wetland Non-Vascular Plants
	Problematic Hydrophytic Vegetation (Explain)
Woody Vine Stratum Plot size (30 Foot Radius)	Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5.
Percent Bare Ground 0	Hydrophytic Vegetation Present? Ves ✓ NO
Remarks: A prevalence index below three and a positive dominance test indica data point.	te that a hydrophytic vegetation community is present at this

B-41

SOIL											Sa	ampling Point	DP06-w
Profile Des	cription: (D	escribe	to the de	oth need	ded to docur	nent the i	ndicato	r or co	nfirm	the absence			
Depth		Matrix				x Features							
(inches)	Color (r	moist)	%	Col	or (moist)	%	Type ¹	Lo		Texture		Remarks	
0-04	10YR	2/1	100						Silty	Clay loam	Fibrous	i	
04-18	10YR	2/1	97	10YR	5/2	3	С	M	S	ilt Loam	Bottom	of pit	
18-20	10YR	5/1	98	10YR	5/6	2	С	M	CI	ay Loam			
	-							_					
Type: C=C	 Concentration	n, D=Dep	letion, RM		ed Matrix, CS	S=Covered	or Coa	ed Sa	nd Gra	ins. ² Loc	ation: PL=	Pore Lining, N	M=Matrix.
					unless other							lematic Hyd	
Black H Hydrog Deplete Thick D Sandy I	Epipedon (A2 Histic (A3) Jen Sulfide (A Jed Below Dar Dark Surface Mucky Miner	A4) rk Surfac (A12) ral (S1)	e (A11)	St Lo Lo De	andy Redox (S ripped Matrix amy Mucky N amy Gleyed I apleted Matrix adox Dark Su apleted Dark S	(S6) Mineral (F1) Matrix (F2) (F3) rface (F6) Surface (F)	ot MLF	RA 1)	Red Very Othe	er (Explain i rs of hydrop nd hydrolog	erial (TF2) ark Surface (n Remarks) hytic vegetat y must be pre	tion and
	Gleyed Matri			<u> </u>	edox Depress	ions (F8)				unles	s disturbed	or problemati	ic.
	Layer (if pr	esent):											
Туре:													
Depth (ir	nches):									Hydric Soil	Present?	Yes <u>V</u>	No
HYDROLC		liantara											
-	ydrology Ind icators (mini			d: chocl	k all that apply	. ()				Sacar	danı Indica	tore (2 or mo	ro roquirod\
$\overline{}$	`	Hulli ol o	ne require	a, checi		.,	- (DO) (4		-	tors (2 or moi	-
	e Water (A1) /stor Table (/	\ 2\			Water-Stai			excep	τ	V\) (MLRA 1, 2,
	/ater Table (A	(2)		Г	_	1, 2, 4A, a	na 4B)				4A, and 4	•	
	ion (A3)			+	Salt Crust	` '	~ (D42)				rainage Pat		C2)
	Marks (B1)	(DO)		<u></u>	Aquatic Inv						-	Vater Table (
	ent Deposits	(B2)			Hydrogen								ıl Imagery (C9
	eposits (B3)	5 40			Oxidized R	-		-	g Root	_		Position (D2)	
	lat or Crust (B4)			Presence						nallow Aqui		
	posits (B5)				Recent Iro						AC-Neutral		
_	Soil Cracks				Stunted or		•	01) (L l	RR A)			ounds (D6) (l	-
	tion Visible o ly Vegetated				Other (Exp	olain in Rei	marks)			Fı	ost-Heave	Hummocks ([D7)
Field Obser				(==)									
Surface Wa	ter Present?	Υ	es 🗆	No [Depth (inc	ches):							
Water Table	e Present?	Υ	es	No [Depth (inc								
Saturation F	Present? apillary fringe		es 🔽	No[Depth (inc				Wetla	nd Hydrology	Present?	Yes 🔽	No
			gauge, m	onitoring	g well, aerial p	ohotos, pre	evious in	specti	ons), if	available:			
Remarks:													
Evidence of	f wetland h	ydrology	/ present	in satu	ration within	7" of the	soil su	rface.					
Evidence o	f wetland h	ydrology	/ present	in satu	ration within	7" of the	soil su	rface.					
Evidence o	f wetland h	ydrology	/ present	in satu	ration within	7" of the	soil su	rface.					

Applicant/Owner MOT	Project/Site: Schrieber Lake		C	ity/County:	Lincoln		Sampling D	ate: 7/12	2/2022
Landform (nillslope, terrace, etc.): Hillside									
Subregion (LRR). LRRE									. 10
Soil Map Unit Name 108: Andic dystric eutrocrepts, lacustrine terraces-Andic dystrocrepts, gl New classification Not mapped Are climatic / hydrologic conditions on the site typical for this time of year? Yes No									
Are Vegetation									
Are Vegetation	•							аррси	
Summary Summ									
Summary Summ									io <u> </u>
Hydrophytic Vegetation Present? Yes No Wilson Processor No Wilson Present? Yes No Wilson Processor No Wilson No Wilson Processor No Wilson No Wils	re Vegetation, Soil, or Hydrology	y nati	urally prob	lematic?	(If needed,	explain any answ	ers in Remark	s.)	
Hydric Soil Present? Yes No Welland Hydrology Present? Yes No Welland Pyrology Present? Yes No Welland?	SUMMARY OF FINDINGS – Attach si			sampling	point location	ons, transect	s, importar	nt feature	s, etc.
Wetland Hydrology Present? Yes				la dha	Communical Arros				
VEGETATION - Use scientific names of plants Tree Stratum	-				.=1	Yes [□ No ▼	•	
VEGETATION - Use scientific names of plants Tree Stratum Plot size (30 Foot Radius) Absolute Cover: Species? Status Sapling/Shrub Stratum Plot size (30 Foot Radius) FACU FACU FACU Sapling/Shrub Stratum Plot size (15 Foot Radius) FACU FAC		No _		Within	a welland:				
VEGETATION - Use scientific names of plants Tree Stratum Plot size (30 Foot Radius) Absolute % Cover: Species? Status Dominant % Cover: Species? Status Abies grandis 30 ✓ FACU The ACU FACU FACU Larix occidentalis 10 ☐ FACU Pinus contorta 20 ✓ FAC Sapling/Shrub Stratum Plot size (15 Foot Radius) Amelanchier alnifolia 15 ✓ FACU Rosa woodsii 10 ✓ FACU Symphoricarpos albus 20 ✓ FACU Herbaceous Stratum Plot size (5 Foot Radius) Arctostaphylos uva-ursi 20 ✓ FACU Berberis repens 10 UPL Calamagrostis rubescens 15 ✓ UPL Carpanula rotundifolia 2 FACU Equisetum arvense 5 FAC Fragaria virginiana 10 FACU Hieracium acurantiacum 3 UPL Hieracium acurantiacum 2 VUPL Linnaea borealis 2 FACU Penstemon confertus 2 UPL Cilinnaea borealis 2 FACU Penstemon confertus 2 UPL Linnaea borealis 2 FACU		act corner o	f the proi	oct area					
Absolute	opiand sample point located in the southwe	est comer o	i iiie pioj	eul alea.					
Abies grandis 30	VEGETATION - Use scientific name:	s of plants	<u> </u>						
Abies grandis 30 FACU Larix occidentalis 10 FACU Pinus contorta 20 FACU FACU FACU FACU FACU FACU FACU FAC	<u>Tree Stratum</u> Plot size (30 Foot Radius)				Do	minance Test wo	orksheet		
Larix occidentalis	Abjec grandic							1 (4)	
Pinus contorta 20								' (A)	
Sapling/Shrub Stratum Plot size (15 Foot Radius) Amelanchier alnifolia 15	=======================================							8 (B)	i
Sapling/Shrub Stratum Plot size (15 Foot Radius) Amelanchier alnifolia 15	- mae comorta			1710					
Amelanchier alnifolia Rosa woodsii 10	Sanling/Shrub Stratum Plot Sizo 4 F For	ot Padius)						12.5 %	(A/B)
Rosa woodsii				E4011	Pre	evalence Index w	orksheet		
Symphoricarpos albus 20 FACU Herbaceous Stratum Plot size (5 Foot Radius) Arctostaphylos uva-ursi 20 FACU Berberis repens 10 UPL Calamagrostis rubescens 15 UPL Campanula rotundifolia 2 FACU Equisetum arvense 5 FAC Fragaria virginiana 10 FACU Hieracium aurantiacum 3 UPL Hieracium scouleri 20 VUPL Linnaea borealis 2 FACU Penstemon confertus Woody Vine Stratum Plot size (30 Foot Radius) Obl. species 0 X 1 0 FACW SPECIES 25 X3 75 FACW species 25 X3 75 FACU UPL SPECIES 50 X 5 250 UPL	=				· <u> </u>	Total % Cover	of:	Multiply b	ı <u>y:</u>
Herbaceous Stratum Plot size (5 Foot Radius) Arctostaphylos uva-ursi 20 FACU Berberis repens 10 UPL Calamagrostis rubescens 15 UPL Campanula rotundifolia 2 FACU Equisetum arvense 5 FAC Fragaria virginiana 10 FACU Hieracium aurantiacum 3 UPL Hieracium scouleri 20 UPL Linnaea borealis 2 FACU Penstemon confertus Woody Vine Stratum Plot size (30 Foot Radius) FAC species 25 X 3 75 FAC Upl species 119 X 4 476 UPL species 50 X 5 250 Column Totals 194 (A) 801 Prevalence Index = B/A = 4.12887 Hydrophytic Vegetation Indicators						•			
Herbaceous Stratum Plot size (5 Foot Radius) Arctostaphylos uva-ursi 20	Symphonical pos albus	20	V	FACU		•			
Herbaceous Stratum Plot size (5 Foot Radius) Arctostaphylos uva-ursi 20 ✓ FACU Berberis repens 10 UPL Calamagrostis rubescens 15 ✓ UPL Campanula rotundifolia 2 FACU Equisetum arvense 5 FAC Fragaria virginiana 10 FACU Hieracium aurantiacum 3 UPL Hieracium scouleri 20 ✓ UPL Linnaea borealis 2 FACU Penstemon confertus 2 UPL Woody Vine Stratum Plot size (30 Foot Radius) UPL species FACU Prevalence Index = B/A = 4.12887 Hydrophytic Vegetation Indicators 1 - Rapid Test for Hydrophytic Vegetat 2 - Dominance Test is >50% 2 - Dominance Test is >50% 3 - Prevalence Index is <= 3.0 4 - Morphological Adaptations (Provide supporting data in remarks or on separ sheet. 5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation (E Indicators of hydric sil and wetland hydrology mu present, unless disturbed or problematic for #3, 4						•	_		
Berberis repens Calamagrostis rubescens 15	Herbaceous Stratum Plot size (5 Foo	ot Radius)							
Berberis repens 10 UPL Calamagrostis rubescens 15 ☑ UPL Campanula rotundifolia 2 ☐ FACU Equisetum arvense 5 ☐ FAC Fragaria virginiana 10 ☐ FACU Hieracium aurantiacum 3 ☐ UPL Hieracium scouleri 20 ☑ UPL Linnaea borealis 2 ☐ FACU Penstemon confertus 2 ☐ UPL Woody Vine Stratum Plot size (30 Foot Radius) Prevalence Index = B/A = 4.12887 Hydrophytic Vegetation Indicators ☐ 1 - Rapid Test for Hydrophytic Vegetat ☐ 2 - Dominance Test is >50% ☐ 3 - Prevalence Index is <= 3.0 ☐ 4 - Morphological Adaptations (Provide supporting data in remarks or on separa sheet. ☐ 5 - Wetland Non-Vascular Plants ☐ Problematic Hydrophytic Vegetation (E Indicators of hydric sil and wetland hydrology mupresent, unless disturbed or problematic for #3, 4	Arctostaphylos uva-ursi	20	~	FACU	Col	lumn Totals	10/1 (A)	801	(B)
Campanula rotundifolia Equisetum arvense Fragaria virginiana 10		10							(D)
Equisetum arvense	Calamagrostis rubescens	15	<u> </u>	UPL					
Fragaria virginiana 10	Campanula rotundifolia	2		FACU	Hye				
Hieracium aurantiacum Hieracium scouleri Linnaea borealis Penstemon confertus 20 ✓ UPL Linnaea borealis 2 □ FACU Penstemon confertus 3 - Prevalence Index is <= 3.0 4 - Morphological Adaptations (Provide supporting data in remarks or on separa sheet. 5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation (E Indicators of hydric sil and wetland hydrology mu present, unless disturbed or problematic for #3, 4	Equisetum arvense	5		FAC				, ,	ation
Hieracium scouleri Linnaea borealis Penstemon confertus 20 V UPL 4 - Morphological Adaptations (Provide supporting data in remarks or on separation sheet. Denstemon confertus 10 4 - Morphological Adaptations (Provide supporting data in remarks or on separation sheet. 5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation (E) Indicators of hydric sil and wetland hydrology mu present, unless disturbed or problematic for #3, 4	Fragaria virginiana	10		FACU					
Linnaea borealis Penstemon confertus 2	Hieracium aurantiacum	3		UPL		☐ 3 - Prevale	nce Index is <	= 3.0	
Penstemon confertus 2	Hieracium scouleri		✓		.			`	
Penstemon confertus 2 UPL 5 - Wetland Non-Vascular Plants Problematic Hydrophytic Vegetation (E Indicators of hydric sil and wetland hydrology mu present, unless disturbed or problematic for #3, 4							data in remark	s or on sepa	arate
Woody Vine Stratum Plot size (30 Foot Radius) Problematic Hydrophytic Vegetation (E Indicators of hydric sil and wetland hydrology mu present, unless disturbed or problematic for #3, 4	Penstemon confertus	2		UPL			l Non-Vascular	Dlante	
Woody Vine Stratum Plot size (30 Foot Radius) Indicators of hydric sil and wetland hydrology mu present, unless disturbed or problematic for #3, 4									
Woody Vine Stratum Plot size (30 Foot Radius) present, unless disturbed or problematic for #3, 4						□ Problematio	c Hydrophytic '	/egetation (Explain)
Hydrophytic	Woody Vine Stratum Plot size (30 Foo	ot Radius)							
					-		·		
Vegetation Yes □ NO ✓					Ve	getation	Yes 🗌 NO	✓	
Percent Bare Ground 11 Present? Remarks:					Pre	esent?			

SOIL									Sampling Point: DP07-u
Profile Desc	ription: (Describe [•]	to the dep	th needed to docu	ment the indic	cator c	or confir	m the absence	
Depth		Matrix		Redo	x Features				
(inches)	Color	(moist)	%	Color (moist)	%Ty	ype ¹	_Loc ²	<u>Texture</u>	Remarks
0-02								Duff	
02-10	10YR	4/1	100				S	andy Loam	
10+								Cobbles	Rock refusal
								·	
								<u> </u>	
									
				Reduced Matrix, C			d Sand G		rs for Problematic Hydric Soils ³ :
Histosol		: (Applica	able to all	LRRs, unless othe Sandy Redox (-				n Muck (A10)
_	oipedon (A:	2)		Stripped Matrix					Parent Material (TF2)
Black Hi		_,		Loamy Mucky I		xcept	MLRA 1	_	Shallow Dark Surface (TF12)
	n Sulfide (Loamy Gleyed				Othe	er (Explain in Remarks)
	Below Da		e (A11)	Depleted Matrix				3	
	irk Surface lucky Mine			Redox Dark Su Depleted Dark					rs of hydrophytic vegetation and nd hydrology must be present,
	ileyed Mat			Redox Depress					s disturbed or problematic.
Restrictive L	-				()				- mountain at promoting
Туре:									
Depth (inc	ches):							Hydric Soil	Present? Yes No
Remarks:								L	
No hydric so	oil indicate	ors obser	ved.						
HYDROLO	GY								
Wetland Hyd	drology In	dicators:							
Primary Indic	ators (min	imum of o	ne required	l; check all that appl	у)			Secon	idary Indicators (2 or more required)
Surface	Water (A1))		Water-Sta	ined Leaves (E	39) (ex	cept	w	/ater-Stained Leaves (B9) (MLRA 1, 2,
High Wa	ter Table ((A2)		MLRA	1, 2, 4A, and 4	4B)			4A, and 4B)
Saturation	on (A3)			Salt Crust					rainage Patterns (B10)
	arks (B1)				vertebrates (B				ry-Season Water Table (C2)
	t Deposits	(B2)			Sulfide Odor (_	aturation Visible on Aerial Imagery (C9)
	osits (B3)	(D.1)			Rhizospheres a	-	_		eomorphic Position (D2)
	t or Crust	(B4)			of Reduced Iro				hallow Aquitard (D3)
	osits (B5) Soil Crack	c (P6)			on Reduction in Stressed Plar		•		AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
			magery (B7		olain in Remarl	-) (LKK F		rost-Heave Hummocks (D7)
			Surface (E			1(0)		· · · ·	ost ricave riaminooks (B1)
Field Observ				,					
Surface Wate	er Present	? Y	es 🔲 I	No Depth (in	ches):				
Water Table	Present?	Y	es 🔲 l		ches):		I		
Saturation Pr	esent?	Y	es 1	No Depth (in	ches):		Wet	land Hydrology	y Present? Yes 🔲 No 🔽
(includes cap				mitaring wall assial	abataa menin)	if available.	
Describe Rec	orded Dai	ia (Silealli	gauge, mo	nitoring well, aerial	priotos, previot	us msp	dections),	, ii avallable.	
Remarks:									
No evidence	of wetlar	nd hydrol	ogy obser	ved.					
		-							

Project/Site: Schrieber Lake Ci	ty/County: Lincoln	Sampling Date:7/12/2022
Applicant/Owner: MDT	, ,	State: Montana Sampling Point: DP07-w
	ection, Township, Range	e: S 13 T 27N R 30W
Landform (hillslope, terrace, etc.): Toeslope		
Subregion (LRR): LRR E Lat:	48.104318 L	ong:115.414524 Datum: NAD 83
Soil Map Unit Name: 105: Aquic udifluvents, poorly drained		NWI classification:Not mapped
Are climatic / hydrologic conditions on the site typical for this time of year	? Yes 🔽 No 🗔	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly dis	sturbed? Are "No	ormal Circumstances" present? Yes 🗹 No 🔲
Are Vegetation, Soil, or Hydrology naturally problem.	ematic? (If need	led, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing s	sampling point loc	ations, transects, important features, etc
Hydrophytic Vegetation Present? Yes No		
Hydric Soil Present? Yes V No	Is the Sampled A within a Wetland	
Wetland Hydrology Present? Yes <u>✓</u> No <u> </u>	Within a Wetland	. 100 <u>——</u> 110 <u>——</u>
Sample point located along the south side of wetland cell 1.		
VEGETATION - Use scientific names of plants		
<u>Tree Stratum</u> Plot size (30 Foot Radius) Absolute Domiant % Cover: Species?	Indicator Status	Dominance Test worksheet
// // Cover. Openes:	Glatus	Number of Dominant Species that are OBL, FACW or FAC: 1 (A)
		Total Number of Dominant Species Across All Strata: 1 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)		Percent of Dominant Species That Are OBL, FACW, or FAC: 100 % (A/B)
Sapining/Shrab Stratum 1 fot size (13 1 sot readins)		Prevalence Index worksheet
		Total % Cover of: Multiply by:
		OBL species 0 X 1 0 FACW species 80 X 2 160
		FAC species 17 X 3 51
		FACU species 0 X 4 0
Herbaceous Stratum Plot size (5 Foot Radius)		UPL species 5 X 5 <u>25</u>
	FAC	Column Totals 102 (A) 236 (B
	UPL FAC	Prevalence Index = B/A = 2.31373
	FAC	Hydrophytic Vegetation Indicators
	FACW	✓ 1 - Rapid Test for Hydrophytic Vegetation
		✓ 2 - Dominance Test is >50%
		✓ 3 - Prevalence Index is <= 3.0
		 4 - Morphological Adaptations (Provide supporting data in remarks or on separate sheet.
		5 - Wetland Non-Vascular Plants
		Problematic Hydrophytic Vegetation (Explain
Woody Vine Stratum Plot size (30 Foot Radius)		Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5.
		Hydrophytic Vegetation Yes ✓ NO
Percent Bare Ground 0		Present?
Remarks: A prevalence index below three indicate a hydrophytic vegetatio	n community.	
LIS Army Corps of Engineers	1.4	Vectors Mountaine, Valleye, and Caseta, Versier, C.C.
US Army Corps of Engineers	V	Vestern Mountains, Valleys, and Coasts - Version 2.0

SOIL											S	ampling Point	DP07-w
Profile Des	cription: (I	Describe	to the de	oth need	led to docun	nent the ir	ndicato	r or cor	nfirm	the absence			
Depth		Matrix				x Features			2	_			
(inches)	Color		%	Cold	or (moist)	%	Type	Loc		Texture		Remarks	
0-06	10YR	2/1	100						Cl	ay Loam			
06-16	2.5YR	5/2	95	2.5YR	5/8	5	С	М	Sar	ndy Loam	Bottom	of pit	
					ed Matrix, CS			 ited San	d Gra			Pore Lining, N	
Hydric Soil	Indicators	: (Appli	cable to al	ا LRRs, ا	unless other	wise note	d.)					lematic Hydr	ric Soils³:
Black H	ol (A1) Epipedon (A: Histic (A3) Jen Sulfide (Jed Below Da Dark Surface	A4) ark Surfa	ce (A11)	Str Loa Loa V De	ndy Redox (S ipped Matrix amy Mucky N amy Gleyed I pleted Matrix dox Dark Sui	(S6) Mineral (F1 Matrix (F2) (F3)		pt MLR	A 1)	Red Very Othe	er (Explain i		,
	Mucky Mine				pleted Dark S		7)					y must be pre	
Sandy	Gleyed Mat	rix (S4)		Re	dox Depress	ions (F8)				unles	s disturbed	or problemati	C.
Restrictive	Layer (if p	resent):											
Туре:												_	
Depth (ir	nches):									Hydric Soil	Present?	Yes 🔽	_ No <u></u>
IYDROLO	ncv												
Wetland Hy		dicators											
-				d: check	all that apply	/)				Secor	darv Indica	tors (2 or mor	e required)
	e Water (A1)				☐ Water-Stai	-	s (B9)	(except			-	d Leaves (B9)	
	/ater Table (1, 2, 4A, aı					4A, and 4		, (,
	ion (A3)	,			Salt Crust		,			□ D		terns (B10)	
	Marks (B1)				_ ☐ Aquatic Inv	` '	(B13)					Nater Table (0	C2)
Sedime	ent Deposits	(B2)			Hydrogen	Sulfide Od	or (C1)			s	aturation Vi	sible on Aeria	I Imagery (C9
Drift De	posits (B3)				Oxidized R	hizospher	es alon	g Living	Roots	s (C3) 🔲 G	eomorphic	Position (D2)	
Algal M	lat or Crust	(B4)			Presence o	of Reduced	d Iron (d	C4)		s	hallow Aqui	tard (D3)	
Iron De	posits (B5)				Recent Iroi	n Reductio	n in Til	led Soils	(C6)	F	AC-Neutral	Test (D5)	
Surface	Soil Crack	s (B6)			Stunted or	Stressed I	Plants ((D1) (LR	RA)	R	aised Ant N	ounds (D6) (l	_RR A)
Inundat	tion Visible o	on Aerial	Imagery (E	37) <u> </u>	Other (Exp	lain in Rer	marks)			Fi	ost-Heave	Hummocks (E	07)
Sparse	ly Vegetated	d Conca	/e Surface	(B8)									
Field Obse	rvations:			_	_								
Surface Wa	ter Present	? ,	Yes		Depth (inc								
Water Table	e Present?	•	Yes	No	Depth (inc	ches):							
	apillary fringe	e)	Yes	,	Depth (inc						/ Present?	Yes	_ No <u> </u>
Positive 1/6	Journal Dal	.ज <i>(</i> उत्तटवा	gaage, II	omoning	won, acriar p		vious II	JOPECHO	. 137, 11	a valiabis.			
Remarks:													
Evidence o	f wetland h	nydrolog	y present	in satur	ation within	6" of the	soil su	ırface.					

Project/Site: Schrieber Lake		City/Co	ounty. Lincoln		Sampling Da	ate. 7/13/2022
Applicant/Owner: MDT	_	C.(.), C.		State: Montana		
		Cootio	n Taumahin Dan	ge: S 13 T :		
Landform (hillslope, terrace, etc.): Hillside						
Subregion (LRR): LRR E						
Soil Map Unit Name: Aquic udifluvents, poorly drained						арреа
Are climatic / hydrologic conditions on the site typical for this $% \left(1\right) =\left(1\right) \left(1\right) \left$	time of ye	ar? Ye	es 🔽 No 👢	(If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology signature.	gnificantly	disturb	ed? Are "N	lormal Circumstances" p	resent? Yes	s 🔽 No 🔲
Are Vegetation, Soil, or Hydrology na	turally pro	blema	tic? (If nee	ded, explain any answe	rs in Remark	s.)
SUMMARY OF FINDINGS - Attach site map s	howing	sam	pling point lo	cations, transects	, importar	nt features, etc.
Hydrophytic Vegetation Present? Yes No	~					
Hydric Soil Present? Yes No	_		Is the Sampled A		1	•
Wetland Hydrology Present? Yes No	<u> </u>		within a Wetland	!? Yes <u> </u>	No <u>_</u>	<u></u>
Remarks:						
This point is located approximately 1.5 feet in elevation	n above	DP08	-W.			
VEGETATION - Use scientific names of plant	ts					
Tree Stratum Plot size (30 Foot Radius) Absolute	Domiant		dicator	Dominance Test wor	ksheet	
Tree Stratum Piot size (30 Foot Radius) % Cover:	Species ⁴	? St	atus	Number of Dominant S that are OBL, FACW of		0 (A)
				Total Number of Domi Species Across All Str		1 (B)
Carling/Charle Charles Distairs 45 Foot Podius				Percent of Dominant S That Are OBL, FACW		0 % (A/B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)				Prevalence Index wo	rksheet	
				Total % Cover o	f:	Multiply by:
				OBL species	0 X1	0
				FACW species	0 X 2	0
				FAC species FACU species	13 X3 1 X4	<u>39</u>
Herbaceous Stratum Plot size (5 Foot Radius)				*	60 X 5	300
Alopecurus arundinaceus 5		FAC				
Bromus carinatus 2		UPL			74 (A)	343 (B)
Bromus tectorum 5		UPL		Prevalence Index	(= B/A = 4	.63514
Centaurea stoebe 50	✓	UPL		Hydrophytic Vegetat		
Penstemon confertus 3		UPL		☐ 1 - Rapid Te	st for Hydrop	hytic Vegetation
Phleum pratense 7		FAC	,	2 - Dominan	ce Test is >50	0%
Rumex acetosa 1		FAC	;	3 - Prevalend	ce Index is <=	= 3.0
Verbascum thapsus 1		FAC	EU			ions (Provide s or on separate
						Diamete
					Non-Vascular	
				☐ Problematic	Hydrophytic \	/egetation (Explain)
Woody Vine Stratum Plot size (30 Foot Radius)				Indicators of hydric sil a present, unless disturb		
Percent Bare Ground 26				Hydrophytic Vegetation Present?	es 🗌 NO	✓
Remarks: The vegetation community at this data point is domin LIS Army Corps of Engineers	ated by u	ıpland		Western Mountains Vall	ove and Co	poto Vorcier 2.0

SOIL											S	Sampling Poir	nt: DP08-u
Profile Des	cription: (De	escribe	to the dep	th need	ed to docu	ment the	indicator	or co	nfirm the	e absence			
Depth		Matrix				ox Featui							
(inches)	Color (n	noist)	%	Colo	r (moist)	%	Type ¹	Loc	2 ²	Texture		Remarks	3
0-04	10YR	2/1	100						Sand	y Loam	Fine ro	ots.	
04-16	2.5Y	3/1	100						Loam	ıy Sand	Botton	າ of pit	
	- Concentration							ed San	— — nd Grains			Pore Lining,	
	Indicators:	(Appli	cable to all				oted.)					blematic Hyd	dric Soils [°] :
Black H	ol (A1) Epipedon (A2) Histic (A3) en Sulfide (A ed Below Darl	4)	ce (A11)	Stri	ndy Redox ipped Matri amy Mucky amy Gleyed pleted Matr	x (S6) Mineral (I Matrix (F		t MLR	A 1)	Red	y Shallow D	0) Iterial (TF2) Dark Surface in Remarks)	, ,
Sandy	oark Surface (Mucky Minera	al (S1)		De	dox Dark S pleted Dark	Surface	(F7)				-	phytic vegeta gy must be p	
	Gleyed Matrix			L Re	dox Depres	sions (F8	5)			unles	s disturbed	l or problema	atic.
Restrictive	Layer (if pre	esent):											
Туре:													
Depth (ir	nches):									łydric Soil	Present?	Yes	No <u></u>
HYDROLC		iootoro											
-	/drology Ind i icators (minin			d: check	all that ann	nlv)				Secor	ndary Indica	ators (2 or m	ore required)
	Water (A1)	idili oi	one require	a, oncor			ıves (B9) (e	vcent			•	*	9) (MLRA 1, 2
	ater Table (A ′ater Table (A	2)					and 4B)	жсері		v	4A, and		13) (IVILINA 1, 2
	ion (A3)	2)			Salt Crus		and 40)			Пп		tterns (B10)	
	Marks (B1)			Ī	Aquatic Ir	, ,	tes (B13)					Water Table	(C2)
	ent Deposits (B2)		Ī			Odor (C1)				-		ial Imagery (C9
_	posits (B3)	,					eres along	Living	Roots (Position (D2	
	lat or Crust (E	34)			_	-	ced Iron (C4	_			hallow Aqu		,
	posits (B5)	,			_		tion in Tille		s (C6)		AC-Neutral		
	Soil Cracks	(B6)			_		d Plants (D		, ,			Mounds (D6)	(LRR A)
Inundat	tion Visible or	n Aerial	Imagery (B	7)	Other (Ex	plain in F	Remarks)			F	rost-Heave	Hummocks	(D7)
Sparsel	ly Vegetated	Concav	/e Surface (B8)									
Field Obse	rvations:												
Surface Wa	ter Present?	,	Yes	No	🙎 Depth (ir	nches): _							
Water Table	e Present?	,	Yes	No	Depth (ir	nches): _							
	pillary fringe)	ľ			Depth (ir						y Present?	Yes	No <u></u>
Describe Re	ecorded Data	(strear	n gauge, m	onitoring	well, aerial	photos, p	orevious ins	spectio	ns), if av	/ailable:			
Remarks:					0 11 1 11					<i>a</i>			
No wetland	l hydrology i	ndicat	ors observ	ed here	. Soil in th	e test pi	t was dry t	throug	hout th	e profile.			

Project/Site: Schrieber Lake	Citv/County: Lincoln	Sampling Date:7/13/2022
Applicant/Owner: MDT		State: Montana Sampling Point: DP08-w
	Section, Township, Ra	
Landform (hillslope, terrace, etc.): Toeslope/bank	Lead relief (conserve	convex none): flat Slone (%): 5
Subregion (LRR): LRR E		Long:115.409498 Datum: NAD 83
Soil Map Unit Name: 105: Aquic udifluvents, poorly drained		
•		NWI classification: PEM
Are climatic / hydrologic conditions on the site typical for this tin		
Are Vegetation, Soil, or Hydrology signi		"Normal Circumstances" present? Yes 🗹 No 🔲
Are Vegetation, Soil, or Hydrology natu	rally problematic? (If ne	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map she	owing sampling point l	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No _	le the Commission	1.0
Hydric Soil Present? Yes No	Is the Sampled within a Wetlar	
Wetland Hydrology Present? Yes No Remarks:		
This point and its matching upland point are located on	the island between wetland	I cell 7 and Schrieber lake
This point and its matering apparta point are located on	the leana between wettana	Con Fund Connegor land.
VEGETATION - Use scientific names of plants		
Trace Ctreatures Diet size (OO Feet Dedition)	Domiant Indicator Species? Status	Dominance Test worksheet
	•	Number of Dominant Species that are OBL, FACW or FAC:
		Total Number of Dominant Species Across All Strata: 2 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)		Percent of Dominant Species That Are OBL, FACW, or FAC: 100 % (A/B)
		Prevalence Index worksheet
		Total % Cover of: Multiply by:
		OBL species 45 X 1 45 X 2 45 X 2
		FAC species 40 X 3 120
		FACU species 0 X 4 0
Herbaceous Stratum Plot size (5 Foot Radius)		UPL species 0 X 5 0
Alopecurus pratensis 40	✓ FAC	Column Totals 93 (A) 181 (B)
Carex aquatilis 5	OBL	Prevalence Index = B/A = 1.94624
Carex lasiocarpa 30	✓ OBL	
Epilobium ciliatum 3	FACW	Hydrophytic Vegetation Indicators 1 - Rapid Test for Hydrophytic Vegetation
Persicaria amphibia 10	OBL	✓ 2 - Dominance Test is >50%
Phalaris arundinacea 5	FACW	✓ 3 - Prevalence Index is <= 3.0
		4 - Morphological Adaptations (Provide
		supporting data in remarks or on separate sheet.
		☐ 5 - Wetland Non-Vascular Plants
		Problematic Hydrophytic Vegetation (Explain)
Woody Vine Stratum Plot size (30 Foot Radius)		Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5.
Percent Perc Crewnd 7		Hydrophytic Vegetation Present? Ves ✓ NO
Percent Bare Ground 7 Remarks:		1.000111.
A prevalence index below three and a positive dominar	nce test indicate a hydrophy	tic plant community.
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SOIL										Sampling Point: DP08-w
Profile Des	scription: (Describe	to the de	oth ne	eded to doc	ument the	indicator	or confir	m the absence	e of indicators.)
Depth		Matrix		-		dox Featur				
(inches)	Color	(moist)	%	C	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-06	10YR	2/1	100						Loam	
06-16+	10YR	2/1	100						Sand	Gravels, cobbles, bottom of p
					uced Matrix, (ed Sand G		cation: PL=Pore Lining, M=Matrix. ors for Problematic Hydric Soils ³ :
Histose		s. (Appli	cable to al				ieu.)			m Muck (A10)
Histic II Black I Hydrog	or (AT) Epipedon (A Histic (A3) gen Sulfide (ed Below Di	(A4)	ce (A11)		Sandy Redox Stripped Matr Loamy Mucky Loamy Gleye Depleted Mat	ix (S6) / Mineral (F d Matrix (F		t MLRA 1	Red	m Muck (A10) d Parent Material (TF2) ry Shallow Dark Surface (TF12) ner (Explain in Remarks)
	Dark Surface		()		Redox Dark S		i)		³ Indicat	ors of hydrophytic vegetation and
	Mucky Mine			_	Depleted Dar		. ,			and hydrology must be present,
	Gleyed Mat			<u> </u>	Redox Depre	ssions (F8))		unle	ss disturbed or problematic.
Restrictive	e Layer (if p	resent):								
Туре: _										
Depth (i	inches):								Hydric Soi	I Present? Yes <u>✓</u> No <u> </u>
HYDROLO	mineral co	ntent lay	/er.							
Wetland H	lydrology In	dicators	:							
Primary Inc	dicators (mir	imum of	one require	d; che	ck all that ap	ply)			Seco	ndary Indicators (2 or more required)
Surface	e Water (A1)			Water-S	tained Lea	ves (B9) (e	xcept	v	Water-Stained Leaves (B9) (MLRA 1, 2
_ ✓ High W	Vater Table	(A2)			MLR	A 1, 2, 4A,	and 4B)			4A, and 4B)
✓ Satura	ition (A3)				Salt Crus	st (B11)				Orainage Patterns (B10)
Water	Marks (B1)					Invertebrat				Ory-Season Water Table (C2)
	ent Deposits				Hydroge					Saturation Visible on Aerial Imagery (C9
	eposits (B3)					l Rhizosph	_	-		Geomorphic Position (D2)
	Mat or Crust					e of Reduc	-	-		Shallow Aquitard (D3)
	eposits (B5)				_	ron Reduc		•		FAC-Neutral Test (D5)
	e Soil Crack					or Stresse	-	1) (LRR A		Raised Ant Mounds (D6) (LRR A)
	ation Visible ely Vegetate				Other (E	xplain in R	emarks)			Frost-Heave Hummocks (D7)
Field Obse	• •			(20)						
	ater Present	? `	Yes 🗆	No	✓ Depth (inches):				
Water Tabl				No _	` `	inches):	_	7		
Saturation				No _		inches):	_) Wet	land Hydrolog	yy Present? Yes <u>✔</u> No <u>□</u>
	apillary fring lecorded Da		n gauge, m	onitori	ing well, aeria	al photos, p	revious ins	spections)	, if available:	
								,		
Remarks:										
										inches from the soil surface, as
well as sulf	TIGIC odor,	a positiv	e FAC-ne	utral t	est, and the	point's g	eomorphi	c positior	1.	

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

Project/Site: Schrieber Lake	City/County: Lincoln	Sampling Date:7/13/2022
Applicant/Owner: MDT	_ , ,	State: Montana Sampling Point: DP09-u
	Section Township Rang	ge: S 13 T 27N R 30W
Landform (hillslope, terrace, etc.): Flat/Island		
		Long:115.409417 Datum: NAD 83
Soil Map Unit Name: 105: Aquic udifluvents, poorly drained		
Are climatic / hydrologic conditions on the site typical for this time of		
Are Vegetation, Soil, or Hydrology signification		
Are Vegetation, Soil, or Hydrology naturally SUMMARY OF FINDINGS - Attach site map show		ded, explain any answers in Remarks.)
Hydrophytic Vegetation Present? Yes ☐ No ☑		
Hydric Soil Present? Yes ☐ No ☑	Is the Sampled A	
Wetland Hydrology Present? Yes No	within a Wetland	? Yes <u></u> No <u></u> ✓
Remarks:	-	
This point is located approximately 0.75' above DP09-w.		
VECETATION. He a significant manner of plants		
VEGETATION - Use scientific names of plants Absolute Don	niant Indicator	
Trace Christian Dietoire (OO Foot Dedivis)	cies? Status	Dominance Test worksheet
		Number of Dominant Species that are OBL, FACW or FAC: 1 (A)
		Total Number of Dominant Species Across All Strata: 2 (B)
Sapling/Shrub Stratum Plot size (15 Foot Radius)		Percent of Dominant Species That Are OBL, FACW, or FAC: 50 % (A/B)
<u>Japining Orratum</u> 1 lot 5/25 (15 1 cot reading)		Prevalence Index worksheet
		Total % Cover of: Multiply by:
		OBL species 0 X 1 0
		FACW species 0 X 2 0 FAC species 32 X 3 96
		FACU species 7 X 4 28
Herbaceous Stratum Plot size (5 Foot Radius)		UPL species 41 X 5 205
Achillea millefolium 1	FACU	Column Totals 80 (A) 329 (B)
Berteroa incana 1] UPL	
Centaurea stoebe 40	<u>UPL</u>	24
Fragaria virginiana 1	FACU	Hydrophytic Vegetation Indicators 1 - Rapid Test for Hydrophytic Vegetation
Phleum pratense 30		2 - Dominance Test is >50%
Rumex acetosa 2	FAC	3 - Prevalence Index is <= 3.0
Verbascum thapsus 5	FACU	
		 4 - Morphological Adaptations (Provide supporting data in remarks or on separate
		sheet.
		5 - Wetland Non-Vascular Plants
		Problematic Hydrophytic Vegetation (Explain)
Woody Vine Stratum Plot size (30 Foot Radius)		Indicators of hydric sil and wetland hydrology must be present, unless disturbed or problematic for #3, 4, 5.
	ŀ	Hydrophytic
Percent Bare Ground 20		Vegetation Yes NO ✓ Present?
Remarks:		
This data point hosts an upland plant community.		
US Army Corps of Engineers	V	Western Mountains, Valleys, and Coasts - Version 2.0

SOIL											5	Sampling Po	int: DP09-u
Profile Des	cription: (Describe	to the de	oth ne	eded to docu	ment the	indicator o	r con	firm the a	bsence			
Depth		Matrix				ox Feature							
(inches)	Color	(moist)	%	Cc	olor (moist)	%	Type ¹	Loc²	Te	xture	_	Remark	(S
0-05	10YR	2/2	100						Loa	m			
06-16	2.5Y	5/2	100						Loamy	Sand	Botton	n of pit	
				-		_				-			
¹ Type: C=C	concentratio	n. D=De	pletion. RM	 I=Redu	ced Matrix, C	S=Covere	ed or Coated	l Sand	— —— d Grains.	2Lo	cation: PL=	Pore Lining	. M=Matrix.
					, unless othe								dric Soils ³ :
Histoso	I (A1)			<u></u>	Sandy Redox	(S5)					m Muck (A1		
	pipedon (A	2)		_	Stripped Matrix	` ,						iterial (TF2)	
_	listic (A3)				oamy Mucky	,		MLRA	A 1)	_	•	ark Surface	, ,
	en Sulfide ((4.4.4)		oamy Gleyed		2)			U Oth	er (Explain	in Remarks)
	d Below Da		ce (A11)	_	Depleted Matri		`			311: 4 .			
_	ark Surface Mucky Mine				Redox Dark Si Depleted Dark						-	phytic veget gy must be p	
	Gleyed Mat			_	Redox Depres	,	•				-	l or problem	
Restrictive	-				todox Bopioo	0,0,10 (1 0)	<u>'</u>			dillo	o diotarboo	r or problem	ano.
Type:		,											
Depth (in	nches):								Hyd	dric Soil	Present?	Yes _	No 🔽
Remarks:													
	201												
HYDROLO		diaatawa											
Wetland Hy				d che	ck all that app	lv)				Seco	ndary Indic:	ators (2 or m	nore required)
	Water (A1)		one require	a, one			ves (B9) (ex	cent			-		39) (MLRA 1, 2
	ater Table (-		1, 2, 4A,		cepi		v	4A, and		39) (WILKA 1, 2
Saturati		(72)			☐ Salt Crust		and 4D)			Пг		tterns (B10)	
_	/larks (B1)			-	Aquatic Ir	, ,	es (B13)				_	Water Table	
	nt Deposits	(B2)		-	Hydrogen						-		rial Imagery (C9
	posits (B3)			-			eres along L	ivina l	Roots (C3			Position (D	
	at or Crust			-		-	ed Iron (C4)	-	110010 (00		hallow Aqu		-/
	posits (B5)	()		-			ion in Tilled		(C6)		AC-Neutra		
	Soil Crack	s (B6)		-			d Plants (D1			_		Mounds (D6)	(LRR A)
	ion Visible		Imagery (E	37)	Other (Ex			, (,			Hummocks	
	y Vegetate					•	,						,
Field Obser	rvations:												
Surface Wat	ter Present'	?	Yes 🔲	No	🔽 Depth (ir	nches):		_					
Water Table	Present?	,	Yes	No	✓ Depth (ir	nches):		_					
Saturation F			Yes	No	✓ Depth (ir	nches):		_ v	Vetland H	ydrolog	y Present?	Yes	No <u></u>
(includes ca Describe Re			m gauge, m	onitorir	ng well, aerial	photos, p	revious insp	ection	ns). if avai	lable:			
			33 -,		3,	, , , , ,			,,				
Remarks:													
			observed	due to	o precipitatio	n the pre	evious nigh	t, soi	ls within	the test	pit were	dry and not	hydric soil
indicators w	vere obser	ved.											

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

Project/Site: Schrieber Lake	City/County: Lincoln	Sa	ampling Date: 7/13/2022
Applicant/Owner: MDT	, ,		ampling Point: DP09-w
	Section, Township, Rang		
Landform (hillslope, terrace, etc.): Toeslope/Undulating Valley b			
Subregion (LRR): LRR E Lat:			
Soil Map Unit Name: Aquic udifluvents, poorly drained			
Are climatic / hydrologic conditions on the site typical for this time of you			
Are Vegetation, Soil, or Hydrology significantly			
Are Vegetation, Soil, or Hydrology naturally pr			
SUMMARY OF FINDINGS – Attach site map showing	,		•
Hydrophytic Vegetation Present? Yes <u>✓</u> No			
Hydric Soil Present? Yes No	Is the Sampled A		No. 🗆
Wetland Hydrology Present? Yes No	Within a Welland	· 163	. NO <u> </u>
Remarks: This point is located to the west of wetland cell 10.			
This point is located to the west of westand con To.			
VEGETATION - Use scientific names of plants			
Absolute Domiar	nt Indicator	Dominance Test works	heet
Tree Stratum Plot size (30 Foot Radius) % Cover: Species	s? Status	Number of Dominant Spethat are OBL, FACW or F	ecies
		Total Number of Dominal Species Across All Strata	nt
Sapling/Shrub Stratum Plot size (15 Foot Radius)		Percent of Dominant Spe That Are OBL, FACW, or	
Sapinig/Siriub Stratum Flot size (13 Foot Madius)	-	Prevalence Index works	sheet
		Total % Cover of:	Multiply by:
			X 1 2 26
		•	X 2 <u>26</u> X 3 252
			X 4 4
Herbaceous Stratum Plot size (5 Foot Radius)		UPL species 0	X 5 0
Alopecurus pratensis 79	FAC	Column Totals 100	(A) 284 (B)
Cirsium arvense 5	FAC	Prevalence Index =	
Epilobium ciliatum 5	FACW	Hydrophytic Vegetation	
Persicaria amphibia 2	OBL		or Hydrophytic Vegetation
Phalaris arundinacea 8	FACU	✓ 2 - Dominance	
verbascum mapsus	FACU	✓ 3 - Prevalence	Index is <= 3.0
		4 - Morphologic	al Adaptations (Provide in remarks or on separate
			. Manaylan Dlamba
			n-Vascular Plants
		☐ Problematic Hyd	drophytic Vegetation (Explain)
Woody Vine Stratum Plot size (30 Foot Radius)			wetland hydrology must be or problematic for #3, 4, 5.
Percent Bare Ground 0		Hydrophytic Vegetation Yes Present?	✓ NO □
Remarks:	- indicate the - :	of a book and a second	41
A positive dominance test and a prevalence index below three	e indicate the presence	οτ a nydrophytic vegeta	ation community.
US Army Corps of Engineers	V	Vestern Mountains, Valleys	s, and Coasts - Version 2.0

SOIL									Sampling Point: DP09-w
Profile Des	cription: (Describe	to the dept	h needed to docur	nent the	indicator o	r confirm	the absence	
Depth		Matrix			x Feature				
(inches)	Color	(moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-01	10YR	2/2	100					nic/mineral	Dense roots
01-09	10YR	2/1	100				Gr	itty-Fibric	
09-17	10YR	2/1	100		-		Gri	tty-Hemic	Bottom of pit
			·						
				Reduced Matrix, CS			Sand Gra		ation: PL=Pore Lining, M=Matrix.
_		: (Applic	cable to all I	_RRs, unless othe		ted.)			rs for Problematic Hydric Soils ³ :
Black H Hydroge Deplete Thick D	I (A1) pipedon (A listic (A3) en Sulfide (d Below Da ark Surface Mucky Mine	(A4) ark Surfac e (A12)	ce (A11)	Sandy Redox (in Stripped Matrix Stripped Matrix Loamy Mucky In Loamy Gleyed Depleted Matrix Redox Dark Su Depleted Dark	(S6) Mineral (F Matrix (F ((F3) rface (F6	2)	MLRA 1)	Red Very Othe	n Muck (A10) Parent Material (TF2) Shallow Dark Surface (TF12) Fr (Explain in Remarks) rs of hydrophytic vegetation and hydrology must be present,
	Gleyed Mat			Redox Depress		•			s disturbed or problematic.
Restrictive	-			Redox Depress	10113 (1 0	·		unics.	s distarbed of problematic.
Type:		,.							
Depth (in	rchee).							Hydric Soil	Present? Yes <u>V</u> No
Remarks:								Tiyane Jon	rresent: res <u> </u>
HYDROLO									
Wetland Hy					,				
			one required	; check all that appl					dary Indicators (2 or more required)
<u>✓</u> High Wa						ves (B9) (exo and 4B)	cept		ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Saturati				Salt Crust	. ,				rainage Patterns (B10)
_	Marks (B1)	(50)		Aquatic In					ry-Season Water Table (C2)
	nt Deposits posits (B3)			_ ⊻ Hydrogen ☐ Oxidized F		odor (C1) eres along Li	ivina Root:		aturation Visible on Aerial Imagery (C9 eomorphic Position (D2)
	at or Crust					ed Iron (C4)	9		nallow Aquitard (D3)
	posits (B5)	,				tion in Tilled	Soils (C6)		AC-Neutral Test (D5)
	Soil Crack	s (B6)				d Plants (D1)			aised Ant Mounds (D6) (LRR A)
Inundati	ion Visible	on Aerial	Imagery (B7) Other (Exp			,		rost-Heave Hummocks (D7)
Field Obser	• •	u Concav	e Surface (E						
		o \	/aa 🗆 🖪	lo 🔽 Depth (in	ala a a\.				
Surface Wat Water Table				No <u> </u>		4.0	-		
Saturation P		`		lo Depth (in		0	Wetla	nd Hydrology	Present? Yes 🔽 No 🗌
(includes ca Describe Re			n gauge, mo	nitoring well, aerial	ohotos, p	revious insp	ections), if	available:	
Remarks:									
Evidence of				in saturation to the					st, sulfidic odor within the soil

MDT Montana Wetland Assessment Form (revised March 2008)

1. Project name Schriebe	r Lake		2. MDT	proje	ct#	NH	H 27 (029)			Con	trol#	1027007	
3. Evaluation Date 7/12/202	2 4. Evaluators		ng, W Foo		5.	Wet	land/Site# (s	Schr	ieber	r Lake			
6. Wetland Location(s): T	27N R 3	oW	Sec1	13		т		R		Sec2			
Approx Stationing or Milepost	s Approximately M	ilepost	53.8										
Watershed 1 - Kootenai	W	atersh	ed/Coun	ty	_incolr	1							
7. Evaluating Agency	CI for MDT			L			8. Wetlan	d size a	cres			55.91	
Purpose of Evaluation							How asse		0.00	Measure	ed e.a. I		
☐ Wetlands potentially affect	ted by MDT project						9. Assess		rea		<u> </u>	55.91	
☐ Mitigation Wetlands: pre-	construction						(AA) size (How asse	•		Measure	d e a h	ov GPS	
✓ Mitigation Wetlands: post	construction						now asse	sseu.		ivicasure	u e.g. t	y GF3	
☐ Other													
10. Classification of Wetland	and Aquatic Habitats	in AA											
HGM Class (Brinson)	Class (Cowardin)		Modifie	er (Co	wardi	in)	Water	Regime			% of A	A	
)epressional	quatic Bed						Permaner	nt/Perenr	nial			25	
Pepressional	Emergent Wetland						Permaner	nt/Perenr	nial			10	
tiverine	Inconsolidated Bottom	Ì					Permaner	nt/Perenr	nial			5	
lope	Emergent Wetland						Permaner	nt/Perenr	nial			30	
Blope	mergent Wetland						Seasonal	Intermitt	ent		10		
Slope	Scrub-Shrub Wetland						Permaner	nt/Perenr	nial			20	
Estimated Relative Abunda General Condition of AA i. Disturbance: (use matrix belaquatic nuisance vegetation spe	ow to determine [circle] a	appropri	ate respor	nse – s							nd		
Conditions within	AA	natura hayed conve roads	ged in predo al state; is no d, logged, or erted; does n or buildings or ANVS co	ot graze otherw not cont s; and n	ly ed, ise ain oxious	Land mod sele subj few	d not cultivated, lerately grazed c ctively logged; o lect to minor clear roads or building d or ANVS cover	but may be r hayed or r has been ring; contai s; noxious		Land cultivated or heavily graze or logged; subject to substantial placement, grading, clearing, or hydrological alteration; high roar building density; or noxious wee or ANVS cover is >=30%.			
AA occurs and is managed in predominan grazed, hayed, logged, or otherwise conve roads or occupied buildings; and noxious <=15%.	erted; does not contain	lo	w distur	banc	е		low distur	bance		mode	erate d	isturbance	
AA not cultivated, but may be moderately selectively logged; or has been subject to placement, or hydrological alteration; cont noxious weed or ANVS cover is <=30%.	relatively minor clearing, fill ains few roads or buildings;		modera disturba			m	oderate dis	turbanc	е	hiç	gh dist	urbance	
AA cultivated or heavily grazed or logged; substantial fill placement, grading, clearin, high road or building density; or noxious v >=30%.	g, or hydrological alteration;	hiç	gh distur	banc	е		high distur	bance		hiç	gh dist	urbance	
Comments: (types of disturbar Highway 2 and USFS roads are			ot cultivat	ted, m	ninimal	noxi	ous weeds, a	and low o	distur	bance.			
i. Prominent noxious, aquatic Spotted knapweed, Canada this				d, and	Linari	ia vul	garis						
ii. Provide brief descriptive su													
Site is in a relatively flat valley bo vith secondary growth coniferous													

and has been reported in previous years to support hoary willow.

PSS wetlands occur along pre-existing creek channels and in southwest corner of the site where a "carr" fen occurs. The fen supports bog birch

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

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

Comments:	aquatic bed, emergent, scrub-shrub

SECTION PERTAINING to FUNCTIONS VALUES ASSESSMENT

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

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

Primary or critical habitat (list	species)	□ D □	S				
Secondary habitat (list Specie	s)	● D ○	S Grizzly bear				
Incidental habitat (list species	s)	○ D •	S Canada lyn:	κ, North American ν	volverine, Yellow-b	illed Cuckoo, Spa	ldings ca
No usable habitat							
ii. Rating (use the condusion	ns from i a	bove and the m	atrix below to arriv	e at [check] the fur	ctional points and	rating)	
Highest Habitat Level doc	1 ' 1		doc/secondary	sus/secondary	doc/incidental	sus/incidental	None
Functional Points and Rating	1H	9H	.8H	.7M	.3L	.1L	OL
		, ,	,	a vehicle on the ac he area for several	,	y 2 in 2022. USF\	WS and

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

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

Primary or critical habitat (list species)	lacktriangle D $igcirc$ S	Salix candida (S3/S4),Western toad (S2);
Secondary habitat (list Species)	lacktriangle D $igcirc$ S	Townsend's big-eared bat (S3), hoary bat (S3)
Incidental habitat (list species)	○ D • S	Westslope cuthroat trout (S2), fisher (S3)
No usable habitat	S	

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

ii. Italiing (use the cone		bove and the n	ia i ix bolow to aili w	s at joileon, the full	ctional points and	raurig)	
Highest Habitat Level	doc/primary	sus/primary	doc/secondary	sus/secondary	doc/incidental	sus/incidental	None
S1 Species: Functional Points and Rating	1H	.8H	.7M	6M	.2L	1L	_OL]
S2 and S3 Species: Functional Points and Rating	.9Н	.7M	.6M	.5M	.2L	1L	OL

Sources for documented use

MDT BRR. USFS, MTNHP and MFWP databases and discussions with reg wildlife and fisheries biologists. Western toads observed by MDT and Kootenai Nat'l Forest personel in April 2011.

																			Subs	stant	ial	
bstantial (based	d on any	of the	followin	g [che	ck]):						Minii	nal (b	ased or	any of	the foll	owing	[check])):	1			
observations	of abund	ant wil	dlife #s	or high	h specie	es diver	sity (du	ring an	y period	d)	fe	w or n	o wildlif	e obsei	vations	during	j peak u	ise per	iods			
abundant wild	life sign	such a	s scat,	tracks,	, nest s	tructure	s, game	e trails,	etc.		lit	tle to r	no wildli	fe sign								
presence of e	xtremely	limitin	g habita	at featu	ures not	availab	ole in the	e surro	unding	area	s	parse a	adjacen	t upland	d food s	ources	5					
interviews with	h local bi	ologist	ts with k	nowle	dge of t	he AA					in	iterviev	ws with	local bi	ologists	with k	nowledg	ge of th	ie AA			
•		Ü			Ü										Ü							
oderate (based o	•			-																		
observations			-					-		_		eriods										
common occu			-		is scat,	tracks,	nest str	ucture	s, game	e traiis, e	eic.											
adequate adja interviews with																						
																	0.			., .		
i. Wildlife hab rom #13. For o other in terms o permanent/pere	class co	over to perce	be con	nside positi	ered ever	enly d	listribu	ted, th ‡10).	ne mos Abbre	st and I viation:	east p s for su	revale urface	ent veg water	etateo durati	d class ons ar	es mi	ust be o	within : P/P :	20% o =	f each		
erms])		-,	2001			, 1/1		.,, 51 al	,, JP:10	Jiui	, /	. u.	[c									
tructural iversity (see 13)				Hi	gh							Mod	erate					L	ow			
Class cover listribution (all egetated lasses)							ven			Eve	en			Une	ven			Εν	/en			
uration of urface water in ≥ 0% 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	А		
ow disturbance t AA (see #12i)	E	Е	Е	Н	Е	Е	Н	н	Е	Н	Н	М	Е	Н	М	М	Е	Н	М	М		
Moderate listurbance at AA	н	Н	н	н	н	н	Н	М	Н	н	М	м	Н	М	М	L	Н	М	L	L		
see #12i)	- '	''		<u>. '' </u>		_''		, IVI			IVI	IVI		IVI	IVI			. IVI	-			
ligh disturbance t AA (see #12i)	М	М	М	L	М	М	L	L	М	М	L	L	М	L	L	L	L	L	L	L		
ii. Rating (u Evidence of v					omia Excep		above	and t	the ma		Vildlife		ive at		ratin			point	s and ı	rating) Low	
Substantial										.91						.8H	1				.7M	1
Moderate			+		1E			\vdash							_							
Minimal					.91	1				.71	VI					.5M	-				.3L	
viii ii i i ai					.6N	1				.41	M					.2L					.1L	
omments ID. General I	Fish H	abita	ıt Rati	ng: ((Asses	ss this	s funct	tion if	the A		sed b	y fish										e AA
ould be used l storable due NA here a	to hab	itat c	onstra	ints,	or is ı		sired															ζ.
Habitat Qu		d Kno	own / S	uspe	cted F	ish S	oec ie s	in AA	(user	natrix t	o arrive	e at [c	heck tl	ne fund	ctional	points	and ra	ating)				
Duration of surfac n AA	e water			Pe	emane	nt / Pere	ennial					Seas	onal / Ir	itermitte	nt				Tem	porary	/ Epheme	ral
	_	-									_		_		1 -	_						
Aquatic hiding / re escape cover	sting/		Optim	al	А	dequate	9	Po	or	O	otimal		Adeq	uate		Poor		Opti	mal	Ade	equate	Po

. Habitat Quality and	KIIOWII	ouspec		Opecie	, 3 III A	1 (u3 c ii	IU III IX IO	umivo u	t [O HO OK	the lamet	cuonai points and rating)									
Duration of surface water in AA		Per	manent / I	Perennial	l			Se	easonal / I	Intermitten	t		Temporary / Ephemeral							
Aquatic hiding / resting / escape cover	Optimal Adequate			Po	oor	Optimal		Adequate		Poor		Opti	mal	Adequate		Poor				
Thermal cover optimal/ suboptimal	0	S	0	S	0	S	0	S	0	S	0	S	0	S	0	S	0	S		
FWP Tier I fish species	1E	.9Н	.8H	.7M	.6M	.5M	.9H	.8H	.7M	.6M	.5M	.4M	.7M	.6M	.5M	.4M	.3L	.3L		
FWP Tier II or Native Game fish species	.9H	.8H	.7M	.6M	.5M	.5M	.8H	.7M	.6M	.5M	.4M	.4M	.6M	.5M	.4M	.3L	.2L	.2L		
FWP Tier III or Introduced Game fish	.8H	.7M	.6М	.5M	.5M	.4M	.7M	.6M	.5M	.4M	.4M	.3L	.5M	.4M	.3L	.2L	.2L	.1L		
FWP Non-Game Tier IV or No fish species	.5M	.5M	.5M	.4M	.4M	.3L	.4M	.4M	.4M	.3L	.3L	.2L	.2L	.2L	.2L	.1L	.1L	.1L		

Sources used for identifying fish sp. potentially f	ound in AA	:								
ii. Modified Rating (NOTE: Modified score ca a) Is fish use of the AA significantly reduced by a current final MDEQ list of waterbodies in need o fishery or aquatic life support, or do aquatic nuis yes, reduce score in i above by 0.1: Modified	a culvert, d f TMDL de sance plant	ike, or other n velopment with	nan-made ['] s h listed "Pr	obable Impai	red U	lses" includii	ng cold or w	varm water	e If	
b) Does the AA contain a documented spawning comments) for native fish or introduced game fis	_	her critical hal Y		e (i.e., sanctu dd 0.1 to the Modifed R	adju	sted score ii	•			
iii. Final Score and Rating: 7 M Comments: Brook Trout documented in Schrieber Creek immediately up and downstream of Schrieber Lake by FWP in 2011 (MFISH query). Westslope Cutthroat documented upstream. outside project area.										
14E. Flood Attenuation: (Applies only to wetl channel or overbank flow, click NA her		ct to flooding eed to 14F.)	via in-chan	nel or overba	ınk flo	ow. If wetlan	ids in AA ar	e not flooded	d from in-	
i. Rating (working from top to bottom, use the Estimated or Calculated Entrenchment (Rosge 1994, 1996)		y entrenched stream type	- C, D, E	Moderately		enched – B	Entrencl	hed-A, F, G s	stream	
% of flooded wetland classified as forested and/or scrub/shrub	75%	25-75%	<25%	75%	25-7	5% <25%	75%	25-75%	<25%	
AA contains no outlet or restricted outlet	1H	.9H	.6M	.8H	.71	л .5M	.4M	.3L	.2L	
AA contains unrestricted outlet	.9H	.8H	.5M	.7M	.61	и <u>.4</u> М	.3L	.2L	.1L	
Climbilis Entrangled		Madaratali	Entrenched				Entranahad			7
Slightly Entrenched ER = >2.2		ER = 1.	41 – 2.2			E	Entrenched R = 1.0 - 1.4			
C stream type D stream type E stream type B stream type F stream type G stream type										
Flood-prone Width Bankfull Depth Bankfull Depth										
Floodprone 25 width	/ Ban widt	kfull :h			10	= Entrer	nchment	2.5		
ii. Are ≥10 acres of wetland in the AA subject to within 0.5 mile downstream of the AA (check)?	flooding A	ND are man-r N (●)	made featu	res which ma	ay be	significantly	damaged b	y floods loca	ated	
Comments: Stream channels in AA have free access to most of their floodplains. Floodplains 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, dick NA here and proceed to 14G.)										
 i. Rating (Working from top to bottom, u water durations are as follows: P/P = perr 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
	14	9Н	8H	8H		6M	5M	4M	31	21

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	.9Н	.8H	.7M	.7M	.5M	.4M	.3L	.2L	.1L

Comments: Extensive areas of inundation, much great than 5 ac-feet, observed in 2022 and previous monitoring events.

14G. Sediment/Nutrient/Toxical through influx of surface or ground to 14H.)												ortoxica	
i. Rating (working from top to bo	ttom, use the m	natrix below	to arrive a	at [check	k] the fu	ınctiona	l points	and ra	ting [H	= high, I	Л = m	oderate,	or L
= low]) Sediment, nutrient, and toxicant input levels within AA	to deliver compounds a not substan	or surrounding levels of sed at levels such tally impaired f nutrients or eutrophicatio	iments, nutr that other fu l. Minor sedi toxicants, or	ients, or unctions a imentatio	are n, o	deve nutrients with pot compoun	lopment s, or toxi ential to ds such	for "prol cants or deliver l that othe tion, sou	oable cau AA rece nigh leve er function rces of n	uses" rela ives or su ls of sedin ons are su	ted to s rround ments, i bstantia r toxica	d of TMDL ediment, ing land un nutrients, ally impair nts, or sig	se or ed.
% cover of wetland vegetation in AA Evidence of flooding / ponding in AA	≥ 70%	No ,	< 70	% No		Yes	≥ 70'	% No		Yes	< 70	% No	
AA contains no or restricted outlet		1	7M	.5M	1	.5N		.41	1	.3L	1	.2L	
AA contains unrestricted outlet	r	7M .	6М	.4M		.41	1	.3	L	.2L	i	.1L	
Comments: AA has potential to	receive minor s	sedimentation	on from ne	arby US	Hwy 2	and ad	jacent	hillsides	s that ha	ave beer	n logge	ed.	
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, click NA here and proceed to 14I.) i. Rating (working from top to bottom, use the matrix below to arrive at [check] the functional points and rating)													
% Cover of wetland streambank or shoreline by species with stability ratings		Durat	ion of surface	e water ad	iacent to i	rooted veg	getation						
of ≥6 (see Appendix F). ≥ 65%	Permanent / F	_	Sea	asonal / In	1		Te		/ Epheme	ral			
35-64%	.7M	_		.6N	_				5M				
< 35%	.3L			.2L				<u> </u>	1L				
Comments: Shorelines and ban 14I. Production Export/Food Cha i. Level of Biological Activity (sym	in Support:	and fish habi	tat ratings [check])	ary gra	ss, with	lesser	cover	y Care	c spp.			
General Fish Habitat C Rating (14D.iii.) E/H	General Wildlife	Habitat Ratii M	ng (14C.iii.) L) -									
E/H H		н	1	м									
М		М		м									
L M		M		L .									
N/A H		М	_	L									
ii. Rating (Working from top to bottom, use the matrix below to arrive at [check] the functional points and rating. Factor A = acreage of vegetated wetland component in the AA; Factor B = level of biological activity rating from above (14I.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].) A Vegetated component >5 acres Vegetated component >1-5 acres Vegetated component >1-5 acres													
A Vegetated component >5 B High Moderate C Yes No Yes No	Low Yes No	High Yes No	Mod	erate No	Lo Yes	w No	Hi Yes		Mode Yes	ponent <1 a erate No	re Lo Yes	No No	
P/P 1E .7H .8H .5M	.6M .4M	.9H .6N		.4M	.5M	.3L	.8H	.6M	.6M	.4M	.3L	.2L	
S/I .9H .6M .7H .4M	.5M .3L	.8H .5M	1 .6M	.3L	.4M	.2L	.7H	.5M	.5M	.3L	.3L	.2L	
T/E/A .8H .5M .6M .3L	.4M .2L	.7H .4M	1 .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? Y N If yes, add 0.1 to the score in ii above and adjust rating accordingly: Modified Rating 1 E Comments: High level of biological activity, veg component > 5 ac, perennial, has surface and subsurface outlets													

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

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 Estimated AA Acreage)	Indicate the four most prominent functions with an asterisk (*)
A. Listed/Proposed T&E Species Habitat	Н	.8	1	44.73	
B. MT Natural Heritage Program Species Habitat	Н	.9	1	50.32	
C. General Wildlife Habitat	E	1	1	55.91	✓
D. General Fish Habitat	М	.7	1	39.14	
E. Flood Attenuation	М	.6	1	33.55	
F. Short and Long Term Surface Water Storage	Н	1	1	55.91	>
G. Sediment/Nutrient/Toxicant Removal	Н	1	1	55.91	
H. Sediment/Shoreline Stabilization	Н	1	1	55.91	
Production Export/Food Chain Support	Е	1	1	55.91	>
J. Groundwater Discharge/Recharge	Н	1	1	55.91	
K. Uniqueness	Н	1	1	55.91	V
L. Recreation/Education Potential (bonus points)	Н	.2	NA	11.18	
Totals:		10.2	11		
Percent of Possible Score			92.73 %		

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

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

|--|

Table B-1. Schrieber Lake Wetland Mitigation Site. Comprehensive vegetation species list 2015-2022

Scientific Name	Common Name	WMVC Indicator Status ⁽¹⁾
Abies bifolia	Herb	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	NL
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	NL
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
Centaurea stoebe	Spotted Knapweed	UPL
Cirsium arvense	Canadian Thistle	FAC
Cirsium vulgare	Bull thistle	FACU

Scientific Name	Common Name	WMVC Indicator Status ⁽¹⁾
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	NL
Hieracium scouleri	Scouler's Woollyweed	NL
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
Pascopyrum smithii	Western-Wheat Grass	FACU

Scientific Name	Common Name	WMVC Indicator Status ⁽¹⁾
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
Urtica dioica	Stinging Nettle	FAC

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

¹ 2020 NWPL (USACE 2020)

New species identified in 2022 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: 2022



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: 2022



Photo Point: 1 – Photo 3 Bearing: 164 degrees

Location: Northwest Boundary Year: 2015



Photo Point: 1 – Photo 3 Bearing: 164 degrees

Location: Northwest Boundary Year: 2022



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: 2022



Photo Point: 2 – Photo 2 Bearing: 205 degrees

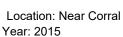




Photo Point: 2 – Photo 2 Bearing: 205 degrees

Location: Near Corral Year: 2022



Photo Point: 2 – Photo 3 Bearing: 162 degrees

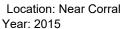




Photo Point: 2 – Photo 3 Bearing: 162 degrees

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: 2022



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: 2022



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: 2022



Photo Point: 5 – Photo 1 Bearing: 143 degrees

Location: Corner of carr Year: 2015



Photo Point: 5 – Photo 1 Bearing: 143 degrees

Location: Corner of carr Year: 2022



Photo Point: 5 – Photo 2 Bearing: 35 degrees

Location: Corner of carr Year: 2015



Photo Point: 5 – Photo 2 Bearing: 35 degrees

Location: Corner of carr



Photo Point: 5 – Photo 3 Bearing: 359 degrees



Location: Corner of carr Year: 2015



Photo Point: 5 – Photo 3 Bearing: 359 degrees





Photo Point: 6 - Photo 1 Bearing: 150 degrees

Location: South end of Cell 1 Year: 2015



Photo Point: 6 – Photo 1 Bearing: 150 degrees

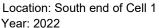




Photo Point: 6 – Photo 2 Bearing: 103 degrees

Location: South end of Cell 1 Year: 2015



Photo Point: 6 – Photo 2 Bearing: 103 degrees

Location: South end of Cell 1 Year: 2022



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: 2022



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: 2022



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: 2022



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: 2022



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: 2022



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: 2022



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: 2022



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: 2022



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: 2022



Photo Point: 10 Bearing: 39 degrees

Location: Overlook Year: 2015



Photo Point: 10 Bearing: 39 degrees

Location: Overlook Year: 2022

Schrieber Lake: Vegetation Transect Photographs



Transect 1: Start Bearing: 251 degrees

Location: T-1 Year: 2015



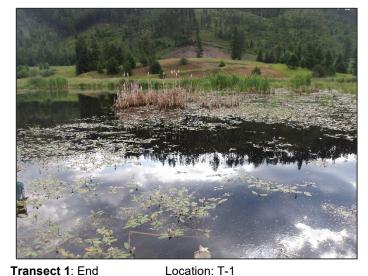
Transect 1: Start Bearing: 251 degrees

Location: T-1 Year: 2022



Transect 1: End Bearing: 71 degrees

Location: T-1 Year: 2015



Transect 1: End Bearing: 71 degrees



Transect 2: Start Bearing: 152 degrees

Location: T-2 Year: 2015

Transect 2: Start Bearing: 152 degrees

Location: T-2 Year: 2022

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: 2022



Transect 3: Start Bearing: 175 degrees

Location: T-3 Year: 2015



Transect 3: Start Location: T-3 Bearing: 175 degrees Year: 2022



Transect 3: End Bearing: 355 degrees

Location: T-3 Year: 2015



Transect 3: End Bearing: 355 degrees

Location: T-3 Year: 2022



Data Point: DP01w Year: 2022

Location: Veg Com 3



Data Point: DP01u Year: 2022

Location: Veg Com 1



Data Point: DP02w Year: 2022

Location: Veg Com 3



Data Point: DP02u Year: 2022

Location: Veg Com 1



Data Point: DP03w Year: 2022

Location: Veg Com 3



Data Point: DP03u

Location: Veg Com 1



Data Point: DP04b-w

Location: Veg Com 2

Year: 2022



Data Point: DP04-w

Year: 2022



Data Point: DP04u Year: 2022

Location: Veg Com 5



Data Point: DP05w

Year: 2022

Location: Veg Com 3



Data Point: DP05u

Year: 2022

Location: Veg Com 1



Data Point: DP06w Year: 2022

Location: Veg Com 3



Data Point: DP06u Year: 2022

Location: Veg Com 1



Data Point: DP07w Year: 2022

Location: Veg Com 3



Data Point: DP07u Year: 2022

Location: Veg Com 5



Data Point: DP08w Year: 2022

oint: DP08w Location: Veg Com 8



Data Point: DP08u

Location: Veg Com 1



Data Point: DP09w Year: 2022

Location: Veg Com 8



Data Point: DP09u Year: 2022

Schrieber Lake: Cross-Section Photographs



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

Location: Schrieber Creek Year: 2016



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

Location: Schrieber Creek Year: 2022



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

Location: Schrieber Creek Year: 2016



Cross-Section: SC1-1 Loc Bearing: 120° – Downstream

Location: Schrieber Creek Year: 2022



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

Location: Schrieber Creek Year: 2016



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

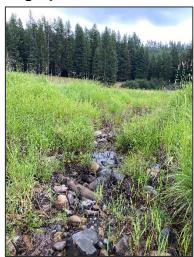
Location: Schrieber Creek Year: 2022

Schrieber Lake: Cross-Section Photographs



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

Location: Schrieber Creek Year: 2016



Cross-Section: SC1-2 Location: Schrieber Creek Bearing: 100° – Downstream Year: 2022



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

Location: Schrieber Creek Year: 2016



Cross-Section: SC2A-1 Location: Schrieber Creek Bearing: 315° – downstream Year: 2022



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: 2022

Schrieber Lake: Cross-Section Photographs



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

Location: Schrieber Creek Year: 2016



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

Location: Schrieber Creek Year: 2022



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

Location: Schrieber Creek Year: 2016



Cross-Section: SC2A-2Bearing: 5° –Upstream

Location: Schrieber Creek Year: 2022



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

Location: Schrieber Creek Year: 2016



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

Location: Schrieber Creek Year: 2022



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

Location: Schrieber Creek Year: 2016



Cross-Section: SC2B-1Bearing: 355° – Upstream

Location: Schrieber Creek Year: 2022



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

Location: Schrieber Creek Year: 2016



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

Location: Schrieber Creek Year: 2022



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

Location: Schrieber Creek Year: 2016



Cross-Section: SC3-1Bearing: 60° – Downstream

Location: Schrieber Creek Year: 2022



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

Location: Schrieber Creek Year: 2016



Cross-Section: SC3-2 Bearing: 160° – downstream Year: 2022



Location: Schrieber Creek



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

Location: Schrieber Creek Year: 2016



Cross-Section: SC3-2 Bearing: 340° - Upstream

Location: Schrieber Creek Year: 2022



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

Location: Schrieber Creek Year: 2016



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

Location: Schrieber Creek

Year: 2022



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

Location: Schrieber Creek Year: 2016



Cross-Section: SC7-1Bearing: 270° – Upstream

Location: Schrieber Creek Year: 2022



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

Location: Coyote Creek Year: 2016



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

Location: Coyote Creek Year: 2022



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

Location: Coyote Creek Year: 2016



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

Location: Coyote Creek Year: 2022



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

Location: Coyote Creek Year: 2016



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

Location: Coyote Creek Year: 2022



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

Location: Coyote Creek Year: 2016



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

Location: Coyote Creek Year: 2022



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

Location: Coyote Creek Year: 2016



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

Location: Coyote Creek Year: 2022



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

Location: Coyote Creek Year: 2016



Cross-Section: CC1B-1Bearing: 20° – Upstream

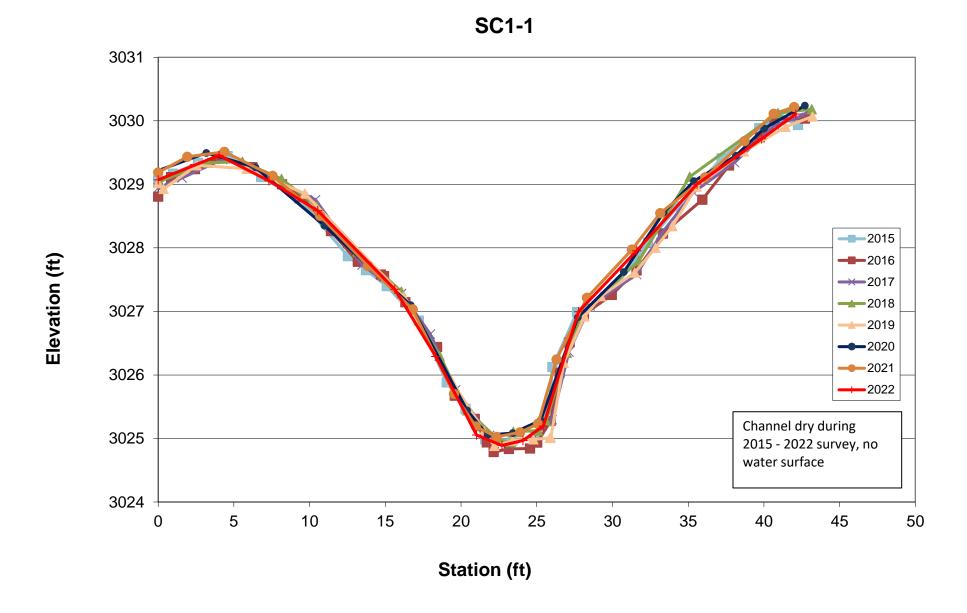
Location: Coyote Creek

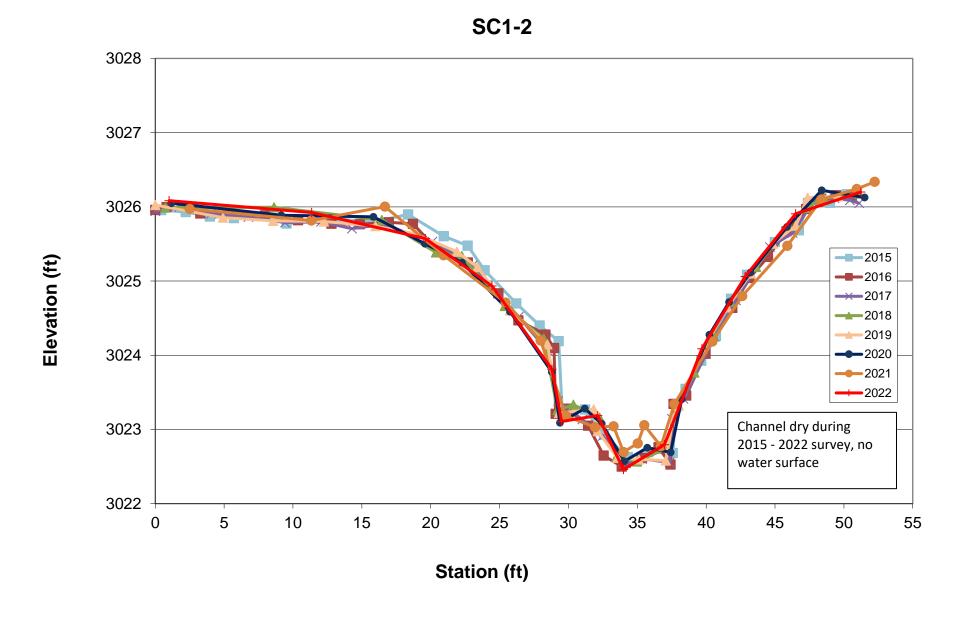
Year: 2022

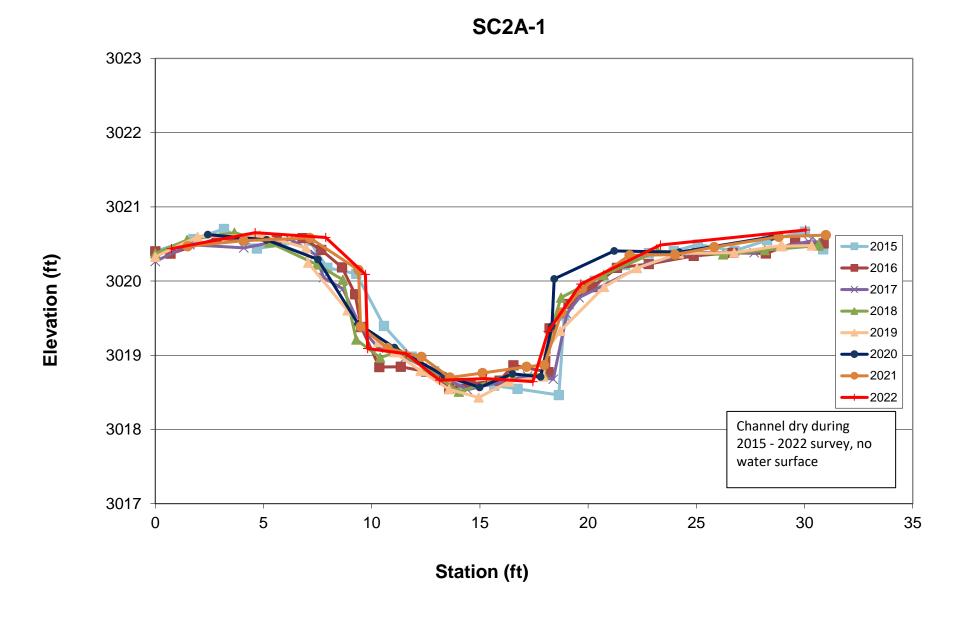
APPENDIX D

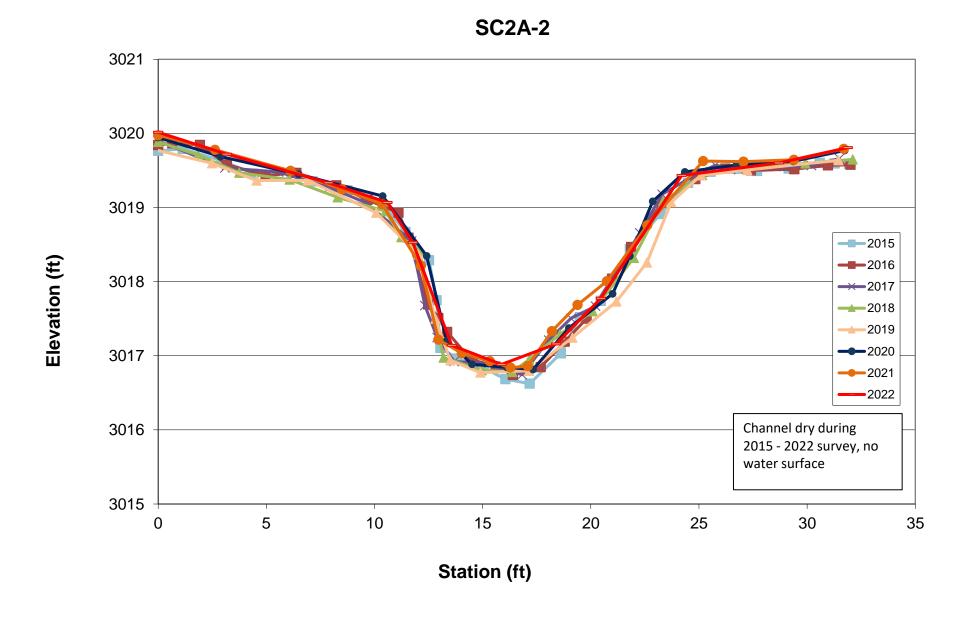
Surveyed Stream Cross Sections

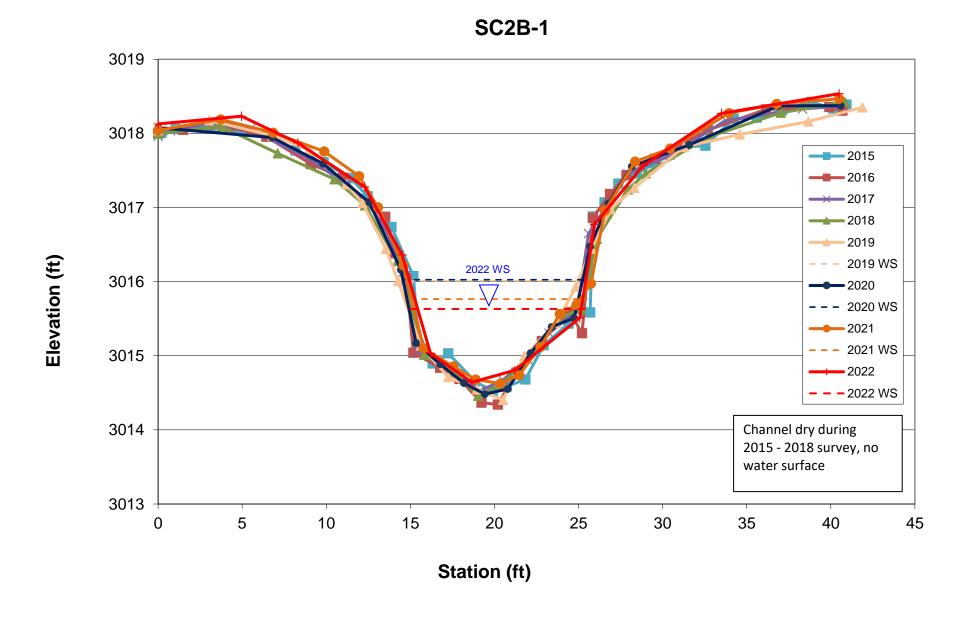
MDT Wetland Mitigation Monitoring Schrieber Lake Lincoln County, Montana



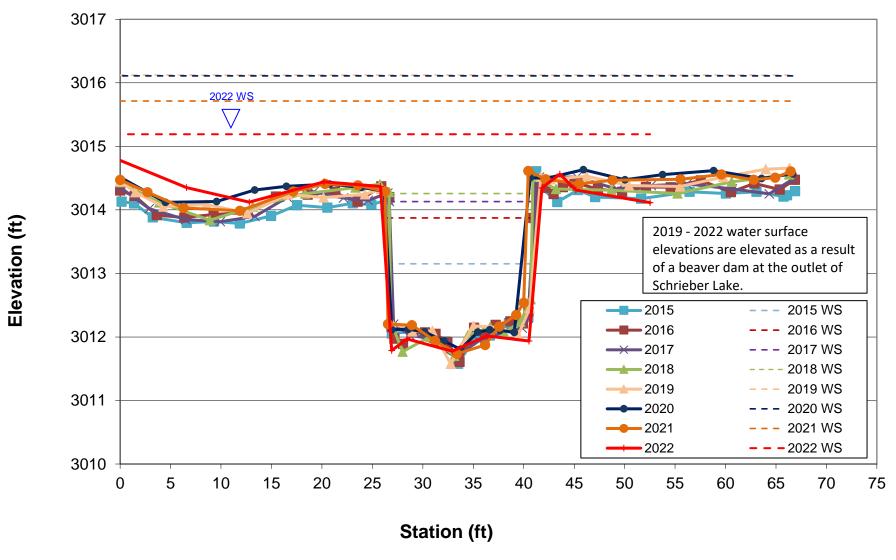


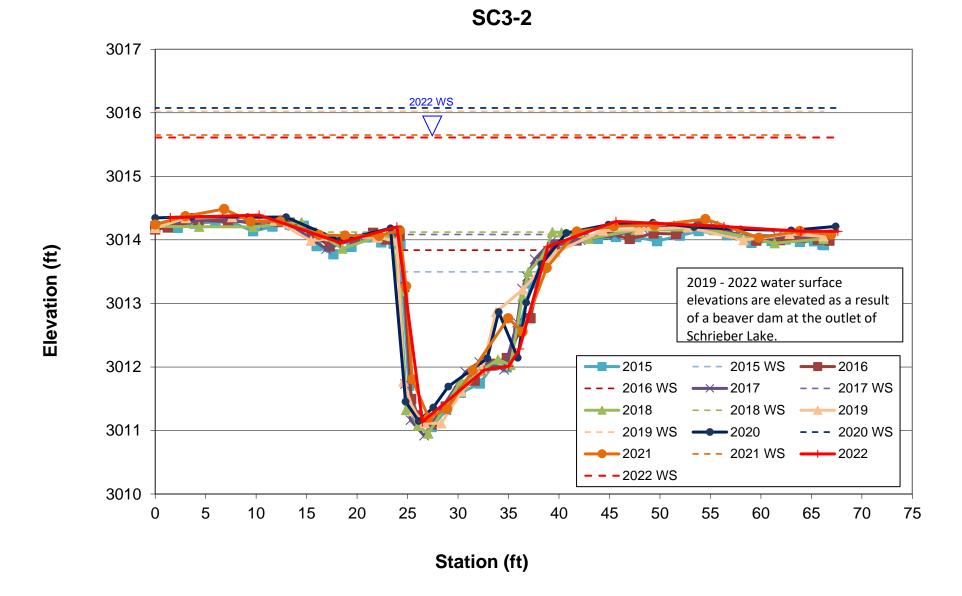




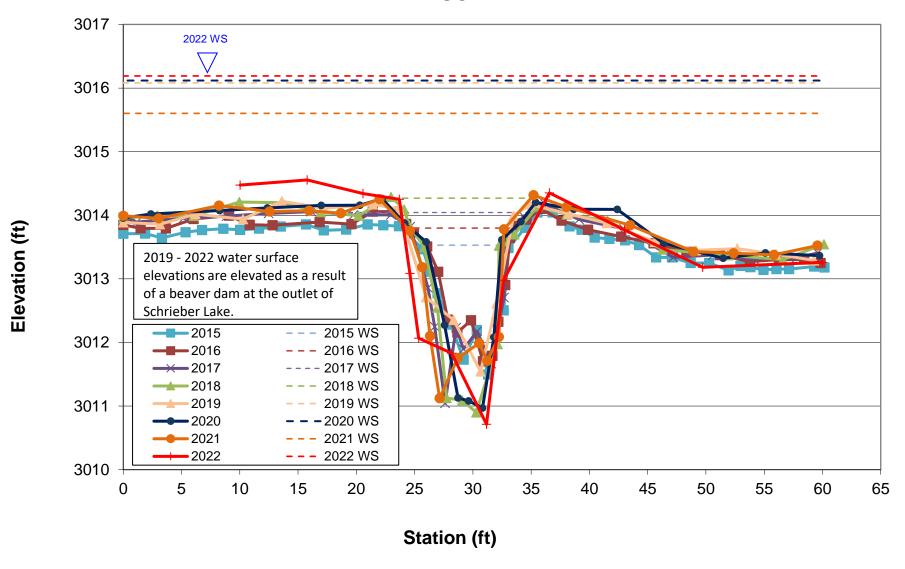


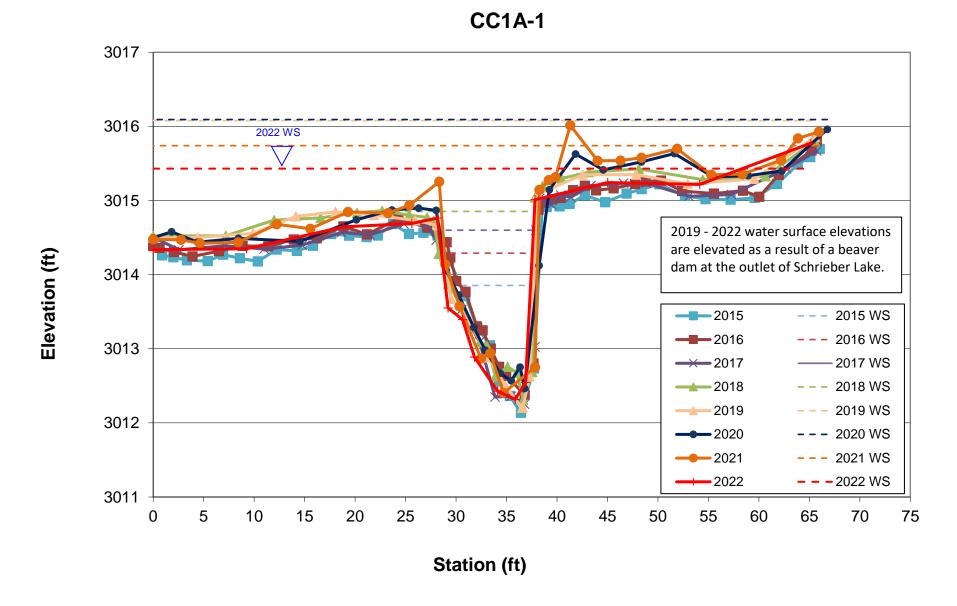


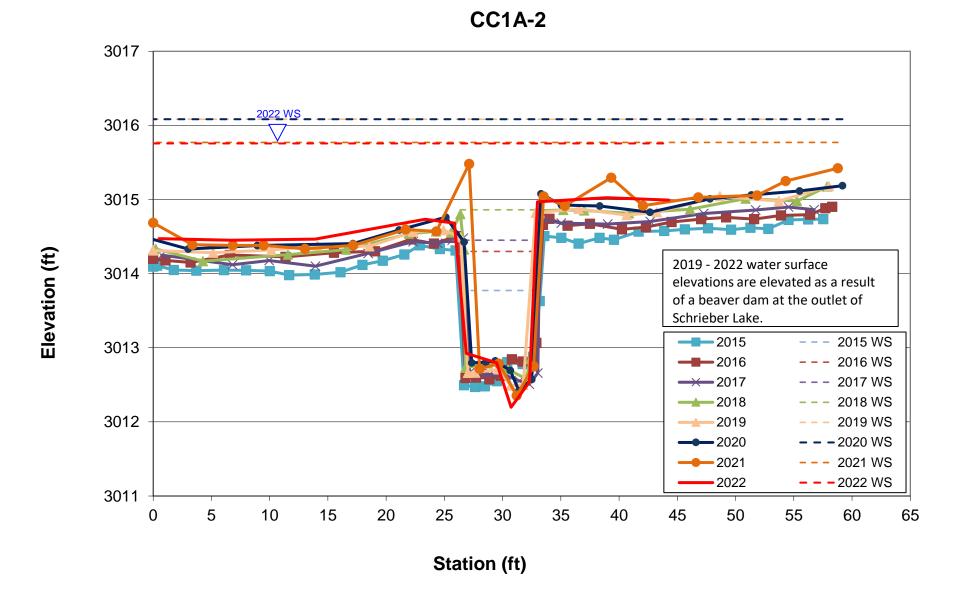




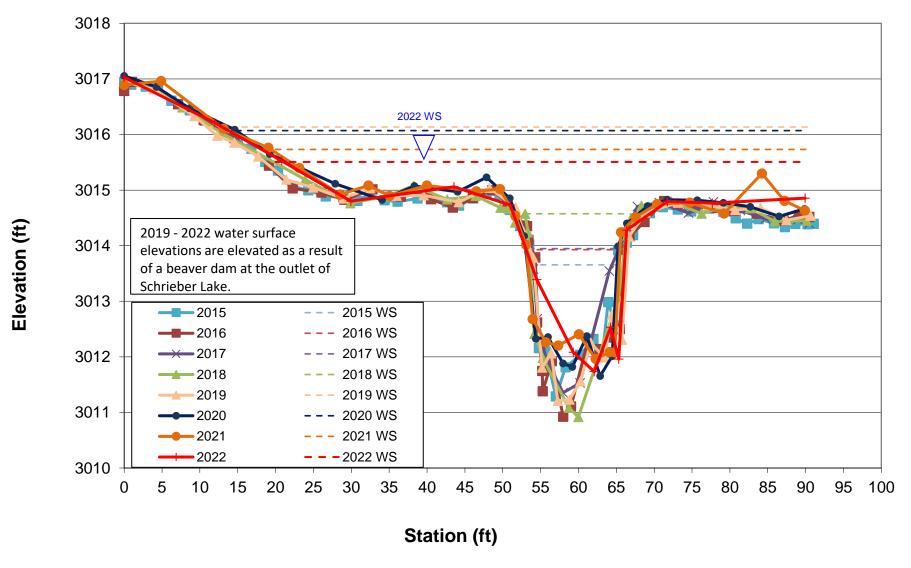












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